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# **MBH**

## Reference Materials

# **MBH**

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An ISO 9001 Certified Company



The full range of  
Reference Materials  
and Standards for  
Spectroscopic  
Analysis Techniques  
can be found within our two  
main catalogues for  
**Solids / Powders**  
and  
**Liquids / Glassware**



Please ask for copies or visit our website:

[www.mbh.co.uk](http://www.mbh.co.uk)

where copies can be downloaded.

The MBH catalogues are periodically re-issued to include the latest information.

Please ensure you have the latest version to hand.

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**Please Note**

This catalogue details only the current Reference Materials produced exclusively by MBH Analytical Ltd. Prices are correct at the time of publication only. Please also see our full catalogue for materials we can source from other producers.

**Certified Reference Materials**

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Most of the MBH range of discs are available in chippings form. Please see the sections for general composition information.

Please enquire for availability, size and price.

*Note: Chippings are made to order, and are non-returnable*

**Listing of new materials added in this catalogue. 44 - 46**

**This catalogue is not the full listing of the materials supplied by MBH but only those materials produced by MBH. Please see our full product catalogue.**

On the following pages you will find the current range of reference materials, principally for OES, produced by MBH. The range includes Reference Materials, Certified Reference Materials and Setting Up Samples for both ferrous and non-ferrous alloys.

The format of the catalogue has followed the same conventions we use in our full Reference Materials catalogue. Whilst every effort has been made to detail the latest information, it is possible that products will be remade or replaced and values and dimensions changed. This catalogue can therefore only be a snapshot of the information available at the time of publication. It will be re-issued every ~8 months.

*Included in this publication you will find the current prices against each item. It is our intention that the pricing will remain unchanged for as long as possible but we reserve the right to revise prices as necessary and without notice .*

Listed you will find details of the latest additions and imminent new materials produced by MBH. Materials noted as "provisional values" are currently being certified and will be available with a Provisional certificate of analysis prior to the release of the full certificate once completed.

**The majority of materials are certified to the latest international guide-lines and those meeting the definitions for Certified Reference Materials are clearly identified.**

The catalogue lists currently available or forthcoming materials produced by MBH only. If you cannot find the catalogue reference number you want listed it may have been changed, deleted or excluded because of its age. It may also not be produced by MBH but from another producer. Please enquire

We trust you will find this 'MBH only' catalogue useful. Should you have any questions or require further information please do not hesitate to contact us.

## Information

### Abbreviations

CRM	This material is classified by MBH as a Certified Reference Material
( )	The concentration value stated within the brackets is not certified and is provided for information purposes only
R.E.	Rare Earth
ppm	Parts per Million (w/w)
<b>Form</b>	
C	Material is a <b>Cast</b> product
CC or (2xCC)	Material is <b>Chill Cast</b> product or ( <b>Double Chill Cast</b> )
HIP	Material is <b>Hot Isostatically Pressed</b> powder
SC	Material is a <b>Spray Cast</b> product
W	Material is a <b>Wrought</b> product
R	Material has been cut from <b>Rolled</b> strip
** provisional values	This material is in production and is currently available for purchase and will be supplied with a provisional certificate. However the values presented are the result of an incomplete analysis programme. The final certified values are expected to be available within 8 months, but may differ slightly. A copy of the final certificate will be mailed to you as soon as available. Please enquire .
Sold Out	Materials where data is struck through (for example <del>14X-MN2-Q</del> etc.) and indicated as sold out will be remade later; please enquire.

Material listed in previous editions and now no longer listed herein should be considered no longer available and are not likely to be remade.

## Definitions

The materials in this catalogue have been categorised as Certified Reference Materials, Reference Materials or Setting Up / Control Samples. The following definitions used in ISO Guide 30: 1992 apply to the first two categories;

Certified Reference Material	"A Reference Material, accompanied by a certificate, one or more of whose property values are certified by a procedure which establishes its traceability to an accurate realisation of the unit in which the property values are expressed and for which each certified values ia accompanied by an uncertainty at a stated level of confidence." Such materials are indicated with <b>CRM</b> in the left hand margin against the catalogue number.
Reference Material	"A material or substance one or more of whose property values are sufficiently homogeneous and well established to be used for the calibration of an apparatus, the assessment of a measured method, or for assigning values to materials."
Setting Up Samples	Samples which have been prepared to meet the routine setting up requirements of laboratories using direct reading spectrometers. Whilst analytical data are supplied with each sample they are not certified and are only intended to be used as Setting Up Samples.

**Note:** Products that are not marked in this catalogue as 'CRM' may be presumed to be Reference Materials as defined above.

## Use of Reference Materials

Whilst modern instrumental methods of analysis are capable of high accuracy and precision, they are comparative techniques. Reference materials must be selected and used correctly for optimum performance to be achieved, and the following points should be considered.

The instrument manufacturer's recommendations and advice should be followed.

Users should be aware of the possible effects of structure, sample preparation and physico-chemical interferences when using reference materials.

## Validity of Information

**IMPORTANT - Please Note** The majority of the analytical data in the following pages indicate actual values for the batch currently available. However some materials may be remade during the lifetime of this catalogue and the values achieved for the replacements may differ from those stated.

We recommend that customers verify the availability of any material where it is important that the material supplied has the element concentration values listed.

**All concentration values in this catalogue are given in % (w/w) unless otherwise stated.**

All stated dimensions and weights are approximate. Finished sizes/weights may differ from those stated.

Whilst every effort is taken to present accurate data, errors and omissions excepted, it remains the responsibility of the purchaser to verify data prior to purchase.

**For materials not classified as 'CRM' it is the responsibility of the purchaser to ensure the end-user is willing to use a material of lower status.**

### General Conditions

All materials are subject to our general Conditions of Sale . The text is reproduced here for your convenience

- 1 All items listed in this catalogue or otherwise offered for sale are subject to availability and any delivery dates that may be quoted are conditional on supplies. We are unable to accept liability for delay and if any item becomes unavailable during the life of a catalogue we will advise on suitable alternatives where appropriate.
- 2 Unless credit facilities have been agreed with us (in which case payment is due on a net monthly basis), payment for items is due either against a Pro Forma invoice at the time of ordering or by Confirmed Irrevocable Letter of Credit through a British Clearing Bank payable on presentation of invoice and despatch documents.
- 3 We draw the attention of all customers to the notes in our catalogue relating to definitions, analyses and calibration procedures.
- 4 To the extent that the law may permit, the following condition stands in substitution for all conditions and warranties as to merchantability and fitness for purpose as implied by statute, common law or otherwise.
  - a. It is the responsibility of the customer to decide on the suitability and fitness for purpose of all items purchased
  - b. Any items claimed to be defective must be returned to us (within 3 months of delivery) for examination and analysis. No claims can be entertained if this is not done.
  - c. We may, at our discretion, replace any item shown to be defective or refund the price paid. Our liability in respect of any such item will not in any circumstances exceed the amount paid for the item in question and no liability is accepted for consequential losses however arising.
- 5 These conditions shall apply to all contracts entered into by us to the exclusion of all other conditions and notwithstanding any items that may appear on any printed stationery of any customer. No variation of these conditions shall be effective unless confirmed by us in writing on or prior to formal acceptance by us of any order.
- 6 Until such a time as we have received full payment, items supplied to customers shall remain our property notwithstanding delivery to the customer and we shall be entitled to enter upon the customer's premises to recover the property if the customer shall go into liquidation, or if a receiver is appointed .
- 7 This contract shall be governed by English Law and any disputes shall be referred to the exclusive jurisdiction of the English Courts.

### Ordering Procedure

Orders are accepted by mail, fax or email. Please ensure any subsequent confirmation of an order is appropriately marked so as to avoid duplication.

Send your order to:	<b>MBH Analytical Ltd</b>	<b>Tel:</b>	<b>++44 (0)208 441 2024</b>
	<b>Holland House</b>		
	<b>Queens Road</b>	<b>Fax</b>	<b>++44 (0)208 449 0810</b>
	<b>Barnet, Herts, EN5 4DJ</b>		
	<b>United Kingdom</b>	<b>Email:</b>	<b>sales@mbh.co.uk</b>

Orders placed shall include: Catalogue Number, Quantity required, Description, Price, agreed discount and confirmation of invoicing and delivery address.  
Unless specifically instructed all orders will be despatched by our chosen carrier, with due regard to speed, security and cost.

**All orders will be acknowledged by either fax, e-mail or post. Please check the acknowledgement to ensure we have correctly understood your requirement.**

## Conditions of Sale - Prices, VAT and payment terms.

December 2011

### Prices

The prices given in this catalogue are stated in £stg and are correct at the time of publication and include packing. Freight and Insurance (when required) are additional and are charged extra at cost. **These prices are subject to change without notice. We recommend that customers verify the price of items prior to placing their order.** We are pleased to provide written quotations upon request indicating current availability and estimated despatch cost.

### Value Added Tax (VAT)

All orders delivered to a UK address are subject to VAT at the rate applicable at the time of despatch. European Union customers are also subject to UK VAT and unless we are advised of your VAT number at the time of placing your order VAT will be charged at the current rate.

### Payment

Payment should be in Sterling (or stated currency) and free of all local/senders bank charges. **MBH will only accept our own bank's charges.** Payments must be sent for the full amount **after** deduction of all transmission fees (including intermediary banks fees).

Payment may be made by any of the following methods.

- Visa Purchasing Card or major debit/credit/charge card (Visa, Mastercard or American Express). Payments over £500.00 are subject to a 3% surcharge. Please note we can only invoice/collect payment in Sterling. The amount billed on your card will reflect your card company's currency conversion cost and fee.
- Sterling (or stated currency) prepayment with your order against our Proforma invoice by bankers draft or automated bank transfer.
- Irrevocable Letter of Credit through a London bank, payable at sight upon presentation of documents (minimum order value applies).
- Established customers may apply to receive strictly Net Monthly Account terms, subject to satisfactory bank and trade references.

Our bank details are:

Name of Banker:	<b>National Westminster Bank plc</b>		
Branch Address:	<b>181 Darkes Lane POTTERS BAR Herts EN6 1XT England</b>		
Account Name:	<b>MBH Analytical Ltd</b>		
Account No:	<b>(Sterling) 13140922</b>	(IBAN)	GB10NWBK60174913140922
Bank Sort Code:	<b>60 17 49</b>		
BIC (Swift code):	<b>NWBKGB2L</b>		

If paying in **Euro** or **US Dollars** please remit payment **in the currency stated on the invoice** to the corresponding currency account below.

Bank Account Numbers:	<b>Euro</b>	(IBAN)	GB18NWBK60720506848966
(All other bank details remain as stated above.)	<b>US Dollar</b>	(IBAN)	GB71NWBK60730116500466

# 1. Iron Base

## Irons

Updated: 8 December 2011

Blocks / Discs

1.1.3 High Phosphorus		C	Si	S	P	Mn	Cr	Mo												Size (mm) Ø x H	Form	Price
CRM	11X HPC1 G	3.22	2.60	0.0311	0.75	0.499	....	....												40 x 15	CC	
CRM	11X HPC2 K	2.85	2.19	0.066	1.55	0.775	2.05	....												40 x 17	CC	
CRM	11X HPC3 J	3.38	1.63	0.0473	2.01	1.287	1.48	0.120												40 x 15	CC	
CRM	11X HPC4 P	3.15	1.08	0.094	2.03	0.804	1.57	....												40 x 15	CC	
CRM	11X HPC5 A	3.68	1.175	0.223	0.246	1.028	1.42	....												40 x 17	CC	

  

1.1.7 Low Alloy		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	Al	Ti	V	Nb	Co	W	As	Sb	Bi	Se	Zn	Size (mm) Ø x H	Form	Price
CRM	11X CC21 A	3.12	2.19	0.083	0.0246	0.785	0.107	0.351	0.0357	0.153	0.0078	0.0024	0.0259	0.0083	....	....	....	0.0101	....	....	....	....	45 x 6	2xCC	
CRM	11X CC22 A	3.70	1.82	0.080	0.033	.690	0.060	0.319	0.021	0.712	0.012	(0.002)	0.029	0.0087	....	....	....	0.009	....	....	....	....	45 x 6	2xCC	
CRM	11X C1 P	2.85	1.483	0.0383	0.105	1.262	0.696	0.538	0.075	0.164	0.032	0.0193	(0.14)	0.101	0.170	0.082	....	0.018	0.064	0.0060	0.010	0.0208	continued		
CRM	11X C2 S	3.54	1.281	0.086	0.200	0.961	1.006	0.794	0.096	0.133	0.065	0.049	0.042	0.289	0.084	0.113	0.098	0.029	0.068	0.007	(0.009)	0.0020			
CRM	11X C3 AA	3.38	0.975	0.150	0.489	0.664	2.95	1.97	0.200	0.340	0.198	0.0988	0.048	0.655	0.148	0.242	0.054	0.095	0.235	(0.005)	0.009	0.0131			
CRM	11X C4 Q	1.89	3.02	0.138	0.111	0.651	2.41	1.50	0.114	0.342	0.0207	0.032	0.091	0.0233	0.072	0.0175	0.122	0.0103	0.011	0.0050	(0.0030)	0.0112			
CRM	11X C5 U	2.49	1.78	0.103	0.097	0.791	2.05	1.15	0.497	2.71	0.021	0.006	0.079	0.0537	(0.088)	0.105	(0.083)	0.0225	0.037	0.006	0.0046	0.011			
CRM	11X C6 V	3.76	0.487	0.0567	0.069	1.088	0.060	0.606	1.561	0.890	0.0585	(0.018)	0.049	0.0608	0.023	0.094	....	0.0499	0.037	0.005	0.007	0.025			
CRM	11X C7 N	2.51	0.829	0.0101	0.0266	1.942	0.0303	0.507	0.071	0.075	0.0114	0.0127	0.022	0.036	0.051	0.0335	0.066	0.0159	0.025	0.0137	....	0.0226			
CRM	11X C8 T	3.03	1.61	0.189	0.843	0.486	0.320	0.501	0.158	0.317	0.091	0.016	0.115	0.0637	(0.082)	0.174	0.0175	0.077	0.068	0.041	(0.073)	0.007			
CRM	11X C9 B	2.82	1.19	0.0306	0.032	1.88	2.58	1.31	0.158	0.299	0.052	0.005	0.054	0.475	0.062	0.132	0.286	0.046	0.152	(0.011)	0.0091	0.010			
CRM	11X C10 B	3.60	1.69	0.144	0.111	0.634	0.247	0.254	0.328	0.660	0.0346	0.019	0.0317	0.0275	....	....	0.335	0.0140	0.007	....	....	....			

  

Continuation from above		Pb	B	Zr	Te	Cd	N															Size (mm) Ø x H	Form	Price
	11X C1 P	0.011	0.052	0.005	....	....	0.0044															40 x 15	CC	
	11X C2 S	0.015	0.0072	....	....	....	0.0057															40 x 15	CC	
	11X C3 AA	0.040	0.0046	....	....	....	0.0095															40 x 15	CC	
	11X C4 Q	0.0155	0.018	0.006	0.0010	0.0014	....															40 x 17	CC	
	11X C5 U	0.023	0.0172	(0.004)	0.005	....	....															40 x 17	CC	
	11X C6 V	0.006	0.0053	0.005	....	....	0.0152															40 x 15	CC	
	11X C7 N	0.0106	0.0097	(0.003)	....	....	0.025															40 x 15	CC	
	11X C8 T	0.023	0.0409	....	0.0043	....	0.0075															40 x 15	CC	
	11X C9 B	0.0044	0.0058	....	0.015	....	....															40 x 17	CC	
	11X C10 B	0.007	....	....	....	....	0.0072															40 x 15	CC	

  

1.1.8 Abrasion Resistant		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Al	Ti	V	Nb	Pb								Size (mm) Ø x H	Form	Price
CRM	11X AR5 J	3.10	1.70	0.0316	0.0299	0.57	5.16	9.73	0.12	0.032	(0.018)	0.0147	0.0586	0.030	(0.003)								40 x 17	CC	

# 1. Iron Base

## Irons

Updated: 8 December 2011

Blocks / Discs

1.1.9 Corrosion Resistant															Size (mm)	Form	Price			
		C	Si	S	P	Mn	Ni	Cr	Cu						Ø x H					
CRM	11X S/4Cr3 H	2.92	1.20	0.035	0.093	0.86	14.94	0.96	6.09							Sold Out	40 x 15	CC		
CRM	11X S/4Cr5 F	2.54	1.27	0.035	0.107	0.75	16.3	3.36	6.34							Sold Out	40 x 15	CC		
	11X S/2Cr1 E	2.83	2.85	0.011	0.31	1.68	16.5	2.48	0.02								40 x 15	CC		
	11X S/2Cr2 D	3.03	1.23	0.046	0.14	0.53	18.0	2.35	0.23								40 x 15	CC		
	11X S/2Cr4 D	2.82	2.59	0.010	0.049	0.97	20.7	1.10	0.24								40 x 15	CC		
	11X S/2Cr5 D	3.01	2.51	0.042	0.14	0.83	19.5	3.99	0.24								40 x 15	CC		
	11X S/2Cr6 D	2.65	3.59	0.009	0.254	0.81	18.0	4.39	0.27								40 x 15	CC		
	11X S/3Cr1 D	2.61	2.52	0.011	0.046	0.70	31.7	0.15	0.19								40 x 15	CC		
	11X S/3Cr2 C	2.30	2.59	0.010	0.045	0.85	31.0	2.62	0.21								40 x 15	CC		
	11X S/3Cr3 B	2.49	2.44	0.050	0.053	0.66	29.4	4.06	0.23								40 x 15	CC		
		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Co	Sn	Al	Ti	V	Pb	Size (mm)	Form	Price	
	11X 20001 J	2.90	1.01	0.143	0.005	0.58	21.4	1.50	....	0.01	....	....	....	....	....	....	40 x 15	C		
	11X 20002 J	2.67	2.04	0.045	0.060	1.06	20.0	2.03	....	0.30	....	....	....	....	....	....	40 x 15	C		
	11X 20003 K	2.91	3.03	0.007	0.174	1.53	17.8	2.53	....	0.52	....	....	....	....	....	....	40 x 15	C		
Note: items that are cast - C - may contain some primary carbon.																				
CRM	11X 0331.1 H	2.831	2.10	0.137	0.111	1.353	13.75	2.022	0.111	7.68	0.154	0.048	(0.030)	0.094	....	0.030		40 x 13	CC	
GRM	11X 0331.2 H	2.54	2.78	0.126	0.062	1.32	15.64	1.50	0.085	7.42	....	0.0220	0.049	....	....	0.029		Sold Out	40 X 13	CC
CRM	11X 0331.3 F	2.10	2.46	0.061	0.040	1.08	18.03	2.57	0.061	6.49	....	0.0091	0.055	....	....	0.0112		40 X 13	CC	
CRM	11X 0331.5 C	2.73	2.93	0.217	0.164	0.893	14.52	0.582	0.117	7.74	....	0.121	0.018	....	....	0.0056		40 X 13	CC	
CRM	11X 0331.6 A	2.71	2.05	0.0197	0.0473	1.144	14.03	1.13	0.011	6.57	....	(0.0020)	...	0.025	0.0106	(0.0006)		35 X 6	CC	
1.1.11 With Chromium															Size (mm)	Form	Price			
		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	V	W	Co	Pb		Ø x H			
CRM	11X 15294 T	2.25	0.409	0.050	0.100	0.551	1.84	29.32	0.630	0.126	0.070	0.124	0.45	0.179	0.0067		40 x 15	CC		
CRM	11X 15295 P	2.285	1.057	0.094	0.085	1.01	0.350	24.87	0.518	0.238	(0.045)	0.144	(0.20)	0.542	(0.010)		40 x 17	CC		
CRM	11X 15309 R	3.273	0.562	0.0110	0.0340	1.196	2.05	23.30	0.982	1.142	....	0.096	(0.057)	0.068	....		40 x 15	CC		
CRM	11X 15310 A	2.71	0.892	0.0278	0.051	1.45	5.66	21.22	0.980	2.64	....	0.071	0.137	0.0709	....		40 x 15	CC		

# 1. Iron Base

# Steels

Updated: 6 December 2011

Blocks / Discs

1.2.2 Residuals in Mild Steel		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	Al	Ti	V	W	As	Co	Zn	Nb	N	Bi	Se	Sb	Size (mm) Ø x H	Form	Price	
CRM	12X 10180 A	0.170	0.221	0.0336	0.0104	0.806	0.101	0.095	0.0220	0.176	0.0143	0.0243	....	....	....	0.0058	....	0.0031	....	0.0106	....	....	....	40 x 20	W		
CRM	12X 10400 A **	0.41	0.22	0.029	0.016	0.75	0.061	0.13	0.016	0.14	0.010	0.028	....	....	....	0.007	....	0.003	....	0.014	** provisional values			40 x 15	W		
CRM	12X 12700 A	0.365	0.238	0.0116	0.0205	0.636	0.0197	0.070	0.0345	0.0342	....	0.055	....	0.0033	....	0.0060	0.0047	0.0120	....	0.0073	....	....	....	50 x 20	C		
CRM	12X 12701 A	0.330	0.308	0.0124	0.0218	0.636	0.0557	0.235	0.0163	0.0346	....	0.0426	....	0.0040	....	0.0060	0.0058	0.0014	....	0.0072	....	....	....	50 x 20	C		
CRM	12X 12746 U	0.0132	0.183	0.064	0.0247	1.70	0.161	0.182	0.654	0.368	0.202	0.021	0.0283	0.0160	0.101	0.049	0.115	....	....	....	....	....	....	40 x 15	W		
CRM	12X 12747 U	0.149	0.337	0.041	0.029	2.02	0.391	0.443	0.500	0.437	0.167	0.015	0.072	0.0375	0.030	0.0114	0.200	....	....	....	....	....	....	42 x 15	W		
CRM	12X 12748 T	0.135	0.122	0.052	0.053	0.494	0.454	0.755	0.300	0.543	0.074	0.009	(0.003)	0.0464	0.056	0.145	0.280	....	....	....	....	....	....	42 x 15	W		
CRM	12X 12749 V	0.138	0.549	0.080	0.036	1.531	0.609	0.549	0.224	0.269	0.0240	0.026	0.0361	0.0419	0.035	0.074	0.484	....	....	....	....	....	....	42 x 15	W		
CRM	12X 12750 T	0.202	0.383	0.0082	0.0106	0.248	1.012	0.853	0.119	0.0215	0.227	0.285	0.116	0.0961	0.105	....	0.670	....	0.120	....	....	....	....	40 x 15	W		
CRM	12X 349 B	0.278	0.295	0.0326	0.0340	0.910	0.285	0.190	0.058	0.308	0.175	0.152	0.125	0.0158	0.053	0.0050	0.0211	....	....	....	....	....	....	42 x 15	W		
CRM	12X 350 B	0.138	0.672	0.0363	0.029	0.706	0.162	0.392	0.149	0.150	0.0298	0.341	0.099	0.0286	0.275	0.053	0.0206	....	....	....	....	....	....	40 x 15	W		
CRM	12X 352 C	0.257	0.498	0.131	0.074	0.533	0.380	0.348	0.242	0.162	0.124	0.090	0.246	0.042	0.140	0.030	0.031	....	....	....	....	....	....	42 x 15	W		
CRM	12X 353 D	0.128	0.143	0.0049	0.0075	0.533	0.191	0.524	0.108	0.259	0.072	0.0490	0.066	0.0258	0.098	0.052	0.045	0.0185	0.058	0.0047	0.0104	0.018	0.088	40 x 15	W		
CRM	12X 354 A	0.27	0.19	0.015	0.066	0.86	....	....	....	....	....	0.01	....	0.02	....	....	0.03	....	0.07	....	....	....	0.05	38 x 15-20	W		
CRM	12X 355 B **	0.16	0.46	0.030	0.030	0.59	0.08	0.10	0.06	0.62	0.055	0.12	0.14	0.12	0.03	0.032	0.052	....	0.035	0.006	0.04	0.035	0.08	40 x 15	W		
CRM	12X 356 B **	0.32	0.28	0.018	0.050	0.345	0.02	0.068	0.023	0.44	0.037	0.043	0.035	0.060	0.05	0.020	0.13	0.017	0.016	0.007	0.010	0.007	0.021	40 x 15	W		
CRM	12X 357 B **	0.36	0.23	0.083	0.011	0.25	0.07	0.093	0.010	0.55	0.017	0.14	0.028	0.17	0.002	0.011	0.195	0.025	0.002	0.009	0.010	0.006	0.010	40 x 15	W		
		** provisional values																									
1.2.3 Low Alloy Steel		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	Al	V	W	As	Co	Nb	Ti	Ta	Zn	N	Size (mm) Ø x H	Form	Price			
CRM	12X LA1 A	0.06	0.73	0.045	0.013	1.32	0.21	0.95	<0.01	0.034	....	<0.01	0.41	....	....	....	....	....	....	....	....	....	....	40 x 15	W		
CRM	12X LA2 C	0.182	1.023	0.0424	0.0268	0.415	0.788	0.757	0.179	0.383	....	1.60	0.0686	....	....	0.053	....	....	....	....	0.0108	....	....	42 x 15	W		
CRM	12X LA3 A	0.48	0.13	0.040	0.032	1.50	0.31	0.37	0.30	0.20	....	0.06	0.19	....	....	....	....	....	....	....	0.006	....	....	40 x 15	W		
CRM	12X LA4 B	0.537	0.335	0.039	0.0363	0.303	0.521	0.499	0.489	0.334	....	0.057	0.328	0.091	....	0.105	....	....	....	....	0.0222	....	....	42 x 15	W		
CRM	12X LA5 B **	0.72	0.65	0.021	0.051	0.96	0.15	0.135	0.22	0.16	....	0.155	0.58	....	....	0.16	....	....	....	0.028	0.007	** provis vals		40 x 15	W		
CRM	12X LA6 B **	0.09	0.13	0.009	0.011	0.14	0.01	0.038	0.007	0.068	....	0.205	0.015	....	....	0.008	....	....	....	0.019	0.003	** provis vals		40 x 15	W		
CRM	12X 15217 Q	0.176	1.390	0.073	0.058	0.652	0.864	1.24	0.358	0.231	0.0737	(0.021)	0.662	0.121	....	0.248	0.131	....	....	....	0.0253	....	....	40 x 15	W		
CRM	12X 15251 T	1.17	2.27	0.0258	0.0284	1.003	1.035	0.792	0.205	0.110	0.0047	0.050	0.405	0.053	....	0.259	0.29	....	....	....	0.0232	....	....	42 x 15	W		
CRM	12X 15252 Q	0.0478	0.265	0.0580	0.0213	0.818	2.03	0.887	0.248	0.154	0.0448	0.074	0.330	....	....	0.154	0.10	....	(0.054)	....	0.0218	....	....	40 x 15	W		
CRM	12X 15253 R	0.240	0.387	0.054	0.066	1.162	0.527	1.492	0.538	0.431	0.216	0.187	0.248	0.332	....	0.093	0.49	....	....	....	0.043	....	....	40 x 15	W		
CRM	12X 15255 P	0.473	1.13	0.0225	0.111	1.170	0.405	1.99	0.111	0.395	0.100	0.13	0.541	0.209	....	0.051	0.145	....	....	....	0.018	....	....	40 x 15	W		
CRM	12X 15256 P	0.082	0.137	0.0134	0.0177	0.553	5.70	0.970	0.130	0.050	0.123	0.129	0.554	0.103	....	0.546	0.101	....	....	....	0.0273	....	....	40 x 15	W		
CRM	12X 15259 P	0.740	1.90	0.099	0.0401	0.314	4.01	0.554	0.434	0.161	0.070	0.192	0.165	1.04	....	0.123	0.377	....	....	....	0.0132	....	....	40 x 15	CC		
CRM	12X 15260 V	0.446	0.456	0.094	0.031	2.20	0.573	3.69	0.130	0.231	0.0130	0.378	0.351	....	0.087	0.109	0.243	....	0.026	....	....	....	....	40 x 15	CC		
CRM	12X 15266 U **	0.43	0.55	0.015	0.045	1.2	1.55	3.1	0.33	0.21	0.01	0.47	0.10	....	0.07	0.37	1.4	....	0.12	....	....	** provis vals		40 x 15	CC		
CRM	12X 41300 A **	0.32	0.18	0.015	0.01	0.54	0.08	0.97	0.21	0.125	0.006	0.044	....	....	0.0045	....	....	....	....	0.002	0.009	** provis vals		38 x 15	W		
CRM	12X 41400 A	0.418	0.221	0.0210	0.0138	0.795	0.127	1.003	0.211	0.238	0.0181	0.0195	....	....	0.0088	....	....	....	....	....	0.0101	....	....	38 x 20	W		
CRM	12X 43400 A **	0.415	0.25	0.028	0.012	0.58	1.37	1.17	0.22	0.18	0.006	0.014	....	....	0.008	....	....	....	....	0.003	0.009	** provis vals		40 x 15	W		
CRM	12X 44220 A **	0.413	1.68	0.001	0.005	0.86	1.90	0.83	0.39	0.03	0.0015	0.028	0.076	....	0.0025	....	....	....	....	....	0.002	** provis vals		38 x 15	W		
CRM	12X 15CDV6 A **	0.17	0.15	0.008	0.007	0.81	0.04	1.35	0.86	0.022	0.0015	0.02	0.235	....	0.003	....	....	....	....	....	0.006	** provis vals		40 x 15	W		
CRM	12X 15254 Y	0.261	0.753	0.0476	0.043	1.19	0.886	2.09	0.788	0.130	0.047	1.136	0.296	0.358	....	0.470	0.322	0.260	....	....	....	....	....	40 x 15	W		
CRM	12X 15258 N	0.548	1.020	0.070	0.0439	1.434	0.327	0.465	0.215	0.0934	0.0453	0.032	0.218	0.102	....	0.272	0.103	0.120	....	....	....	....	....	42 x 15	W		
CRM	12X 15261 W	0.689	1.606	0.079	0.111	0.437	0.113	0.495	1.508	0.252	0.0157	1.013	0.114	0.256	....	0.363	0.691	0.397	....	....	....	....	....	40 x 15	CC		



# 1. Iron Base

# Stainless Steels

Updated: 8 December 2011

Blocks / Discs

1.3.2 Austenitic Stainless Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	Al	Co	Nb	N	B	Bi	Ta	V	Sb	Ti	W	Ca	Size (mm) Ø x H	Form	Price	
CRM	13X 17001 B	0.114	0.34	0.016	0.080	1.73	6.05	14.89	0.12	0.037	0.030	0.01	0.15	0.76	0.040	0.008	....	....	....	....	....	....	....	....	40 x 15	C	
	13X 17002 D	0.117	0.664	0.050	0.056	1.38	7.84	17.62	0.222	0.085	(0.0024)	(0.0046)	0.103	0.487	0.047	....	....	....	....	....	....	....	....	....	42 x 15	W	
	13X 17003 A	0.10	0.78	0.035	0.037	0.85	11.90	11.89	0.27	0.08	....	....	0.07	0.34	....	....	....	....	....	....	....	....	....	....	40 x 15	C	
	13X 17004 A	0.06	1.32	0.048	0.024	0.62	16.06	21.78	0.31	0.11	....	....	0.05	0.23	....	....	....	....	....	....	....	....	....	....	40 x 15	C	
CRM	13X 17005 C	0.128	2.03	0.090	0.0166	0.446	20.19	24.96	0.472	0.283	....	....	0.033	0.125	0.118	0.0035	....	(0.11)	....	....	....	....	....	....	40 x 15	CC	
CRM	13X 30300 A	0.041	0.422	0.312	0.0205	1.83	8.60	17.62	0.334	0.025	....	....	0.0255	....	0.034	0.0035	....	....	0.091	....	....	....	....	....	40 x 15	W	
CRM	13X 30403 A	0.0200	0.288	0.025	0.029	1.495	7.93	18.27	0.193	0.217	....	....	0.101	0.0185	0.081	....	....	....	0.113	....	....	0.018	....	....	40 x 15	W	
CRM	13X 34700 A	0.016	0.483	(0.0006)	0.028	1.290	9.38	17.19	0.393	0.163	....	0.023	0.131	0.330	0.0166	0.0008	....	....	0.123	....	....	0.146	....	....	38 x 15	W	
	13X 18001 A	0.22	0.32	0.057	0.022	1.40	6.41	15.92	0.80	0.16	....	....	0.04	0.57	....	....	....	....	....	....	....	....	....	....	40 x 15	C	
CRM	13X 18002 C	0.155	0.648	0.019	0.019	0.805	7.98	18.10	0.239	0.083	....	0.059	0.064	1.60	0.058	....	....	....	0.050	....	....	....	....	....	40 x 15	CC	
CRM	13X 18003 B	0.203	1.008	0.042	0.054	0.773	10.35	19.98	0.397	0.074	....	....	0.120	1.12	0.046	....	....	....	....	....	....	....	....	....	42 x 15	W	
	13X 18004 A	0.07	1.44	0.012	0.094	2.1	12.55	21.64	0.63	0.04	....	....	0.18	0.83	....	....	....	....	....	....	....	....	....	....	40 x 15	C	
CRM	13X 19001 B	0.055	1.20	0.0174	0.0151	0.460	5.10	15.07	1.51	0.202	....	....	0.025	0.032	0.070	....	....	(0.019)	0.083	....	....	....	....	....	40 x 15	W	
CRM	13X 19003 B	0.0132	0.550	0.0390	0.0406	1.273	12.22	18.56	2.47	0.068	....	....	0.121	0.122	0.020	....	....	....	....	....	....	....	....	....	42 x 15	W	
	13X 19004 B	0.066	0.36	0.014	0.069	1.96	17.9	22.8	3.62	0.022	....	....	....	0.18	....	....	....	....	....	....	....	....	....	....	40 x 15	C	
	13X 12533 Y	0.03	0.37	0.032	0.011	1.13	5.04	18.8	1.05	0.18	(0.03)	0.011	0.055	....	(0.014)	(0.01)	....	(0.17)	....	....	0.14	....	....	....	40 x 15	C	
CRM	13X 12534 U	0.0303	0.988	0.0209	0.0309	0.604	10.24	18.76	2.32	0.079	....	(0.04)	0.064	....	0.078	....	....	0.037	....	....	0.159	....	....	....	40 x 15	CC	
CRM	13X 12535 BD	0.276	1.31	0.069	0.072	0.495	14.73	16.89	3.91	0.086	0.0182	0.267	0.711	....	0.0141	0.0135	....	....	0.090	....	1.18	....	....	....	40 x 15	CC	
CRM	13X 12536 S**	0.15	0.87	0.14	0.052	0.39	12.1	15.3	2.60	0.062	0.021	0.055	0.30	....	0.062	0.027	....	0.09	....	....	0.11	** provisional	....	....	40 x 15	CC	
CRM	13X 12537 S	0.090	1.18	0.048	0.092	1.174	11.10	19.32	3.12	0.659	0.049	(0.011)	0.114	....	0.043	0.007	....	(0.15)	....	....	0.053	....	....	....	40 x 17	CC	
CRM	13X 31603 A	0.0245	0.335	0.0240	0.0285	1.78	10.19	16.84	1.99	0.325	0.0054	0.009	0.057	(0.008)	0.081	0.0011	....	....	0.095	....	....	0.045	0.003	....	40 x 15	W	
CRM	13X 12853 K**	0.11	1.06	0.024	0.022	0.83	12.2	17.2	2.74	0.53	....	....	0.285	....	....	0.004	....	0.01	....	0.02	0.03	0.10	** prov	....	40 x 15	CC	
CRM	13X 12854 L	0.053	1.308	0.0278	0.024	1.300	11.60	15.77	2.50	0.306	....	....	0.33	0.689	0.0550	0.0076	0.019	(0.06)	....	....	0.065	0.16	....	....	40 x 15	CC	
CRM	13X 12855 L	0.0361	1.029	0.0123	0.0210	0.939	10.98	17.55	2.56	0.379	....	....	0.207	....	....	0.0036	0.0030	(0.11)	....	0.177	0.044	0.201	....	....	40 x 15	W	
1.3.3 Maraging Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Al	Ti	Co	N	Size (mm) Ø x H	Form	Price											
	13X 14933 R	0.008	0.05	0.014	0.023	0.17	16.8	0.022	3.83	<0.005	0.029	11.4	....	40 x 15	C												
CRM	13X 14934 Q	0.0254	0.502	0.0288	0.024	0.254	17.60	0.388	4.22	0.15	0.694	9.03	0.006	40 x 15	CC												
CRM	13X 14935 T	0.0105	0.441	0.055	0.036	0.494	18.96	0.745	5.61	(0.007)	0.106	7.17	0.0102	40 x 15	CC												
1.3.4 Martensitic Stainless Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	Al	Ti	V	As	Co	Nb	W	B	N	Size (mm) Ø x H	Form	Price				
CRM	13X 12547 L	0.335	0.246	0.110	0.062	1.16	0.58	16.43	0.741	0.544	0.0232	....	....	0.098	....	0.313	0.349	....	....	0.0511	42 x 15	W					
CRM	13X 12548 M	0.188	0.425	0.219	0.027	0.577	1.075	12.96	1.318	0.230	....	....	....	....	....	0.353	0.586	0.031	....	0.0500	40 x 15	CC					
	13X 12549 K	0.16	0.43	0.29	0.092	0.34	1.26	11.70	1.49	0.10	....	....	....	....	....	0.52	0.23	....	....	....	40 x 15	C					
	13X 14775 R	0.05	0.63	0.054	0.053	1.37	1.75	17.7	0.47	0.21	....	....	....	....	....	0.15	0.75	....	....	....	40 x 15	C					
CRM	13X 15023 V**	0.115	0.31	0.007	0.013	1.36	0.84	11.1	1.05	0.050	....	0.14	....	0.027	....	0.057	1.55	0.02	....	0.040	40 x 15	CC	** provisional values				
	13X 15024 W	0.12	0.77	0.028	0.030	0.57	2.84	14.94	0.24	0.36	....	....	....	....	....	0.10	0.10	....	....	....	40 x 15	C					
	13X 15035 T	0.10	0.68	0.069	0.054	0.93	2.66	13.94	0.45	0.31	....	....	....	....	....	0.21	0.63	....	....	....	40 x 15	C					
	13X 15059 N	0.057	0.48	0.020	0.015	1.22	1.30	15.97	0.63	0.14	(0.02)	....	....	0.06	....	0.26	0.81	....	....	0.049	40 x 15	C					
CRM	13X 44004 A	1.052	0.363	0.0178	0.0214	0.346	0.207	16.74	0.462	0.0548	....	0.0305	....	0.076	....	0.0188	....	0.030	....	0.0247	40 x 15	W					
CRM	13X 8110L C	0.697	0.788	0.0943	0.047	0.650	4.16	12.11	2.71	0.223	....	(0.004)	0.031	0.220	0.072	0.314	....	....	1.07	0.0200	40 x 15	CC					

# 1. Iron Base

# Stainless Steels

Updated: 8 December 2011

Blocks / Discs

1.3.5 Special Stainless Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Al	Ti	V	W	Co	Nb	N	Size (mm) Ø x H	Form	Price		
	13X 12538 J	0.04	0.64	....	....	0.78	6.07	23.72	1.53	....	....	....	....	....	....	....	....	40 x 15	C			
	13X 12540 L	0.15	1.05	....	....	0.44	5.17	27.88	0.54	....	....	....	....	....	....	....	....	40 x 15	C			
CRM	13X 14207 K	0.146	1.525	0.051	0.021	0.900	12.64	19.85	0.300	0.247	....	....	....	3.17	0.031	0.246	0.095	40 x 15	CC			
	13X 14211 P	0.112	1.75	0.018	0.016	0.65	12.8	25.7	0.31	0.28	....	....	....	2.80	0.056	0.15	....	40 x 15	C			
CRM	13X 14212 R**	0.107	2.00	0.025	0.029	1.28	8.65	21.0	0.60	1.20	0.115	0.15	0.14	1.9	0.255	0.98	0.15	40 x 15	CC	** provisional values		
CRM	13X 14215 K	0.126	0.56	0.016	0.016	1.08	15.70	23.8	0.046	0.03	....	0.08	0.06	2.89	0.016	(0.016)	....	40 x 15	C			
	13X 14219 J	0.08	1.48	0.048	0.047	0.48	12.39	21.71	0.19	0.23	....	....	....	4.07	....	0.19	....	40 x 15	C			
CRM	13X 31008 A	0.062	0.510	0.0040	0.030	1.232	19.35	24.45	0.337	0.157	....	....	0.079	0.166	0.078	0.012	0.063	38 x 15	W			
1.3.6 Precipitation Hardening Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Ti	Al	V	Co	Nb	W	B	Ta	N	Size (mm) Ø x H	Form	Price
CRM	13X PH2 L	0.111	0.690	0.0251	0.027	1.140	3.67	16.77	0.500	4.08	0.083	0.051	0.119	0.116	0.336	....	0.0061	....	0.107	40 x 17	CC	
CRM	13X PH3 L	0.167	1.70	0.039	0.023	0.399	6.03	7.47	0.996	7.06	....	....	0.066	0.398	0.65	....	0.0046	....	0.0294	43 x 20	E	Sold Out
CRM	13X PH4 M	0.0347	0.647	0.061	0.0152	0.728	4.39	13.73	0.323	5.42	....	....	0.582	0.655	0.338	....	(0.0037)	(0.049)	0.112	40 x 17	CC	
	13X PH5 J	0.122	1.03	0.015	0.065	0.98	4.51	17.85	0.51	4.42	....	....	....	....	0.58	....	....	....	0.046	40 x 15	C	
CRM	13X PH13800 A**	0.04	0.07	0.003	0.007	0.03	7.90	12.5	2.05	0.045	0.01	1.06	0.019	0.022	....	....	....	....	0.003	38 x 15	W	** provisional values
CRM	13X PH17400 A	0.0200	0.349	0.0215	0.0202	0.829	4.52	15.74	0.061	3.09	....	....	0.112	0.0411	0.184	....	....	....	0.0342	41 x 15	W	
CRM	13X PH17700 A**	0.072	0.55	<0.001	0.019	0.49	7.00	16.95	0.34	0.15	0.045	1.18	0.035	0.046	0.022	0.01	0.004	....	0.018	38 x 15	W	** provisional values
CRM	13X 66286 A	0.036	0.216	(0.0006)	0.0173	1.172	25.21	15.00	1.190	0.195	1.92	0.193	0.264	0.083	....	0.098	0.0044	....	0.0040	38 x 15	W	
CRM	13X PH2S143 A	0.044	0.478	0.0022	0.0205	0.544	5.20	13.45	1.325	1.61	....	....	0.087	0.0475	0.222	0.019	....	....	0.024	32 x 15	W	
CRM	13X FV520B A**	0.02	0.33	0.002	0.022	0.65	5.30	13.75	1.32	1.45	....	....	0.09	0.025	0.30	0.025	....	....	0.018	40 x 15	W	** provisional values
1.3.7 High Nitrogen Stainless Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Al	V	W	Co	Nb	B	N	Size (mm) Ø x H	Form	Price		
	13X NSA1 E	0.07	0.41	....	....	0.42	7.9(6)	20.3	2.47	....	....	....	....	....	....	....	0.040	40 x 15	C			
CRM	13X NSA2 G	0.142	0.805	0.0083	....	0.808	10.24	18.71	1.89	....	....	....	....	....	....	....	0.163	40 x 15	CC			
	13X NSA3 J	0.16	0.57	....	....	1.07	12.0	16.1	2.8	....	....	....	....	....	....	....	0.20	40 x 15	W			
CRM	13X NSA4 A	0.0262	0.44	0.0130	0.0281	5.59	17.11	23.79	4.19	0.487	(0.016)	....	....	....	0.079	....	0.532	40 x 17	CC			
CRM	13X NSA5 A	0.063	0.281	0.0212	(0.010)	4.27	9.52	20.73	2.32	0.098	(0.012)	....	....	....	0.574	....	0.340	40 x 17	CC			
CRM	13X NSA6 A	0.0132	0.258	0.0086	0.0183	1.59	31.32	26.93	6.75	1.16	0.003	....	....	....	0.053	....	0.188	40 x 17	CC			
CRM	13X NSA7 A	0.0209	0.359	0.0009	0.022	0.951	5.67	25.91	3.25	1.42	(0.009)	....	....	....	0.015	....	0.247	42 x 15	W			
CRM	13X NSA8 A	0.0240	(0.40)	0.0008	0.0216	0.656	6.29	25.93	3.60	0.903	....	0.060	0.586	0.0374	(0.004)	....	0.239	44 x 15	W			
CRM	13X NSA9 A	0.020	0.476	0.0008	0.0246	1.593	5.46	22.59	3.10	0.242	....	0.071	(0.024)	0.071	0.012	....	0.156	40 x 15	W			
CRM	13X NSA10 A	0.0180	0.375	0.0007	0.0206	5.23	12.98	20.67	2.636	0.170	....	0.151	(0.061)	0.060	0.143	0.0031	0.342	38 x 15	W			
	13X NSB1 D	0.17	0.58	....	....	0.44	10.0	19.1	0.11	....	....	....	....	....	....	....	0.04	40 x 15	W			
	13X NSB2 D	0.06	0.66	....	....	0.62	11.1	18.2	0.21	....	....	....	....	....	....	....	0.095	40 x 15	W			
CRM	13X NSB3 G	0.121	0.471	....	....	0.632	9.26	15.22	0.630	....	....	....	....	....	....	....	0.198	42 x 15	W			
CRM	13X NSC1 N**	0.31	0.73	0.012	....	6.8	5.1	19	0.20	0.35	....	0.52	0.10	....	1.5	....	0.09	40 x 15	CC	** provisional values		
CRM	13X NSC2 N	0.570	1.20	0.0233	....	8.36	4.00	20.14	0.782	1.040	(0.011)	0.293	....	....	2.25	....	0.269	40 x 17	CC			
CRM	13X NSC3 W	1.34	1.81	0.0086	....	9.48	3.01	22.91	0.0939	0.130	0.08	0.150	....	....	2.43	....	0.469	40 x 15	CC			
CRM	13X NSC4 D	0.522	1.50	0.0097	....	8.37	6.51	31.48	1.57	0.193	0.016	0.206	0.181	0.228	1.97	....	1.030	40 x 15	CC			
CRM	13X NSC5 A	0.493	1.16	0.0095	....	2.49	4.16	22.47	0.002	0.745	0.315	0.026	....	....	2.31	....	0.257	40 x 17	CC			
CRM	13X NSC6 A	0.0266	0.523	0.0055	0.0049	8.85	6.52	20.47	(0.002)	0.0064	(0.009)	0.0052	....	....	....	....	0.235	40 x 13	HIP			
CRM	13X NSD1 C**	0.37	0.55	0.003	0.03	23.1	0.11	21.5	1.1	0.08	0.01	....	0.05	0.13	0.04	....	1.0	40 x 15	W	** provisional values		

# 1. Iron Base

# Special Steels

Updated: 7 December 2011

Blocks / Discs

1.4.2 Tool Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	Al	V	W	As	Co	Nb	N	Pb	Alloy Type	Size (mm) Ø x H	Form	Price
CRM	14X HS1 C	0.718	0.22	0.020	0.018	0.29	0.27	4.00	0.37	0.069	(0.035)	....	1.05	17.0	....	0.25	....	0.023	....	T-1	40 x 15	W	
CRM	14X HS2 C	0.780	0.216	0.0146	0.021	0.240	0.190	4.10	0.445	0.106	....	....	1.17	18.09	....	5.06	....	0.0211	....	T-4	40 x 15	W	
CRM	14X HS3 L	0.855	0.318	0.046	0.035	0.621	0.706	5.25	1.24	0.200	0.288	....	1.79	17.93	0.044	10.64	....	0.087	0.010	T-5/6	40 x 17	CC	
CRM	14X HS9 A	2.14	0.406	0.0126	0.0222	0.259	0.239	12.40	1.11	0.039	....	(0.022)	4.06	0.011	....	0.037	(0.011)	0.032	....	D-7	42 x 15	HIP	
CRM	14X HS10 A	1.710	0.660	0.0099	0.0135	0.134	0.146	14.83	1.679	0.0605	....	....	1.142	1.75	....	0.0866	....	(0.001)	....		48 x 13	HIP	
CRM	14X HS11 A	1.739	0.794	0.0107	0.0133	0.237	0.188	19.34	1.52	0.0562	....	....	1.032	2.24	....	0.074	....	(0.002)	....		48 x 13	HIP	
CRM	14X 72305 A **	1.08	0.20	0.003	0.015	0.34	0.085	0.42	0.020	0.15	0.011	0.004	0.005	....	....	....	....	0.007	....	W-5 ** provisional	40 x 15	W	
	14X 14944 D	0.62	0.17	0.011	0.016	0.23	0.19	2.87	0.14	0.10	....	....	1.00	15.5	....	0.15	....	....	....	T-1	40 x 15	C	
	14X 14945 D	0.67	0.26	0.041	0.033	0.72	0.33	3.97	0.23	0.12	....	....	0.55	16.84	....	0.22	....	....	....		40 x 15	C	
	14X 14946 D	0.85	0.46	0.048	0.051	0.53	1.06	5.06	0.21	0.25	....	....	1.03	16.9(7)	....	0.44	....	....	....	T-1	40 x 15	C	
	14X 14948 C	0.83	0.26	0.017	0.011	0.65	0.29	4.04	0.14	0.04	....	....	0.65	18.8	....	0.16	....	....	....		40 x 15	C	
	14X 14952 D	0.90	0.32	0.054	0.054	0.64	0.34	4.93	0.32	0.02	....	....	1.24	18.0	....	0.02	....	....	....		40 x 15	C	
	14X 14890 K	0.81	0.69	0.028	(0.012)	0.58	0.08	3.60	5.59	0.09	....	....	1.99	5.30	....	0.32	....	....	....		40 x 15	C	
	14X 14892 K	0.83	0.23	0.047	0.054	0.23	0.23	3.99	4.99	0.20	....	....	1.76	6.30	....	0.16	....	....	....		40 x 15	C	
1.4.5 High Manganese Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	Al	V	Nb	Ti	Ta	N	Size (mm) Ø x H	Form	Price			
CRM	14X MN1 AH	0.427	0.260	0.0030	0.0191	19.64	0.694	1.291	0.535	0.044	0.0064	0.149	0.021	0.143	0.133	(0.005)	0.0366	40 x 15	CC				
CRM	14X MN2 Q	0.788	1.27	0.0198	0.0228	9.57	0.504	0.384	1.56	(0.16)	0.0683	(0.008)	0.104	0.346	....	....	0.0148	40 x 17	CC	Sold Out			
CRM	14X MN3 R	1.33	1.01	0.0263	0.053	11.14	2.11	1.17	0.459	0.357	0.0319	(0.026)	0.048	0.416	....	....	0.030	40 x 17	CC				
CRM	14X MN4 Z **	1.2	0.85	0.008	0.025	13.3	1.06	2.1	0.75	0.24	0.018	0.06	0.03	0.08	0.15	0.01	0.022	40 x 15	CC	** provisional values			
CRM	14X MN5 S **	1.37	1.57	0.011	0.027	8.51	1.36	3.31	1.92	0.42	0.011	0.26	0.039	0.020	1.01	0.005	0.015	40 x 15	CC	** provisional values			
	14X 15195 P	1.64	1.45	0.018	0.062	12.06	0.09	0.11	0.30	0.12	0.05	0.08	0.33	....	....	....	....	40 x 15	C				
	14X 15196 S	1.08	1.64	0.012	0.037	10.16	0.25	0.26	0.22	0.22	0.10(5)	0.13(5)	0.21	....	....	....	....	40 x 15	C				
1.4.8 Free Machining & Resulphurised Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	Al	V	Co	N	Size (mm) Ø x H	Form	Price					
CRM	14X MSFM1 K	0.062	0.490	0.382	0.078	1.07	0.036	0.319	0.196	0.0101	0.0253	(0.021)	0.0116	0.0578	0.005	40 x 15	CC						
CRM	14X MSFM2 J	0.210	0.477	0.256	0.049	1.84	0.0667	0.568	0.287	0.0225	0.0095	(0.016)	0.0359	0.0137	0.0049	40 x 15	CC						
	14X MSFM3 F	0.55	0.52	0.087	0.060	2.10	....	....	0.27	....	....	....	....	....	....	40 x 15	C						
CRM	14X MSFM4 A	0.226	0.469	0.224	0.0386	1.141	6.22	1.69	0.974	0.429	0.0141	(0.007)	0.0151	0.0253	0.0220	40 x 15	CC						
1.4.11 High-Ni Calibration Series		C	Si	S	P	Mn	Ni	Cr	Cu	Al	Co	Size (mm) Ø x H	Form	Price									
CRM	14X FeNi20 B	0.0137	1.12	0.0089	0.010	0.0284	20.06	0.102	0.074	0.018	0.994	40 x 15	CC										
CRM	14X FeNi25 B	0.0084	0.019	0.58	0.011	0.0121	25.10	0.0334	0.035	0.103	0.746	40 x 15	CC										
CRM	14X FeNi35 B	0.0418	0.239	0.119	0.0290	0.162	35.21	0.087	0.044	0.042	0.347	40 x 15	CC										
CRM	14X FeNi40 B	0.0450	0.030	(1.09)	0.0185	0.081	40.57	0.0446	0.0517	1.18	0.858	40 x 15	CC										
CRM	14X FeNi45 B	0.0045	0.567	0.038	0.0416	0.0149	45.20	0.048	0.078	0.552	0.654	40 x 15	CC										
CRM	14X FeNi50 B	0.0488	0.203	0.243	0.0259	0.115	50.09	0.093	0.105	0.052	0.499	40 x 15	CC										

## 2. Nickel Base

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2.1.2 Residuals in Nickel		Si	Mn	Cu	Fe	Cr	Co	Ti	Al	Mg	Size (mm) Ø x H		Form	Price
	21X 17519 J	0.17	0.35	0.06	0.28	0.06	0.77	0.07	0.19	0.20	40 x 15		C	
	21X 17520 H	0.20	0.18	0.09	0.25	0.10	0.48	0.08	0.04	0.06	40 x 15		C	
	21X 17521 J	0.28	0.11	0.16	0.24	0.16	0.26	0.12	0.03	0.03	40 x 15		C	
	21X 17522 G	0.35	0.02	0.20	0.07	0.23	0.04	0.31	0.03	<0.005	40 x 15		C	

  

2.2 Ni/Cr (Nimonic Type)		C	Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al	Mg	Sn	Zr	V	Ag	Te	Bi	As	Sb	Pb	W	B	Size (mm) Ø x H		Form	Price	
	22X 801 D	0.14	0.51	0.56	0.22	0.57	20.75	0.25	0.25	2.19	1.33	0.03	....	....	....	....	....	....	....	....	....	....	....	....	....	40 x 15	C	
	22X 803 E	0.06	1.05	0.22	0.007	0.33	19.85	0.50	0.50	1.93	1.60	0.0002	....	....	....	....	....	....	....	....	....	....	....	....	....	40 x 15	C	
	22X 804 D	0.07	0.56	0.54	0.21	0.66	19.72	0.09	0.20	2.34	1.33	0.004	....	....	....	....	....	....	....	....	....	....	....	....	....	40 x 15	C	
	22X 805 D	0.20	0.22	1.01	0.54	1.06	19.82	0.10	0.22	2.71	1.06	....	....	....	....	....	....	....	....	....	....	....	....	....	....	40 x 15	C	
	22X 806 D	0.007	0.10	0.09	0.004	0.18	19.66	0.01	0.03	2.48	1.35	....	....	0.004	....	....	....	....	....	....	0.007	0.02	0.004	....	....	40 x 15	C	
	22X 808 C	....	0.10	0.05	<0.01	0.11	19.73	<0.01	0.03	2.14	1.41	....	0.030	0.035	0.05	0.007	0.008	0.002	0.013	0.017	0.007	0.11	0.014	....	....	40 x 15	C	

  

		C	Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al	Mg	S	P	B	Size (mm) Ø x H		Form	Price
	22X 902 B	0.15	0.50	0.51	0.13	0.61	18.80	0.22	17.08	2.26	1.31	0.02	....	....	....	40 x 15		C	
	22X 903 C	0.08	1.09	0.25	0.01	0.83	19.84	0.07	17.60	1.86	1.67	0.002	....	....	....	40 x 15		C	
	22X 904 C	0.08	0.52	0.50	0.10	0.25	19.9	0.21	16.9	2.26	1.29	0.005	....	....	....	40 x 15		C	
	22X 905 C	0.19	0.22	1.08	0.23	1.15	19.89	0.53	16.45	2.92	1.03	....	....	....	....	40 x 15		C	
CRM	22X 1051 D	0.166	0.58	0.206	0.115	0.575	15.95	4.50	18.98	1.078	4.35	0.0186	0.0015	0.0040	0.0009	40 x 15		C	
	22X 1052 C	0.19	0.51	0.26	0.13	0.65	15.7	4.48	18.6	1.09	4.08	0.002	....	....	....	40 x 15		C	
CRM	22X 1055 D	0.274	0.24	0.03	0.02	1.26	14.9	3.87	19.9	0.52	3.97	(0.008)	0.009	....	....	40 x 15		C	

  

2.3 Fe/Ni/Cr (Incoloy Type)		C	Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al	S	P	Ni	Size (mm) Ø x H		Form	Price
CRM	23X 8001 G	0.130	0.191	1.29	0.078	(44.2)	20.28	0.540	0.982	0.650	0.55	0.0067	0.0067	30.98	40 x 15		C	
	23X 8002 E	0.06	0.47	0.68	0.28	....	20.48	0.34	0.54	0.32	0.29	....	....	32.1	40 x 15		C	
	23X 8004 E	0.06	0.53	0.70	0.30	....	19.72	0.33	0.53	0.34	0.31	....	....	31.8	40 x 15		C	
	23X 8005 E	0.07	0.46	0.73	0.28	....	20.81	0.34	0.50	0.35	0.22	....	....	32.2	40 x 15		C	

## 2. Nickel Base

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Blocks / Discs

2.3 Fe/Ni/Cr (Incoloy Type) continued												Size (mm)	Form	Price									
C	Si	Mn	Cu	Cr	Mo	Co	Ti	Al	Ni			Ø x H											
23X DS2 E	0.06	2.07	1.00	0.30	17.81	0.30	0.48	0.17	0.04	37.4		40 x 15	C										
23X DS4 E	0.06	2.01	1.02	0.30	16.83	0.29	0.48	0.20	0.037	37.15		40 x 15	C										
23X DS5 E	0.080	1.98	1.04	0.30	18.64	0.30	0.50	0.17	0.083	36.57		40 x 15	C										
2.4 Ni/Cr/Co/Mo												Size (mm)	Form	Price									
Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al				Ø x H											
24X 14939 E	0.42	0.63	0.52	0.57	21.0	6.62	19.58	1.88	0.76			40 x 15	C										
2.4.1 Waspalloy, 720-types												Size (mm)	Form	Price									
C	Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al	S	P	Ni	B	V	W	Zr	Nb	Pb		Ø x H			
CRM 24X WASP1 B	0.01	0.59	0.13	0.08	2.16	16.64	6.14	12.8	3.13	1.64	0.011	0.019	----	0.007	0.03	0.18	0.12	0.055	----	Sold Out	40 x 15	C	
CRM 24X WASP2 B	0.09	0.35	0.24	0.11	1.66	18.50	4.22	14.6	3.53	1.00	0.018	0.009	----	0.008	0.06	0.14	0.07	0.12	----	Sold Out	40 x 15	C	
CRM 24X WASP3 E	0.102	0.403	0.650	0.470	1.197	19.76	3.98	13.77	3.904	1.54	0.0171	0.018	53.51	0.0102	0.082	(0.111)	0.146	0.149	----		40 x 15	CC	
CRM 24X 07001 A	0.040	0.090	0.0269	0.0138	1.007	19.55	4.25	13.05	3.05	1.40	(0.0005)	0.0030	57.45	0.0075	----	----	0.0591	0.0500	----		32 x 20	W	
CRM 24X 7201 A	0.0322	0.036	0.0022	----	0.09	16.01	3.01	14.79	5.10	2.44	0.0024	(0.002)	57.10	0.0242	----	1.32	0.0433	----	----		40 x 13	HIP	
2.5 Ni/Cr/Nb/Mo												Size (mm)	Form	Price									
Si	Mn	Cu	Fe	Cr	Mo	Co	W	Nb				Ø x H											
25X 10221 F	0.45	0.28	0.11	0.62	20.0	6.57	0.26	2.23	7.43			40 x 15	C										
25X 10225 G	0.25	0.29	0.12	0.55	18.27	5.95	0.30	1.74	7.00			40 x 15	C										
25X 10230 G	0.34	0.35	0.12	0.76	21.9	6.06	0.59	3.83	7.04			40 x 15	C										
25X 10231 D	0.14	0.13	0.06	0.55	20.58	6.00	0.11	2.67	6.76			40 x 15	C										
25X 10235 E	0.56	0.53	0.26	1.26	19.87	5.85	0.53	3.14	7.25			40 x 15	C										
2.6 Ni/Cr/Mo												Size (mm)	Form	Price									
Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al				Ø x H											
26X 11381 D	0.30	0.43	0.008	0.70	19.76	9.47	(0.047)	2.48	0.41			40 x 15	C										
26X 11383 D	0.29	0.19	0.08	0.49	22.50	9.37	0.05	2.84	0.67			40 x 15	C										
26X 11384 E	0.15	0.13	0.12	0.98	20.5	10.2	0.30	2.6	0.50			40 x 15	C										
26X 14182 D	(0.01)	<0.005	0.006	0.09	21.61	10.11	0.06	2.75	0.76			40 x 15	C										
2.7 Ni/Cr/Mo/Co												Size (mm)	Form	Price									
Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al				Ø x H											
27X 14184 F	0.41	0.40	0.09	0.40	21.8	10.7	10.5	0.02	0.02			40 x 15	C										
27X 14188 D	0.33	0.30	(0.003)	0.44	21.17	10.3	10.4	0.03	<0.01			40 x 15	C										
27X 14386 C	0.38	0.39	0.02	1.50	20.73	10.47	10.51	0.06	0.02			40 x 15	C	Sold Out - no remake									
27X 14387 E	0.28	0.27	<0.005	1.11	20.2	10.8	10.0	<0.005	<0.005			40 x 15	C										

## 2. Nickel Base

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Blocks / Discs

2.8 Ni/Cr/Fe (Inconel Type)		C	Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al	Mg	S	P	Sn	Nb	Ta	W	B	Ni	N	Size (mm) Ø x H	Form	Price	
	28X 6001 G	....	0.95	0.12	0.83	6.33	16.38	....	1.02	0.58	0.02	0.01	....	....	....	....	....	....	....	....	....	40 x 15	C		
	28X 6002 F	....	0.25	0.65	0.02	8.24	16.23	....	0.22	0.12	0.18	0.004	....	....	....	....	....	....	....	....	....	40 x 15	C		
	28X 6003 E	....	0.74	0.47	0.42	7.1	15.56	....	0.62	0.22	0.025	0.01	....	....	....	....	....	....	....	....	....	40 x 15	C		
	28X 6004 E	....	0.65	0.38	0.42	7.17	16.21	....	0.77	0.27	0.05	0.008	....	....	....	....	....	....	....	....	....	40 x 15	C		
	28X 6005 E	....	0.60	0.39	0.39	6.98	16.93	....	0.62	0.28	0.06	0.002	....	....	....	....	....	....	....	....	....	40 x 15	C		
	28X X7504 D	0.03	0.39	1.09	0.22	6.42	14.22	0.46	....	2.59	0.70	....	....	....	....	0.95	....	....	....	....	....	40 x 15	C		
CRM	28X 6251 L	0.028	0.274	0.139	0.072	3.28	20.49	9.94	(0.041)	0.017	(0.054)	....	0.0043	0.0055	....	2.00	....	....	(0.0043)	63.36	0.0431	40 x 17	CC		
CRM	28X 6252 M	0.084	0.559	0.276	0.483	3.72	21.08	9.23	0.262	0.21	0.257	....	0.0138	(0.008)	....	3.96	....	....	0.0166	59.37	0.173	40 x 17	CC		
CRM	28X 6253 P	0.126	1.13	0.677	0.299	5.23	21.66	7.69	0.417	0.360	(0.21)	....	0.0211	0.013	....	4.202	0.057	....	....	57.51	0.093	40 x 15	CC		
CRM	28X 6254 L	0.047	(0.79)	0.457	0.044	3.33	22.71	8.92	0.195	0.179	(0.05)	....	0.0160	0.0097	....	3.60	....	....	0.005	59.55	0.0364	40 x 17	CC		
CRM	28X 6255 L	0.035	0.591	0.230	0.686	1.88	19.41	8.05	0.239	0.413	0.35	....	0.016	0.008	....	4.11	0.194	....	....	63.6	0.099	40 x 15	CC		
CRM	28X 6256 A	0.0173	0.041	0.0004	0.018	(0.034)	21.29	8.81	....	0.266	0.301	....	(0.002)	0.0033	....	3.75	....	....	....	65.4	0.007	40 x 13	HIP		
CRM	28X 06625 A	0.020	0.273	0.090	0.0288	0.917	21.94	9.15	0.031	0.238	0.184	....	0.0037	(0.002)	....	3.52	....	....	0.0009	63.49	0.0219	40 x 15	W		
CRM	28X 7181 J**	0.02	0.82	0.14	0.04	19.0	18.3	3.2	0.01	0.12	0.08	....	0.01	0.014	....	4.90	....	....	0.002	bal	0.036	** provis values	40 x 15	CC	
CRM	28X 7182 M	0.021	0.390	0.310	0.134	(14.7)	19.98	3.59	0.632	0.98	0.41	....	0.0106	0.007	0.005	4.74	....	0.030	0.0047	53.86	....		43 x 20	C	
CRM	28X 7183 U**	0.10	0.89	0.54	0.32	15.5	18.4	3.65	0.95	0.95	0.5	....	0.020	0.021	....	5.70	....	....	0.011	bal	0.04	** provis values	40 x 15	CC	
CRM	28X 7184 K	0.085	0.403	0.215	0.123	18.22	16.91	3.07	0.44	0.633	0.620	....	0.0158	0.0103	....	5.07	0.077	....	0.0052	54.16	0.084		40 x 15	CC	
CRM	28X 7185 K	0.060	0.882	0.286	0.203	18.44	20.77	2.71	0.220	0.281	0.359	....	0.0089	0.0189	....	4.61	0.115	....	0.0107	50.67	0.172		40 x 15	CC	
CRM	28X 7186 J	0.043	0.358	0.398	0.190	16.51	16.13	3.24	0.579	1.04	0.70	....	0.0264	0.020	....	5.75	....	....	0.0097	55.06	0.064		40 x 15	CC	
CRM	28X 07718 A	0.026	0.076	0.055	0.038	19.55	18.62	3.01	0.172	0.945	0.544	....	0.0015	0.0063	....	5.05	....	....	0.0034	51.99	0.0056		38 x 15	W	

  

2.10 Ni/Co/Cr/Al/Ti		C	Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al	N	Zr	V	Size (mm) Ø x H	Form	Price
CRM	210X 11775 G	0.024	0.36	0.127	(0.008)	1.02	10.42	3.19	14.83	5.76	7.0	(0.003)	0.070	0.47	45 x 20	C	
	210X 11979 G	0.025	0.30	0.13	0.07	0.56	8.07	3.28	14.32	5.22	3.76	....	0.04	0.82	40 x 15	C	
	210X 11981 F	0.09	0.33	0.21	0.10	0.93	11.81	3.66	14.65	4.83	5.07	....	0.11	0.73	40 x 15	C	

  

2.11 Ni/Cr/Al		Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al	Nb	Ta	Zr	Size (mm) Ø x H	Form	Price
	211X 11221 F	0.21	0.24	0.05	0.25	13.82	3.72	1.24	1.26	6.26	2.81	0.06	0.21	40 x 15	C	
	211X 11222 F	0.23	0.32	0.11	0.17	14.18	4.03	0.12	1.05	5.47	2.89	0.08	0.12	40 x 15	C	
	211X 11224 F	0.34	0.11	0.31	0.41	13.82	3.99	0.25	1.31	6.30	3.33	0.53	0.15	40 x 15	C	
	211X 11233 E	0.14	0.20	0.21	0.39	12.67	4.10	0.63	1.32	6.03	2.61	0.23	0.13	40 x 15	C	
	211X 11236 E	0.21	0.21	0.16	0.46	15.98	4.02	0.64	1.33	6.14	2.73	0.10	0.05	40 x 15	C	

## 2. Nickel Base

Updated: 8 December 2011

Blocks / Discs

2.12 Ni/Cu (Monel Type)		C	Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al	Mg	S	P	Nb	Pb	Sn	Zn	Cd	Be	Bi	Se	Ni	Size (mm) Ø x H	Form	Price
CRM	212X 4001 N	0.0460	0.98	2.35	27.62	1.032	0.143	....	0.107	0.344	0.316	0.16	0.019	0.0099	....	0.054	....	....	....	....	....	....	66.56	40 x 15	CC	
CRM	212X 4002 L	0.0369	0.090	1.68	32.41	1.022	0.084	....	0.064	0.0421	0.081	0.0222	0.0019	....	0.0318	0.0373	....	....	....	....	....	....	64.33	40 x 15	CC	
CRM	212X 4003 J	0.0051	0.293	1.00	30.48	1.24	0.073	0.023	0.029	(0.063)	0.086	0.035	0.0069	0.0054	0.156	0.0134	....	....	....	....	....	....	66.58	43 x 20	C	
CRM	212X 4004 L	0.101	0.892	0.718	28.69	4.71	0.096	....	0.097	1.06	0.479	....	0.0078	0.0203	1.01	0.040	....	....	0.0023	....	....	....	62.11	40 x 15	CC	
CRM	212X 4005 E	0.115	2.48	1.55	20.76	1.90	0.513	0.035	0.662	0.892	2.05	0.0304	0.0138	0.013	0.330	0.025	....	....	....	Sold Out			68.13	40 x 15	CC	
CRM	212X 4006 G	0.0241	4.01	0.763	24.95	1.75	0.120	....	0.042	1.50	3.81	0.107	0.0275	....	0.538	0.016	....	....	....	....	....	....	62.30	40 x 15	CC	
CRM	212X 4007 A	0.0219	2.19	0.955	29.39	1.89	....	....	....	....	....	....	0.0063	0.015	2.30	0.022	0.0207	0.0183	0.0125	0.0040	0.0490	0.023	63.05	40 x 15	CC	
CRM	212X 04400 A **	0.14	0.25	1.03	32.5	2.05	0.15	0.03	0.04	0.015	0.032	0.051	0.001	0.003	....	....	....	....	....	** provisional values			(bal)	40 x 15	W	
CRM	212X 05500 A **	0.14	0.16	0.65	29.5	1.15	0.08	....	....	0.64	3.0	0.01	0.002	0.004	....	....	....	....	....	** provisional values			(bal)	38 x 15	W	

  

		C	Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al	Mg	S	P	Nb	Pb	Ni	Size (mm) Ø x H	Form	Price
	212X NA2 G	0.07	2.50	1.06	29.8	1.53	....	....	....	....	....	0.008	0.023	0.019	....	0.02	....	40 x 15	C	
CRM	212X NA4 A	0.098	3.83	1.082	29.34	2.26	0.120	0.026	0.046	0.037	0.012	0.0014	0.004	0.0053	(0.51)	0.018	62.8	40 x 13	CC	

  

2.15 Ni/Co/Cr/Fe/Mo (Hastelloy Type)		C	Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al	S	P	B	Nb	V	W	N	Ni	Size (mm) Ø x H	Form	Price
CRM	215X HB1 N	0.079	0.24	0.613	0.164	9.73	1.08	32.44	1.176	....	....	0.048	(0.014)	....	....	0.454	....	0.0207	....	40 x 17	CC	
CRM	215X HB2 G **	0.048	0.40	0.80	0.06	4.20	0.70	32.0	0.55	0.13	0.20	0.020	0.007	....	0.25	0.48	....	0.011	....	40 x 15	CC	** provisional values
CRM	215X HB3 H **	0.066	0.80	0.60	0.15	6.28	2.35	27.5	1.0	0.22	0.25	0.015	0.018	....	0.70	0.29	....	0.025	....	40 x 15	CC	** provisional values
CRM	215X HB4 F	0.079	1.02	0.666	(0.024)	7.02	0.414	27.59	1.71	....	....	0.013	0.036	....	....	0.115	(0.028)	0.0028	61.21	43 x 20	C	
CRM	215X HB5 L	0.151	1.05	0.335	0.268	3.45	0.123	26.1	2.49	0.192	0.49	0.0113	0.038	0.003	....	0.136	....	0.006	65.3	40 x 15	CC	
CRM	215X HC1 L	0.045	(0.20)	1.19	0.046	2.60	15.42	20.91	2.60	0.264	0.72	0.0086	0.007	....	....	0.090	2.66	0.059	....	40 x 15	CC	
CRM	215X HC2 J	0.090	0.79	1.036	....	4.02	16.19	19.28	1.72	(0.078)	(0.01)	0.024	0.012	(0.006)	....	0.362	3.92	0.092	52.09	40 x 17	CC	
CRM	215X HC3 L **	0.10	1.3	0.70	0.25	5.0	17.5	18.0	0.95	0.085	0.06	0.023	0.011	0.005	....	0.40	4.40	0.062	....	40 x 15	CC	** provisional values
CRM	215X HC4 J	0.146	0.264	0.548	0.052	6.18	18.17	16.46	0.500	0.149	(0.073)	0.0306	0.007	....	....	0.444	5.26	0.045	....	40 x 15	CC	
CRM	215X HC5 U **	0.13	1.1	0.27	0.62	6.4	19.0	16.5	0.20	0.04	0.15	0.020	0.028	....	....	0.58	5.40	0.080	....	40 x 15	CC	** provisional values
CRM	215X HC6 A	0.005	(0.048)	0.099	....	5.00	15.67	16.14	1.16	0.003	0.066	0.0021	....	....	....	0.012	3.22	0.0034	58.45	40 x 13	HIP	

  

2.19 Various Nickel Alloys		C	Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al	S	P	Ta	W	Zr	B	Nb	Ni	N	Size (mm) Ø x H	Form	Price
CRM	219X 20500 B	0.0486	1.24	0.710	0.0103	3.65	49.99	0.082	0.016	....	....	0.0100	0.0026	....	....	....	....	0.214	43.88	0.175	40 x 15	CC	
	219X 1837 A	0.004	0.053	0.003	....	0.10	9.98	3.00	10.04	5.28	5.63	0.001	0.002	<0.01	0.012	0.027	0.11	<0.01	....	....	40 x 15	C	
CRM	219X 1867 D	0.092	0.187	0.131	0.308	0.244	7.78	6.00	9.80	1.355	6.05	0.0055	0.0054	4.05	0.066	0.273	0.0152	0.052	63.81	....	40 x 15	CC	
CRM	219X 20004 A **	0.222	0.91	14.05	0.318	9.42	13.65	0.105	0.112	0.51	....	0.0030	0.015	0.078	....	....	....	1.55	59.0	....	40 x 15	CC	** provisional values
CRM	219X 86182 A **	0.148	0.81	7.62	0.151	7.89	15.80	0.078	0.046	0.42	....	0.0040	0.009	0.031	....	....	....	2.16	64.8	....	40 x 15	CC	** provisional values

  

2.21 Ni/B Hardfacing Alloys		C	Si	Mn	Cu	Fe	Cr	Mo	Co	W	S	Bi	Se	Sn	B	Size (mm) Ø x H	Form	Price
	221X HF2 B	0.117	3.08	0.387	0.231	3.08	2.96	0.130	0.494	....	0.0106	0.0098	0.0048	....	2.96	43 x 20	C	
	221X HF3 B	0.71	5.5	0.14	0.16	3.44	7.7	0.05	0.25	1.13	0.011	0.005	0.002	0.10	1.69	43 x 20	C	
	221X HF4 B	0.38	6.49	0.15	0.05	5.82	17.3	0.05	0.094	0.76	0.009	....	....	0.68	1.07	43 x 20	C	

### 3. Copper Base

Updated: 8 December 2011

Blocks / Discs

3.1 Brass - Cu/Zn Binaries		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	Sb	Cr	Co	P	S	Se	B	Cd	Cu	Size (mm) Ø x H	Form	Price		
CRM	31X B1 P**	0.020	0.013	44.0	0.03	0.009	0.012	0.005	0.004	0.015	0.011	0.008	0.001	....	0.018	....	....	0.001	0.0015	55.7	** provis values	40 x 15	CC		
CRM	31X B2 L	0.151	0.0129	39.57	0.0191	0.0125	0.0172	(0.007)	0.0222	0.0249	0.0107	0.0207	....	....	....	....	....	0.0056	....	60.13		42 x 18	CC		
CRM	31X B3 K	0.0268	0.024	33.89	0.065	0.059	0.0114	0.017	0.0200	0.0187	0.0127	0.0096	....	....	....	....	....	0.0031	....	65.80		42 x 18	CC		
CRM	31X B4 L	0.073	0.064	28.39	0.026	0.0571	....	0.025	0.046	0.0074	0.0076	0.0076	0.087	0.033	(0.023)	0.0091	....	....	0.0330	71.10		40 x 17	CC		
CRM	31X B5 K	0.045	0.021	23.60	0.056	0.0085	(0.001)	(0.001)	0.0054	0.0006	0.0061	0.0057	0.0002	0.0062	....	....	....	0.0002	0.00050	76.22		40 x 15	CC		
	31X B6 J	<0.005	<0.005	19.4	(0.01)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	....	....	....	....	....	....	....	80.6	Sold Out	40 x 15	CC		
CRM	31X B7 J	0.101	0.010	15.01	0.018	0.020	<0.005	<0.005	0.0016	0.0002	0.066	0.0019	....	....	....	....	....	0.0030	....	84.80		42 x 17	CC		
CRM	31X B8 H	0.035	0.072	9.52	0.0267	0.0083	(0.0013)	0.0051	0.0081	0.0012	0.031	0.0108	....	....	....	....	....	0.0021	....	90.28		42 x 17	CC		
CRM	31X B9 L	0.0245	0.0549	3.83	0.0168	0.0129	(0.0005)	0.0036	0.0053	0.0017	0.0068	0.0075	....	....	....	....	0.0029	(0.0003)	....	96.05		40 x 17	CC		
	31X B95	0.45	<0.001	4.99	(0.007)	<0.001	<0.005	(0.01)	(0.008)	<0.001	(0.007)	<0.001	....	....	....	....	....	<0.001	....	94.4		40 x 15	CC		
3.1.1 Alloyed Brass		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	Sb	P	S	B	Co	Cr	Cd	Ag	Hg	Cu	Size (mm) Ø x H	Form	Price	
CRM	31X B10 L	0.0386	0.0161	35.36	1.25	1.572	0.472	0.034	0.0062	0.206	0.0086	0.0126	....	....	....	....	....	....	....	....	61.01		42 x 18	CC	
CRM	31X B11 H	0.0117	0.0134	36.65	0.802	1.033	0.0262	0.0063	0.0061	0.653	0.0054	0.0057	....	....	....	....	....	....	....	....	60.72		40 x 15	CC	
CRM	31X B12 G	0.0229	0.0244	36.67	0.430	0.491	0.081	0.0207	0.0181	1.720	0.0198	0.0194	....	....	....	....	....	....	....	....	60.51		40 x 15	CC	
CRM	31X B13 G	0.0127	0.0188	36.67	0.182	0.212	0.0148	0.032	0.0120	2.84	0.0116	0.0056	....	....	....	....	....	....	....	....	60.03		40 x 15	CC	
CRM	31X B14 G	0.486	0.0104	36.52	0.0183	0.0190	4.02	0.051	0.0091	0.0117	0.0103	0.0139	....	....	....	0.0109	....	....	0.0130	....	58.85		40 x 15	CC	
CRM	31X B15 H	0.944	0.0073	36.80	0.0176	0.0102	2.98	0.109	0.0048	0.0122	0.0074	0.0111	....	....	....	0.0046	....	....	0.0071	....	59.07		40 x 15	CC	
CRM	31X B16 H**	2.15	0.028	37.1	0.015	0.008	2.00	0.195	0.004	0.003	0.004	0.015	....	....	....	0.002	....	....	0.005	....	58.2	** provis	40 x 15	CC	
CRM	31X B17 F	0.010	(0.05)	(33.9)	(0.02)	(0.01)	6.05	(0.007)	(0.015)	<0.001	<0.001	<0.001	....	....	....	....	....	....	....	....	60.0		40 x 15	CC	
CRM	31X B18 J	0.046	0.916	39.11	0.0193	0.0143	0.0236	0.018	0.0196	0.00110	0.0051	0.0129	0.0117	<0.005	....	....	....	....	....	....	59.82		42 x 18	CC	
CRM	31X B19 P	0.035	2.51	38.50	0.028	0.0127	(0.004)	0.004	0.0110	0.0055	0.0047	0.0134	0.031	(0.002)	....	....	....	....	....	....	58.85		40 x 17	CC	
CRM	31X B20 N	0.0244	4.43	37.03	0.024	0.021	0.0025	(0.005)	0.0028	0.0005	0.0025	0.0039	0.0230	(0.004)	....	....	....	....	....	....	58.53		42 x 17	CC	
CRM	31X B21 D	0.132	0.120	29.50	0.129	0.107	0.121	0.147	0.108	0.0647	0.114	0.130	0.100	(0.002)	0.0050	....	....	....	....	....	69.24		42 x 18	CC	
CRM	31X B22 F**	0.16	0.16	15.5	0.16	0.16	0.04	0.045	0.165	....	0.175	0.17	0.21	0.03	0.004	0.14	....	0.011	....	....	82.9	** provis	40 x 15	CC	
CRM	31X B23 D	0.060	0.046	9.97	0.060	0.047	0.0048	0.0046	0.0482	0.0053	0.0463	0.0448	0.030	0.053	....	0.0472	....	0.0010	....	....	89.57		40 x 15	CC	
CRM	31X B24 D	1.93	0.050	1.99	0.0342	0.134	(0.002)	....	0.0116	0.0030	0.0126	0.118	0.0065	0.050	....	....	....	0.0008	....	....	95.65		40 x 15	CC	
CRM	31X B25 B	0.613	0.298	40.83	0.056	0.236	0.470	0.254	0.0284	0.127	0.0594	0.0843	0.093	....	(0.0045)	....	....	....	....	....	56.95		42 x 17	CC	
CRM	31X B26 E	1.62	0.752	29.81	1.08	1.68	1.12	0.195	0.112	0.474	0.096	0.116	0.054	....	0.0011	0.113	....	0.0172	....	....	62.80		40 x 15	CC	
CRM	31X B27 B	0.985	0.492	17.65	0.111	0.0315	0.0015	0.0044	0.048	0.0059	0.0320	0.0243	0.0150	0.0080	(0.0005)	....	....	....	....	....	80.65		42 x 18	CC	
CRM	31X B28 A	0.0126	0.081	35.47	0.0490	0.083	0.034	....	....	0.094	....	....	....	(0.0018)	....	....	0.073	0.0072	....	0.0007	64.02		42 x 18	CC	
CRM	31X B29 A	0.0328	0.146	24.75	0.144	4.11	0.219	....	....	0.0625	....	....	3.33	....	....	....	0.062	0.0144	....	....	67.08		40 x 15	CC	
3.1.2 Brass - Trace Elements		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	Sb	Cr	Co	Se	Cd	B	C	Ag	Cu	Size (mm) Ø x H	Form	Price		
CRM	31X TB1 J	0.231	0.201	36.90	0.038	0.220	0.210	0.093	0.153	0.314	0.049	0.104	0.084	....	0.006	0.0114	0.0006	....	....	....	61.39		40 x 15	CC	
CRM	31X TB2 G	0.105	0.107	37.16	0.072	0.093	0.084	0.042	0.101	0.088	0.034	0.051	....	....	....	....	<0.0005	0.0040	....	....	61.97	Sold Out	42 x 18	CC	
CRM	31X TB3 K	0.089	0.169	37.92	0.0282	0.0637	0.0045	0.016	0.0454	0.0244	0.0030	0.0222	....	....	....	0.0043	(0.0005)	....	....	....	61.58		40 x 17	CC	
CRM	31X TB4 F	0.0356	0.0225	34.86	0.0229	0.0114	(0.0004)	(0.0027)	0.0065	0.0021	0.0056	0.0064	....	....	....	....	0.0021	0.0018	....	....	65.00		42 x 18	CC	
CRM	31X TB5 A**	0.105	0.58	40.4	0.18	0.08	0.045	0.12	0.34	0.44	0.30	0.17	0.05	0.025	....	0.50	....	....	0.21	55.9	** provis values	40 x 15	CC		



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3.1.3 Naval Brass		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	Sb	P	S	Co	B	C	Cu	Size (mm) Ø x H	Form	Price		
CRM	31X NB1 H	0.535	0.504	29.73	0.037	0.520	(0.0004)	0.004	0.161	0.051	0.0065	0.0057	0.0223	0.0024	(0.0006)	....	....	68.35	42 x 17	CC			
CRM	31X NB2 G	1.06	0.293	28.82	0.095	0.065	0.085	0.096	0.105	0.116	0.052	0.115	0.091	<0.002	....	....	....	68.93	42 x 17	CC			
CRM	31X NB3 H	1.67	0.197	24.64	0.113	0.0299	0.094	0.145	0.074	0.0166	0.093	0.265	0.150	(0.006)	....	0.0026	(0.0020)	72.45	42 x 18	CC			
CRM	31X NB4 J	2.01	0.067	32.57	0.235	0.230	0.178	0.203	0.0062	0.0053	0.104	0.450	0.230	(0.0032)	....	0.0009	....	63.71	42 x 17	CC			
3.1.5 High Tensile Brass		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Sb	P	S	C	Cu			Size (mm) Ø x H	Form	Price			
CRM	31X HT31 A	0.0149	0.020	18.19	2.90	0.196	6.70	0.041	0.0006	5.27	(0.0011)	0.00032	(0.00003)	0.006	66.67			50 x 18	W				
CRM	31X HT37 A	0.0116	0.623	34.69	0.0344	0.0105	0.0004	1.38	0.0011	2.88	0.0007	0.003	<0.0005	0.003	60.33			40 x 18	W				
CRM	31X HT38 A	0.039	0.051	36.66	0.0530	0.0242	0.960	0.869	0.0008	2.60	(0.0006)	0.0024	(0.001)	0.003	58.77			50 x 18	W				
3.1.6 Bismuth Brass		Bi	Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Co	Sb	P	S	Se	Cd	B	Cu	Size (mm) Ø x H	Form	Price	
CRM	31X BIB1 C	1.948	0.488	0.211	36.67	0.113	0.313	0.0718	0.099	0.0282	0.0479	....	0.0158	0.0637	(0.001)	0.0064	0.0082	....	59.93	40 x 15	CC		
CRM	31X BIB2 C	0.972	1.107	0.0659	33.20	0.203	0.466	0.252	0.133	0.0499	....	0.0496	0.089	0.0235	(0.0007)	0.0089	0.0122	....	63.30	40 x 15	CC		
CRM	31X BIB3 B	4.05	0.111	0.149	32.46	0.099	0.098	0.0298	0.061	0.057	0.243	....	0.0417	0.0175	(0.0005)	0.003	0.0029	....	62.48	40 x 17	CC		
CRM	31X BIB4 B **	0.90	0.49	0.09	36.1	0.155	0.20	0.40	0.048	....	....	0.031	0.007	0.015	0.001	0.008	0.002	0.001	61.4	40 x 15	CC	** provisional values	
3.1.7 Leaded Brass		Pb	Sn	Zn	Fe	Ni	Mn	Al	Si	As	Bi	Sb	P	S	Co	Ag	Se	Cd	B	Cu	Size (mm) Ø x H	Form	Price
CRM	31X 7835.1 R	2.699	0.293	35.31	0.118	0.143	....	0.0319	0.010	0.0201	0.0113	0.0161	0.0222	....	0.0232	(0.001)	(0.001)	0.0028	0.0012	61.20	40 x 15	CC	
CRM	31X 7835.2 J	2.08	0.211	31.86	0.094	1.35	....	0.172	0.0217	0.0225	0.0084	0.0240	0.0276	....	0.0279	0.003	0.003	0.0026	(0.0016)	64.03	42 x 18	CC	
CRM	31X 7835.3 G	1.274	0.0912	35.34	0.299	0.282	....	0.384	0.022	0.098	0.0257	0.104	0.042	....	0.0053	0.0010	0.0010	0.0030	0.0014	62.10	40 x 15	CC	
CRM	31X 7835.4 J	1.049	0.070	30.36	0.0350	0.477	....	0.525	....	0.142	0.0169	0.068	0.121	....	0.0027	....	....	0.0088	0.0021	67.13	40 x 15	CC	
CRM	31X 7835.5 A	1.64	0.116	6.23	0.126	0.249	....	0.078	....	0.104	....	0.114	0.018	....	....	....	....	....	....	91.25	42 x 18	CC	
CRM	31X 7835.6 B **	1.52	0.092	37.0	0.027	0.015	....	0.65	0.011	0.005	0.004	0.012	0.016	0.001	0.001	0.001	0.01	0.002	0.003	60.5	40 x 15	CC	** provisional values
CRM	31X 7835.7 A	2.29	0.137	7.50	0.030	0.943	....	0.0084	0.039	....	0.048	0.0327	0.080	0.0075	0.0120	....	....	0.0047	....	88.87	40 x 15	CC	
CRM	31X 7835.8 A	3.15	0.516	24.83	0.100	0.158	0.093	....	....	0.143	0.112	0.115	0.122	....	0.313	0.463	....	0.087	....	69.93	40 x 15	CC	
CRM	31X 7835.9 A **	1.05	1.48	14.4	0.41	0.10	0.001	0.090	....	0.11	0.84	0.44	0.040	0.012	0.080	2.1	0.25	0.065	....	78.5	40 x 15	CC	** provis values
See also Section 3.1.1 products 31X B18 - B20																							
3.1.8 Manganese Brass		Mn	Sn	Pb	Zn	Fe	Ni	Al	Si	As	Bi	Sb	P	S	Co	Ag	Cr	C	Cu	Size (mm) Ø x H	Form	Price	
CRM	31X MNB1 C	0.188	0.105	1.44	29.37	0.268	0.053	0.599	0.128	....	....	....	....	....	....	....	....	....	....	67.77	42 x 18	CC	
CRM	31X MNB2 D	2.05	0.289	0.983	31.30	0.548	0.118	0.272	0.579	0.0201	....	0.0177	0.0246	....	0.0086	0.041	....	....	....	63.75	40 x 15	CC	
CRM	31X MNB3 E	3.08	0.459	0.504	25.97	1.15	0.348	0.584	1.53	0.0179	....	0.0056	0.0259	....	0.0556	0.0162	....	....	....	66.18	40 x 15	CC	
CRM	31X MNB4 F **	2.95	0.55	0.22	25.5	1.72	0.33	3.80	0.10	0.012	....	0.018	0.028	....	0.030	0.012	....	....	....	64.5	40 x 15	CC	** provisional values
CRM	31X MNB5 Q	0.137	1.60	0.243	37.12	0.013	0.996	2.96	0.44	0.0100	....	0.0118	(0.008)	....	0.0155	0.0063	0.19	....	....	56.18	42 x 17	CC	
CRM	31X MNB5 R	0.175	1.228	0.157	37.11	0.898	1.32	3.24	0.528	0.0021	....	(0.006)	0.0399	....	0.066	0.0195	0.0116	....	....	55.14	40 x 17	CC	
CRM	31X MNB6 C	0.871	0.0310	0.016	28.53	0.0697	0.261	0.0148	0.0196	0.0107	....	0.0128	0.0226	....	0.0107	0.0509	....	....	....	70.01	40 x 15	CC	
CRM	31X MNB11 A	11.99	0.161	1.610	22.85	0.337	4.46	1.19	0.071	0.0010	0.0021	0.0051	0.0186	(0.0007)	0.0046	....	0.0046	(0.009)	....	57.36	42 x 18	CC	
CRM	31X MNB12 A	17.88	0.231	1.99	22.12	0.335	0.491	0.749	0.013	0.0022	0.0021	0.0056	0.019	(0.0012)	0.0012	....	0.0038	(0.011)	....	56.16	42 x 18	CC	

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3.1.9 Silicon Brass		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	Sb	P	S	Co	Cr	Mg	Cd	Cu	Size (mm) Ø x H	Form	Price		
CRM	31X WSB1 K	0.283	0.884	9.08	0.191	0.759	1.140	4.82	0.090	1.909	0.056	0.0217	0.0225	....	0.192	0.144	....	0.0226	80.29	40 x 15	CC			
CRM	31X WSB2 F	0.134	0.166	12.24	0.183	0.198	0.080	4.04	0.0305	0.096	....	0.0302	0.029	0.002	0.0529	....	0.0087	0.0017	82.72	40 x 15	CC			
CRM	31X WSB3 D	0.607	0.397	11.96	0.22	0.371	0.509	3.44	0.053	1.06	0.0195	0.028	0.033	(0.0024)	0.129	0.0480	(0.004)	0.0028	81.44	40 x 15	CC	Sold Out		
CRM	31X WSB4 T	0.192	0.432	5.03	0.241	0.092	0.327	4.56	0.0290	0.342	....	0.067	0.065	....	0.162	....	....	0.0030	88.29	40 x 15	CC			
CRM	31X WSB6 D	0.056	0.95	0.881	0.032	0.117	0.059	2.48	0.0051	0.248	0.0056	0.007	(0.020)	(0.002)	0.247	0.058	(0.001)	0.0071	94.74	43 x 20	C			
CRM	31X WSB7 C	1.81	0.107	6.73	1.82	2.94	3.74	4.20	0.092	3.28	0.185	0.610	0.248	....	0.054	0.0288	....	0.0152	74.07	40 x 15	CC			
3.2.1 Phosphor-Bronze		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	Sb	P	S	Co	Mg	C	Se	Cu	Size (mm) Ø x H	Form	Price		
CRM	32X PB10 N	11.87	0.067	0.0494	0.014	0.054	<0.001	(0.004)	0.0138	0.0005	0.0128	0.0201	0.003	0.0162	....	0.004	....	0.0058	87.85	40 x 17	CC			
CRM	32X PB11 F	3.40	1.038	1.50	0.566	0.904	<0.001	0.099	0.200	0.201	0.033	0.478	0.885	0.0227	0.097	0.0041	....	....	90.54	40 x 15	CC			
CRM	32X PB12 E	5.25	0.102	0.546	0.032	0.221	0.0067	0.0099	0.087	0.0110	0.057	0.160	0.172	0.0127	0.0142	0.0033	....	....	93.29	40 x 17	CC			
CRM	32X PB13 D	7.09	0.104	0.240	0.057	0.111	0.039	0.073	0.081	0.0300	0.0137	0.117	0.128	0.015	0.0052	0.0144	....	....	91.88	40 x 15	CC			
CRM	32X PB14 D	9.00	0.048	0.038	0.0056	0.144	(0.0009)	(0.0025)	0.0331	(0.0002)	0.224	0.055	(0.008)	0.065	0.0013	0.0003	....	....	90.26	40 x 17	CC			
CRM	32X PB15 A	2.21	0.174	0.76	0.116	0.212	0.045	0.043	0.123	0.0125	....	0.026	0.0873	....	0.0509	0.0275	....	....	96.07	40 x 15	CC			
CRM	32X PB20 A	4.55	0.0045	0.007	0.0013	0.0090	<0.001	0.0046	0.0011	(0.007)	....	0.0012	0.196	0.0030	....	....	(0.0014)	....	95.22	38 x 17	W			
CRM	32X PB23 A	7.56	0.0042	0.0020	(0.0005)	0.0033	(0.0004)	0.0016	0.0011	(0.0006)	....	0.0025	0.319	0.0015	....	....	0.004	....	92.04	49 x 17	W			
3.2.2 Lead Bronze		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	Sb	P	S	Co	Cd	Ag	Cu	Size (mm) Ø x H	Form	Price			
	32X LB3 G	10.71	9.96	0.051	0.095	1.54	(0.0006)	(0.0024)	0.021	0.025	0.0091	0.024	0.0050	(0.0015)	....	....	....	77.5	40 x 15	CC				
CRM	32X LB10 E	8.16	11.74	0.566	0.013	0.687	(0.001)	(0.001)	0.151	0.0004	0.0608	0.591	(0.001)	0.0116	0.0456	....	0.042	77.98	40 x 17	CC				
CRM	32X LB11 C	11.01	10.56	0.306	0.036	0.672	(0.002)	(0.003)	0.088	0.0020	0.0293	0.109	0.033	(0.046)	0.0178	....	0.0121	76.97	42 x 18	CC				
CRM	32X LB12 D	9.52	9.06	0.584	0.0223	0.433	(0.001)	<0.001	0.0897	....	0.0231	0.442	0.383	0.094	0.0751	....	....	79.27	40 x 15	CC				
CRM	32X LB13 C	5.80	7.59	0.520	0.0160	0.828	0.0011	(0.0035)	0.131	0.0005	0.0721	0.0186	0.0161	0.115	0.0293	....	0.0063	84.87	40 x 17	CC				
CRM	32X LB14 F	5.42	14.65	0.042	0.057	0.318	(0.0006)	0.006	0.052	0.0050	0.974	0.062	0.189	0.016	0.212	....	0.0619	78.08	40 x 17	CC				
CRM	32X LB15 D	5.38	21.76	0.049	0.0089	0.104	(0.0004)	(0.002)	0.0222	0.0014	0.0173	0.092	0.0037	0.0136	0.0033	....	0.0312	72.52	40 x 17	CC				
CRM	32X LB16 A	5.55	18.78	0.458	0.0040	0.793	(0.001)	....	....	....	0.0119	(0.001)	(0.002)	0.0012	....	....	0.0016	74.42	32 x 17	W				
CRM	32X LB17 A **	5.98	9.90	0.63	0.45	0.46	0.37	....	1.50	0.29	0.22	4.2	0.045	....	0.008	0.15	0.91	74.8	40 x 15	CC	** provisional values			
3.2.3 Aluminium Bronze		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	P	Cr	Co	Mg	Bi	Sb	Ag	C	Se	Be	Cu	Size (mm) Ø x H	Form	Price
CRM	32X ALB1 P	0.0314	0.207	0.0228	3.11	5.74	8.83	0.106	0.0083	0.057	0.0145	0.0052	....	0.0092	....	....	....	....	....	....	81.85	42 x 18	CC	
CRM	32X ALB2 K	0.0715	0.147	0.174	4.27	4.42	10.08	0.245	0.0110	0.341	0.029	0.0973	0.286	0.0183	....	....	0.0210	....	....	....	79.64	40 x 15	CC	
CRM	32X ALB3 R	0.110	0.105	0.311	3.97	3.47	11.20	0.173	0.0114	0.297	0.022	0.0060	....	0.0117	....	....	....	....	....	....	80.31	42 x 18	CC	
CRM	32X ALB4 H	0.085	0.120	0.264	3.55	7.03	7.87	0.252	0.0130	1.028	0.036	0.022	....	0.153	....	....	....	....	....	....	79.61	42 x 18	CC	
CRM	32X ALB5 J	0.062	0.093	0.487	2.22	4.14	6.91	0.086	0.064	1.21	0.048	0.0056	0.0307	0.0176	....	....	....	....	....	....	84.61	42 x 18	CC	
CRM	32X ALB6 J	0.147	0.096	0.685	2.53	5.34	8.05	0.295	0.012	0.904	0.0101	0.0097	....	0.0019	....	....	....	(0.002)	....	....	Sold Out	42 x 18	CC	
CRM	32X ALB7 C	0.30	0.029	0.527	4.82	4.96	4.01	0.399	0.056	0.383	0.057	0.061	....	0.0039	....	....	....	....	....	....	84.40	42 x 18	CC	
CRM	32X ALB8 E	0.312	0.071	0.352	5.54	6.68	6.38	0.603	0.145	1.562	0.171	0.36	0.554	0.015	....	0.024	0.0099	....	....	....	77.17	40 x 15	CC	
CRM	32X ALB9 B	0.061	0.377	1.17	3.13	1.21	13.86	0.282	0.0275	0.090	(0.054)	(0.064)	0.0259	0.205	....	....	0.042	(0.006)	....	....	79.24	42 x 18	CC	
CRM	32X ALB10 A	0.202	0.107	0.315	4.23	7.58	11.25	0.169	0.017	1.73	0.040	0.0103	....	0.0029	....	....	(0.0022)	....	....	....	74.28	42 x 18	CC	
CRM	32X ALB11 A	0.0289	0.118	0.576	3.81	4.33	8.80	0.069	....	1.13	0.045	....	0.089	0.075	0.120	0.093	....	....	0.006	0.0194	80.58	40 x 15	CC	
CRM	32X ALB11 B	0.0062	0.0316	0.508	3.99	4.44	8.85	0.015	....	1.290	0.0249	....	0.0180	0.072	0.082	0.203	....	....	0.007	0.064	80.38	40 x ~17	CC	

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3.2.3 Aluminium Bronze (continued)		Sn	Pb	Zn	Fe	Ni	Al	Si	Mn	P	Cr	Mg	Co	Ag	C	Cu	Size (mm) Ø x H	Form	Price				
CRM	32X CA1 A	0.0180	0.007	0.162	4.63	4.94	9.79	0.090	0.296	0.003	0.0049	0.0003	....	0.0012	(0.007)	80.03	42 x 18	W					
CRM	32X CA7 A	0.0172	(0.004)	0.006	2.09	0.234	9.37	0.017	0.151	....	0.0028	0.0004	0.0003	0.0009	0.0028	88.06	42 x 18	W					
CRM	32X CA12 A	0.0157	(0.0017)	0.0405	0.657	0.088	6.14	2.57	0.0290	....	....	0.0005	(0.0003)	0.0010	(0.002)	90.48	42 x 18	W					
CRM	32X CA23 A	0.0164	(0.0026)	0.031	3.63	4.71	9.19	0.026	1.298	0.0011	0.0018	0.0003	....	0.0008	(0.0050)	81.05	50 x 18	W					
CRM	32X CA31 A	0.0037	(0.0024)	0.041	4.06	4.28	8.95	0.036	0.336	(0.003)	0.0026	0.0008	0.0029	0.0008	0.006	82.24	42 x 18	W					
3.2.4 Bismuth Bronze (Sebiloy Type)		Sn	Pb	Zn	Fe	Ni	As	Bi	Sb	P	S	Co	B	Se	Cd	Cu	Size (mm) Ø x H	Form	Price				
CRM	32X SEB1 C	4.23	0.209	8.79	0.0293	0.101	0.043	5.31	0.355	0.0054	0.0011	0.0089	....	0.97	(0.0017)	79.96	40 x 17	CC					
CRM	32X SEB2 D**	6.9	0.105	1.41	0.077	0.044	0.015	4.5	0.022	0.036	0.025	0.013	....	0.04	0.023	86.5	40 x 15	CC	** provisional values				
CRM	32X SEB3 C	2.07	0.109	0.85	0.082	1.52	0.0164	(5.4)	0.054	0.040	....	0.025	0.0021	1.42	0.0016	(88.4)	40 x 17	CC	Sold Out				
CRM	32X SEB4 C	9.26	0.011	8.60	0.366	0.0091	0.0012	2.65	0.0056	(0.006)	....	0.48	0.0021	0.105	0.0004	78.6	42 x 17	CC					
CRM	32X SEB5 B	5.28	0.0149	6.64	0.360	0.308	0.0121	1.17	0.0344	0.183	....	0.0048	0.0028	0.512	0.0067	85.5	40 x 17	CC					
CRM	32X SEB6 C	7.14	0.0463	4.55	0.151	0.860	0.083	0.615	0.235	0.0118	....	0.231	(0.0004)	0.322	0.0036	85.66	40 x 17	CC					
CRM	32X SEB7 A	3.20	0.343	4.42	0.074	1.165	0.038	3.58	0.262	0.0206	0.067	0.119	....	1.19	0.0074	85.46	42 x 17	CC					
3.2.9 Bronze		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Cr	Co	Bi	Sb	Cd	Au	Ag	P	S	Cu	Size (mm) Ø x H	Form	Price
CRM	32X SN1 E	11.55	5.32	0.401	0.006	1.69	(0.0003)	(0.0006)	0.0153	0.0002	....	0.0100	....	0.0126	....	....	....	(0.0010)	0.0087	80.94	42 x 17	CC	
CRM	32X SN2 H	13.54	1.97	1.28	0.0332	0.104	0.0004	0.0028	....	0.0043	....	....	....	0.100	....	....	....	0.082	0.0326	82.80	42 x 18	CC	
CRM	32X SN3 F	15.50	0.285	0.386	0.124	0.447	0.0120	0.005	0.0306	0.128	....	0.048	....	0.194	....	....	....	0.331	0.062	82.55	40 x 17	CC	
CRM	32X SN4 A	18.80	1.059	0.342	0.060	0.556	0.034	(0.004)	0.0468	0.0065	....	0.151	....	0.102	....	....	....	0.988	0.040	77.88	42 x 18	CC	
CRM	32X SN5 A	16.05	0.259	0.494	1.20	0.502	0.474	....	0.0615	0.720	0.0585	0.138	0.097	0.664	0.145	0.0102	0.099	....	0.0009	78.96	40 x 15	CC	
CRM	32X SN6 A	7.31	1.559	1.17	0.099	0.203	0.0313	....	0.764	0.0024	0.0074	0.655	0.158	0.323	0.0903	0.0073	1.159	....	0.018	86.39	40 x 15	CC	
3.3 Gun Metal		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	Sb	P	S	Cr	Co	Ag	Cd	Cu	Size (mm) Ø x H	Form	Price	
CRM	33X GM4 AB	2.56	4.69	7.13	0.053	1.795	(0.001)	(0.001)	0.287	0.0007	0.084	0.0261	0.0088	0.112	....	0.259	0.0265	....	82.96	40 x 17	CC		
CRM	33X GM5 L	5.22	5.43	4.49	0.136	1.008	(0.007)	(0.004)	0.059	0.0018	0.0225	0.093	0.0112	0.064	....	0.0662	0.0099	....	83.98	40 x 17	CC	Sold Out	
CRM	33X GM6 J	6.56	3.90	2.01	0.0338	0.833	0.0098	0.069	0.180	0.0307	0.0313	0.279	0.0406	0.093	....	0.0056	0.0065	....	85.99	40 x 17	CC		
CRM	33X GM7 J	9.61	1.119	2.72	0.050	0.511	0.0110	(0.003)	0.103	0.0088	0.119	0.1092	0.082	0.064	....	0.095	0.050	....	85.40	40 x 15	CC		
CRM	33X GM8 F	4.13	6.11	5.45	0.098	0.148	0.0005	(0.001)	0.0159	0.0008	0.0248	0.0146	0.0029	0.0119	(0.0004)	....	0.097	....	83.81	40 x 17	CC		
CRM	33X GM20 A	4.07	0.106	3.87	0.570	0.999	(0.001)	....	0.196	0.219	0.031	2.004	0.063	....	0.015	0.0382	0.141	0.0229	87.58	40 x 15	CC		
CRM	33X GM24 A	3.85	3.35	3.67	0.0083	0.0087	....	0.0028	0.0010	<0.0005	0.0009	0.0012	0.190	0.003	(0.0013)	....	0.0046	....	88.88	44 x 17	W		
CRM	33X GM29 A	6.12	0.050	4.23	0.0102	0.0289	....	0.0027	0.0017	(0.0005)	0.0019	0.0015	0.138	0.0024	(0.0004)	....	0.0026	....	89.36	33 x 19	W		
CRM	33X RB1 A	2.137	5.02	7.95	0.928	0.0539	0.0048	0.063	0.0030	0.0167	0.0029	0.432	0.020	0.0044	0.0013	....	0.0174	....	83.24	42 x 17	CC		
CRM	33X RB2 A	3.19	3.85	9.14	0.493	0.255	0.0352	0.0116	0.0211	0.0028	0.101	0.019	0.0208	0.078	0.0017	....	0.0029	....	82.67	42 x 17	CC		

### 3. Copper Base

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3.4 Nickel Silver		Sn	Pb	Zn	Fe	Ni	Al	Si	Mn	P	S	Co	Cr	Ag	Mg	C	Cu	Size (mm) Ø x H	Form	Price						
CRM	34X NS1 F	0.0110	0.0141	33.41	0.064	7.81	(0.003)	(0.002)	0.0009	0.0140	(0.0004)	0.052	0.0003	0.069	0.0020	(0.0018)	58.63	42 x 18	CC							
CRM	34X NS2 F	0.019	0.063	25.31	0.085	13.39	....	(0.003)	0.0013	0.0091	(0.020)	0.0118	(0.001)	0.0026	<0.0005	....	61.09	42 x 17	CC							
CRM	34X NS3 F	0.056	0.178	19.96	0.285	14.96	<0.001	(0.002)	0.0377	0.0295	0.0028	0.0922	....	0.100	<0.001	....	64.16	40 x 15	CC							
CRM	34X NS4 F	0.0301	0.071	17.09	0.449	16.61	0.0454	0.102	0.304	0.0570	0.0110	0.152	....	0.0324	0.0009	....	64.97	40 x 15	CC							
CRM	34X NS5 F	0.194	1.29	(23.1)	0.717	17.16	0.674	0.158	0.127	0.067	....	0.197	0.0014	0.0102	0.704	....	55.11	42 x 17	CC							
3.6.1 Cupro Nickel		Sn	Pb	Zn	Fe	Ni	Al	Si	Mn	Bi	P	S	Co	Cr	Mg	B	C	Ti	Nb	Zr	Be	Cu	Size (mm) Ø x H	Form	Price	
CRM	36X CN1 N	0.0578	0.160	0.412	2.15	10.11	0.006	0.089	1.80	....	0.0436	0.0070	0.154	0.0258	....	0.0013	(0.003)	....	....	....	....	....	84.90	40 x 17	CC	
CRM	36X CN2 J	0.061	0.048	0.0358	1.70	15.47	0.005	0.044	1.26	0.0045	0.015	0.035	0.264	0.240	0.0006	....	0.004	0.0102	(0.032)	....	....	....	80.78	40 x 17	CC	
CRM	36X CN3 L	0.063	0.053	0.80	1.07	19.95	0.0055	0.490	0.920	....	0.032	0.029	0.072	0.050	0.012	0.0064	0.035	....	0.15	....	0.0163	....	76.3	40 x 15	CC	
CRM	36X CN4 K	0.009	(0.023)	0.041	2.67	27.49	0.0013	0.025	0.164	0.0077	0.0079	0.0076	0.052	0.022	(0.0004)	....	0.0053	(0.004)	0.0139	....	....	....	69.48	40 x 17	CC	
CRM	36X CN5 N	0.015	0.027	0.232	0.791	32.26	0.006	0.80	0.090	....	0.041	0.074	0.018	0.118	0.014	0.0091	0.0253	....	0.441	....	0.011	....	65.1	40 x 15	CC	
CRM	36X CN6 H	....	0.033	0.388	0.792	31.21	0.063	0.154	0.458	0.0331	0.0104	0.0051	0.0590	2.65	....	....	0.0072	0.057	0.196	0.049	....	....	63.80	40 x 15	CC	
CRM	36X CN7 F	0.039	0.028	0.203	1.021	29.95	....	0.304	0.659	(0.014)	(0.021)	0.0151	0.108	1.51	0.0041	(0.004)	0.0106	(0.037)	0.58	(0.003)	....	....	65.58	40 x 17	CC	
CRM	36X CN8 H	0.046	0.095	0.159	0.86	30.61	0.0009	0.132	0.881	0.103	0.046	0.022	0.104	1.28	0.021	0.0025	0.0225	....	0.18	....	....	....	65.51	40 x 15	CC	
CRM	36X CN9 J	0.0291	0.020	0.060	0.722	28.90	(0.094)	0.413	1.019	....	0.008	0.0130	0.323	1.84	....	0.0065	0.0098	0.150	1.40	0.0019	....	....	64.96	40 x 15	CC	
CRM	36X CN10 A	(0.009)	0.004	0.026	4.28	29.3	1.23	1.02	0.262	0.014	(0.020)	0.055	0.081	1.59	0.0026	0.0029	0.064	0.03	0.89	(0.055)	....	....	61.01	40 x 15	CC	
CRM	36X CN11 A	(0.002)	(0.003)	(0.006)	0.992	14.96	1.457	0.083	4.34	....	(0.002)	0.0012	0.0049	0.380	0.0241	....	(0.001)	....	0.124	....	....	....	77.56	40 x 17	W	
																As	Ag	Cd	C							
CRM	36X CN21 A	0.038	0.051	0.0203	0.0316	5.50	1.95	....	0.0391	....	0.053	....	0.0079	0.0050	0.0067	0.0064	0.0021	....	....	....	....	....	92.17	40 x 17	CC	
CRM	36X CN22 A	0.0371	0.0260	0.0175	0.088	1.806	6.09	....	(0.016)	....	0.0178	....	0.0231	0.0144	0.0208	0.0196	0.0083	....	....	....	....	....	91.80	40 x 17	CC	
CRM	36X CN23 A	0.102	0.115	14.88	0.140	14.38	0.007	....	0.0095	....	0.0299	....	0.0509	0.0021	0.047	0.042	0.0021	....	....	....	....	....	70.22	40 x 17	CC	
CRM	36X CN24 A	(0.002)	0.0056	8.00	0.127	15.41	(0.001)	....	23.60	....	0.0037	....	0.0096	0.0065	(0.001)	0.0466	....	0.0436	....	....	....	....	52.56	38 x 13 x 13	C	
3.6.1a Cu/Ni/Sn (Spinodal Alloy)		Sn	Ni	Cu	Zn	Fe	Al	Si	Mn	Bi	Sb	P	S	Ag	Pb	Mg	Co	B	Ti	Nb	Size (mm) Ø x H	Form	Price			
CRM	36X SP1 A	5.75	8.33	84.90	0.344	0.45	0.0020	0.004	0.084	0.0039	0.0177	(0.003)	0.005	0.005	0.0115	....	0.057	0.0007	(0.0004)	(0.031)	40 x 15	CC				
CRM	36X SP2 A	8.92	15.72	74.91	0.029	(0.09)	0.0003	(0.0023)	0.0019	(0.0027)	0.006	(0.0006)	0.0030	0.0181	0.026	0.0002	0.119	0.0005	(0.0008)	....	40 x 15	CC				
3.6.4 Cu/Be/Co		Sn	Pb	Zn	Fe	Ni	Al	Si	Mn	Co	Cr	Ag	Mg	Be	Cu	Size (mm) Ø x H	Form	Price								
CRM	36X CBC2 E	0.009	0.0099	0.0103	0.0208	0.0472	0.0231	0.0205	0.0015	2.47	0.0044	0.0020	....	0.450	96.96	40 x 17	W									
CRM	36X CBC3 D	0.0021	0.0025	0.004	0.046	0.007	0.019	0.039	....	0.209	....	....	0.0040	1.840	97.77	40 x 15	W									
CRM	36X CBC4 D	0.003	0.318	0.005	0.026	0.004	0.018	0.041	....	0.207	....	....	0.0070	1.865	97.46	40 x 15	W									
CRM	36X CBC5 A	0.01	0.009	0.038	0.028	1.69	0.021	0.036	(0.001)	0.14	0.006	....	....	0.32	97.6	40 x 15	W									

### 3. Copper Base

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3.6.5 Cu/Cr		Sn	Pb	Zn	Fe	Ni	Al	Si	Mn	S	Co	Cr	Ag	Mg	Cd	Zr	Cu	Size (mm) Ø x H	Form	Price
CRM	36X CCR1 D	0.0049	0.0017	0.008	0.0378	0.0035	(0.001)	0.015	0.0010	0.0018	....	0.948	0.0016	0.0015	....	0.067	98.95		W	
CRM	36X CCZ A	0.0045	0.0023	0.0076	0.033	0.0084	0.0003	0.0034	0.0008	0.0040	0.0042	0.667	0.0019	....	0.0027	0.049	99.22		W	Sold Out - no remake
CRM	36X 274 A	0.0140	0.0021	0.0395	0.0779	2.54	0.0013	0.594	0.0148	0.0035	0.0028	0.531	....	....	....	<0.005	96.23		W	

  

3.6.7 Cu/Cd		Sn	Zn	Ag	Cd	Size (mm) Ø x H	Form	Price
CRM	36X CCD1 A	<0.001	(0.0017)	(0.0014)	1.01	30 x 15	W	
CRM	36X CCD3 A	0.473	(0.0018)	(0.0011)	1.10	30 x 15	W	

  

3.7.1 Various Copper Alloys		Sn	Pb	Zn	Fe	Ni	Al	Si	Mn	P	S	Cr	Co	C	Zr	Cu	Size (mm) Ø x H	Form	Price
CRM	37X 218 A	0.015	0.0025	0.027	0.074	2.52	0.0022	0.58	0.083	0.0014	0.007	0.032	0.0013	0.0022	....	96.57		W	
CRM	37X 226 A	0.0030	(0.001)	2.82	1.51	0.0024	0.0020	3.55	0.577	0.0022	0.0005	0.0023	....	0.006	(0.0002)	91.58		W	
	37X HK7 A #	2.30	5.32	0.38	1.72	30.7	....	....	....	....	....	....	....	....	....	59.3		CC	# These alloys are for XRF use only
	37X HK8 A #	10.4	21.0	0.17	0.23	5.01	....	....	....	....	....	....	....	....	....	63.2		CC	

  

3.8 Residuals in Pure Copper - Wire		Sn	Pb	Zn	Fe	Ni	Ag	As	Mn	Bi	Sb	Co	Cr	Si	P	Cd	Te	Se	S	O	Size (mm) Ø x H	Form	Price
	38X C1 A	0.7	0.4	1.5	2	0.8	7.8	<1.0	<1.0	0.2	<1.0	<1.0	<1.0	....	....	<0.1	0.4	0.7	....	....		Wire	
	38X C1 B	<0.3	0.8	0.45	1.2	1.0	13	0.8	1.2	0.1	0.6	0.03	0.06	....	....	<0.01	0.3	....	....	....	3mm x 400mm	Wire	
CRM	38X C1 C	(0.01)	(0.05)	<0.1	1.7	0.27	11	0.19	(0.005)	0.10	0.10	....	<0.005	<0.1	<0.05	<0.01	(0.21)	(0.25)	2.0	266	(5 x 80mm pcs.)	Wire	
	38X C6	120	111	40	107	166	104	98	0.3	22	45	33	1	....	....	32	30	....	....	....		Wire	

  

3.9 Residuals in Pure Copper		Sn	Pb	Zn	Fe	Ni	Al	As	Mn	Bi	Sb	P	S	Co	Cr	Cd	Ag	Au	Se	Te	In	Mg	Ge	Size (mm) Ø x H	Form	Price
CRM	39X 17866 AF	122	73	30	4	471	....	381	....	61	54	....	26	49	....	62	69	19	34	26	170	....	....	40 x 15	CC	
CRM	39X 17867 AC **	420	100	810	160	390	30	340	....	280	120	200	160	25	900	35	100	70	70	110	170	300	** provis	40 x 15	CC	
CRM	39X 17868 AF	(37)	460	(24)	45	244	2	496	23	202	200	(20)	56	2	....	23	323	129	120	240	9	....	Sold Out	40 x 17	CC	
CRM	39X 17869 AE	57	120	(13)	5	100	....	100	....	234	370	....	51	8	....	19	423	89	177	105	35	....	....	40 x 15	CC	
CRM	39X 17870 AG **	30	440	1300	420	60	20	30	....	470	480	10	30	15	....	310	460	10	250	10	80	....	** provisional	40 x 15	CC	
CRM	39X 17871 B	119	131	280	80	329	....	288	7	690	147	(5)	72	40	(5)	37	222	51	360	101	....	....	....	42 x 17	CC	
CRM	39X 27866 A	448	54	287	30	487	....	383	....	47	52	147	469	308	12	139	57	16	28	32	437	....	29	38 x 20	W	
CRM	39X 27869 A	106	225	65	30	190	....	98	....	376	362	119	112	36	(2)	28	349	80	127	153	90	....	123	38 x 20	W	

  

		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	All Elements %										Size (mm) Ø x H	Form	Price		
		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	Sb	P	S	Co	Cr	Cd	Mg	Ag	Au	Se	Te	In	Size (mm) Ø x H	Form	Price
CRM	39X 17872 A	0.180	0.293	0.107	(0.045)	0.0537	0.0118	....	0.0203	0.0055	0.0240	0.0217	0.0045	0.0242	0.0102	....	0.0013	....	0.0214	(0.002)	0.0103	0.0208	0.0241	42 x 15	C	
CRM	39X 17873 A	0.0274	0.065	0.0231	0.019	0.0173	0.015	0.030	0.0209	0.0182	0.0233	0.0229	0.078	0.0206	0.0233	0.0231	0.0052	0.011	0.0228	....	0.0114	0.0070	0.0212	40 x 15	C	



## 4. Zinc Base

Updated: 6 December 2011

Blocks / Discs

4.1 Residuals in Pure Zinc		Pb	Mg	Al	Cd	Fe	Sn	Cu	Ni	Mn	Bi	Sb	Tl	In	Hg	Size (mm) Ø x H	Form	Price	
CRM	41X Z1 P	0.0046	<0.0004	0.0004	0.0006	0.0024	0.0005	0.0040	0.0003	0.0002	0.0003	0.0002	0.0008	0.0002	0.0004	Sold Out	50 x 20	C	
CRM	41X Z2 N	0.0026	0.0001	0.0008	0.0017	0.0077	0.0016	0.0018	0.0013	0.0005	0.0005	0.0006	0.0012	0.0006	0.0003		50 x 20	C	
CRM	41X Z3 L	0.0080	0.0138	0.0164	0.0050	0.0022	0.0029	0.0066	0.0029	0.0029	0.0022	0.0045	0.0012	0.0010	(0.0013)		50 x 20	C	
CRM	41X Z4 L	0.0058	0.0033	0.0065	0.0044	0.0148	0.0022	0.0033	0.0032	0.0029	0.0032	0.0034	0.0028	0.0030	0.0025		50 x 20	C	
CRM	41X Z5 N	0.0286	0.0107	0.0243	0.0165	0.0262	0.0063	0.0109	0.0051	0.0049	0.0056	0.0054	0.0068	0.0057	0.0050		50 x 20	C	
CRM	41X Z6 A	0.031	<0.0005	0.0096	0.0093	(0.002)	0.0038	0.0088	0.0002	0.0002	0.0122	....	0.0004	0.0228	....		50 x 20	C	
CRM	41X Z11 A	0.0077	....	0.0261	0.0155	0.0019	0.0072	0.0116	....	....	0.0189	0.0026	(0.0010)	0.0345	(0.0009)		50 x 20	C	
4.1.1 Zinc with Impurities		Pb	Mg	Al	Cd	Fe	Sn	Cu	Ni	Mn	Bi	Sb	Tl	In	Ag	As	Size (mm) Ø x H	Form	Price
CRM	41X 0336Zn1 L	1.007	0.0062	0.0177	0.0067	0.0106	0.0051	0.0088	0.0009	0.0102	....	....	....	....	....	0.0008	50 x 20	C	
CRM	41X 0336Zn2 M	0.486	0.099	1.55	0.145	(0.01)	0.038	0.354	0.0137	0.0212	0.0099	0.0007	0.0012	....	0.0102	0.0009	50 x 20	C	
CRM	41X 0336Zn3 K	0.0282	0.147	0.336	0.341	0.0456	0.127	0.353	0.0022	0.0106	....	....	....	....	....	0.0003	50 x 20	C	
CRM	41X 0336Zn4 B	2.87	0.179	1.39	0.638	(0.018)	2.38	0.874	0.0074	0.038	0.027	0.048	(0.004)	0.0035	0.0023	0.0005	50 x 20	C	
CRM	41X 0336Zn5 A	0.91	<0.0005	0.035	0.056	0.016	0.21	0.023	(0.0005)	(0.0001)	(0.001)	0.008	....	....	....	....	50 x 20	C	
CRM	41X 0336Zn6 A	1.82	0.0008	0.105	0.0140	0.08	0.0023	0.0203	0.0018	0.0010	0.123	0.234	0.0132	0.0123	0.0055	0.0020	50 x 20	C	
		Pb	Mg	Al	Cd	Fe	Sn	Cu	Ni	Mn	Bi	Sb	Ti	Cr	Si	Co	Size (mm) Ø x H	Form	Price
CRM	41X 4380Zn1 C	0.068	0.0011	0.055	0.376	0.01	0.049	0.175	0.0029	0.0015	0.0017	0.002	(0.001)	0.002	0.006	....	50 x 20	C	
CRM	41X 4380Zn2 C	0.268	0.0243	0.0153	0.284	0.048	0.0021	0.0288	0.0023	0.0087	0.0076	0.0093	0.0251	0.0027	....	....	50 x 20	C	
CRM	41X 4380Zn3 C	0.180	0.0220	0.0203	0.0950	0.017	0.080	0.073	0.0120	0.0180	0.0103	0.0046	0.125	0.0029	....	....	50 x 20	C	
CRM	41X 4380Zn4 D	0.310	0.118	0.446	0.086	0.017	0.0416	0.0284	0.0172	0.0092	0.0101	0.0156	(0.0003)	0.0029	....	0.0018	50 x 20	C	
CRM	41X 4380Zn5 C	0.140	0.00165	0.0215	0.0571	0.0120	0.0101	0.071	0.00147	0.035	0.0308	0.0061	0.339	0.0075	....	....	50 x 20	C	
CRM	41X 4380Zn6 C	0.411	0.0043	0.0051	0.0423	0.018	0.110	0.022	0.00058	0.024	0.00109	0.0359	0.062	0.0022	....	....	50 x 20	C	
CRM	41X 4380Zn7 D	1.18	0.0029	0.277	0.0156	0.0018	0.0036	0.0133	0.0120	0.0036	....	0.086	0.0065	....	....	....	50 x 20	C	
CRM	41X 4380Zn8 C	0.73	0.007	0.225	0.0079	0.003	0.011	0.020	0.024	0.0015	0.011	0.016	0.012	0.0019	(0.005)	....	50 x 20	C	
CRM	41X 4380Zn9 A	0.0139	0.0153	0.295	0.0032	0.0113	0.0008	0.0416	0.0009	0.0018	0.00046	0.0060	....	0.0015	....	....	50 x 20	C	
CRM	41X 4380Zn10 A	0.0043	0.184	0.0004	0.0007	0.49	0.0014	0.0022	0.063	....	....	0.0005	....	0.117	....	....	50 x 18	C	
4.1.2 Galvanising Alloys		Pb	Mg	Al	Cd	Fe	Sn	Cu	Ni	Mn	Bi	Sb	As	Cr	Co	V	Size (mm) Ø x H	Form	Price
CRM	41X GLV1 C	0.0207	0.0008	0.202	0.0101	0.0041	0.0124	0.0184	0.0068	....	0.0040	0.0011	(0.0008)	....	0.00016	....	50 x 20	C	
CRM	41X GLV2 A	0.214	....	0.068	0.0025	0.048	0.003	0.0052	0.0070	....	0.017	0.006	<0.001	....	....	....	50 x 20	C	
CRM	41X GLV3 B	0.0091	0.00145	0.334	0.0188	0.0031	0.0060	0.0260	0.0300	0.0111	0.0016	0.058	(0.0007)	0.00084	0.00150	....	50 x 20	C	
CRM	41X GLV4 C	0.0062	0.0034	0.514	0.0006	0.0028	0.0024	0.0321	0.0441	0.0089	0.0061	0.0287	(0.0003)	0.0007	0.0037	....	50 x 20	C	
CRM	41X GLV5 B	0.0166	0.0014	0.0139	0.0136	0.0443	0.0172	0.0103	0.0025	....	0.0098	0.148	0.00044	....	0.0011	....	50 x 20	C	
CRM	41X GLV6 A	0.120	....	0.474	0.0053	0.0047	0.0152	0.039	0.0008	0.0013	0.0248	0.0112	0.0014	0.0029	0.0047	<0.0005	50 x 20	C	
CRM	41X GLV7 A	0.082	....	0.399	0.00056	0.0031	(0.0006)	0.023	0.0060	0.0025	0.0108	0.0031	0.0016	0.0010	(0.0001)	<0.0001	50 x 20	C	
CRM	41X GLV8 A	0.0037	0.0012	0.263	0.0003	0.0062	0.0005	0.0139	0.0006	0.0012	0.0005	0.0057	....	0.0012	....	....	50 x 20	C	
CRM	41X GLV9 A	0.0043	0.0014	0.547	0.0028	0.0039	0.0028	0.0037	0.0009	0.0027	0.0019	0.0048	....	....	0.0005	....	50 x 20	C	
CRM	41X GLV10 A	0.0066	0.0040	0.969	0.0030	0.0051	0.0062	0.0073	0.0022	0.0062	0.0031	0.0009	....	....	0.0002	....	50 x 20	C	
CRM	41X CGL F	0.046	....	0.28	(0.0015)	....	<0.001	(0.0005)	....	....	....	....	....	....	....	....	42-48 x 20	C	

## 4. Zinc Base

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Blocks / Discs

4.1.3 Zn/Mn, Zn/Mg, Zn/Ni & Zn/Sb Binaries													Size (mm)	Form	Price
		Pb	Al	Cd	Fe	Cu	Ni	Mn	Mg	Sb	Sn	Bi	Ø x H		
	41X ZMn1 A	(0.0026)	(0.0001)	(0.0002)	(0.0025)	(0.0005)	(0.0009)	1.07	....	....	....	....	50 x 20	C	
	41X ZMg1 A	....	....	....	....	....	....	....	1.13	....	....	....	40 x 15	C	
	41X ZMg3 A	....	....	....	....	....	....	....	2.80	....	....	....	40 x 15	C	
CRM	41X ZNiBi A	0.0187	0.050	0.0020	0.0133	0.0132	2.02	....	....	....	0.154	0.502	50 x 20	C	
CRM	41X ZNi2 A	0.0172	0.0135	0.0010	0.0061	0.0056	1.97	....	....	....	0.141	0.0050	50 x 20	C	
	41X ZSb1 A	....	....	....	....	....	....	....	....	1.03	....	....	40 x 15	C	
	41X ZSb4 A	....	....	....	....	....	....	....	....	3.78	....	....	40 x 15	C	
	41X ZSb8 A	....	....	....	....	....	....	....	....	7.68	....	....	40 x 15	C	

  

4.1.4 Special Alloys													Size (mm)	Form	Price
		Pb	Mg	Al	Cd	Fe	Sn	Cu	Ni	Mn	Ti	Cr	Ø x H		
CRM	41X 2951Zn1 A	0.0042	0.0029	0.029	0.0005	0.011	(0.0007)	0.79	0.0038	0.0013	0.278	0.083	50 x 20	C	
CRM	41X 2951Zn2 A	0.0040	0.0123	0.032	0.0037	0.019	(0.0015)	1.37	0.0027	0.0011	0.209	0.142	50 x 20	C	
CRM	41X 2951Zn3 A	0.0065	0.0164	0.078	0.0062	0.029	(0.006)	1.89	0.0010	0.0018	0.133	0.184	50 x 20	C	

  

4.1.5 RoHS Monitors					Size (mm)	Form	Price	
		Pb	Cd	Hg	Cr	Ø x H		
CRM	41X ZSC1 A	0.0621	0.0288	0.026	0.0039	50 x 20	C	
CRM	41X ZSC2 A	0.111	0.0016	0.0053	0.0036	50 x 20	C	
CRM	41X ZSC3 A	0.0273	0.119	0.0021	0.0148	50 x 20	C	
CRM	41X ZSC4 A	0.156	0.0131	0.050	0.0299	50 x 20	C	
CRM	41X ZSC6 A	0.0077	0.215	0.029	<0.0002	50 x 20	C	

  

4.2 Zn/Al																		Size (mm)	Form	Price	
		Pb	Mg	Al	Cd	Fe	Sn	Cu	Ni	Mn	Sb	Cr	Si	Tl	In	Ce	La	Zr	Ø x H		
CRM	42X Z1 H	0.0022	0.0041	4.61	0.0005	0.0024	0.0006	0.0019	0.0017	0.0007	(0.0009)	<0.0005	0.0046	....	....	0.0027	0.0026	....	50 x 20	C	
CRM	42X Z2 J	0.0064	0.0150	4.08	0.0020	0.0072	0.0063	0.0307	0.0032	0.0058	(0.001)	0.0014	0.011	....	....	0.0072	0.0031	....	50 x 20	C	
CRM	42X Z3 H	0.0060	0.0288	3.72	0.0048	(0.047)	0.0030	0.159	0.0102	0.0252	0.003	0.0020	0.015	....	....	(0.0003)	(0.0003)	....	50 x 20	C	
CRM	42X Z4 J	0.0133	0.0663	3.52	0.0065	0.019	0.0052	0.0752	0.0170	0.0083	....	(0.0002)	0.006	....	0.0025	0.0361	0.0183	....	50 x 20	C	
CRM	42X Z5 L	0.0051	0.0471	4.24	0.0027	0.021	0.0022	0.1095	0.0325	0.0023	....	(0.0002)	....	(0.001)	0.0037	0.0277	0.0138	....	50 x 20	C	
CRM	42X Z6 B	0.0093	0.177	3.67	0.0039	0.008	0.0057	0.238	0.00030	0.0157	0.0169	0.0034	(0.010)	0.0021	0.0019	(0.012)	(0.011)	....	50 x 20	C	
CRM	42X Z7 B	0.0097	0.0095	4.39	0.030	0.027	0.012	0.0249	0.0067	0.0045	....	(0.0001)	0.006	....	....	0.072	0.061	....	50 x 20	C	
CRM	42X Z8 A	0.0025	0.0033	7.03	0.0003	0.013	(0.002)	0.0215	0.0019	0.0014	....	(0.0002)	0.013	....	....	0.0081	0.0079	....	50 x 20	C	
CRM	42X Z9 A	0.0021	0.0464	5.58	0.0054	0.032	(0.0004)	0.0070	(0.0003)	0.0006	....	....	(0.004)	....	....	0.0047	0.0044	0.011	50 x 20	C	
CRM	42X Z11 A	0.0058	0.0329	3.19	0.0020	(0.036)	0.0017	0.093	0.0241	0.0196	0.0047	0.0016	....	0.0047	0.0037	0.0014	(0.0009)	....	50 x 20	C	
CRM	42X Z12 A	0.0079	0.0488	4.72	0.00277	0.046	0.0022	0.156	0.0413	0.0483	0.0070	0.00063	....	0.0076	0.0068	0.0116	0.0084	....	50 x 20	C	
CRM	42X Z15 A	0.0074	0.0026	9.99	0.0023	0.026	0.0006	0.0028	0.0017	0.0037	0.0006	0.0003	....	....	0.0024	....	....	....	50 x 20	C	
CRM	42X Z16 A	0.0090	0.105	12.28	0.0045	0.033	0.0034	0.235	0.0039	0.0028	....	0.0007	0.011	(0.003)	0.0051	....	....	....	50 x 20	C	

## 4. Zinc Base

Updated: 8 December 2011

Blocks / Discs

4.3 Zn/Al/Cu		Pb	Mg	Al	Cd	Fe	Sn	Cu	Ni	Mn	Bi	Sb	Ti	Cr	Si	Be	Size (mm) Ø x H	Form	Price
CRM	43X Z1 J	0.0017	0.0145	4.50	0.00037	0.0058	(0.0007)	0.501	0.0010	0.0005	0.0031	0.0016	0.0014	0.0009	(0.0037)	....	50 x 20	C	
CRM	43X Z2 M	0.0106	0.0828	3.89	0.0053	0.0081	0.0099	1.004	0.0024	0.0086	0.0022	0.0068	0.0008	0.0063	0.011	....	50 x 20	C	
CRM	43X Z3 L	0.0132	0.0143	3.64	0.0132	0.061	0.0125	1.58	0.0061	0.0125	0.018	(0.0030)	....	0.0045	0.005	....	50 x 20	C	
CRM	43X Z4 B	(0.0024)	0.043	4.76	0.0025	(0.064)	(0.0023)	3.21	0.0286	0.088	0.012	0.0043	0.0017	0.0063	(0.0065)	....	50 x 20	C	
CRM	43X Z5 A	0.0045	0.041	3.05	0.0111	0.023	0.0032	6.05	0.0021	0.0030	....	....	0.0009	0.0010	0.003	....	50 x 20	C	
CRM	43X Z6 A	0.0016	0.0256	4.02	0.0016	0.019	0.0053	2.72	0.029	0.0006	0.0049	0.0045	0.0013	0.0006	0.012	....	50 x 20	C	
CRM	43X Z7 A	0.0058	0.062	3.68	0.00092	0.029	0.0031	3.14	0.0005	0.0025	(0.001)	0.0016	0.067	0.0003	....	0.0194	50 x 20	C	(Beric Alloy)
CRM	43X Z8 A	0.0027	0.00155	2.51	0.00090	(0.002)	(0.0005)	0.481	0.00033	0.00021	....	....	....	0.00024	....	....	50 x 20	C	
CRM	43X Z9 A	0.0078	0.0472	3.17	0.0034	0.073	0.0020	4.82	0.0027	0.0108	0.0033	0.0033	0.0012	0.0034	....	0.0010	50 x 20	C	
CRM	43X Z10 A	0.0046	0.0403	3.99	0.0014	0.007	0.0012	2.97	0.0036	0.0050	....	....	....	0.0003	0.009	....	50 x 20	C	
CRM	43X Z11 E	0.0305	0.053	11.61	0.0224	0.0091	0.0206	0.515	0.0014	0.0089	0.0035	0.0091	0.013	0.0010	0.020	....	50 x 20	C	
CRM	43X Z12 D	0.0133	0.027	10.05	0.0114	0.047	0.0089	0.796	0.0035	0.0059	(0.002)	0.0039	0.0054	0.0023	(0.008)	....	50 x 20	C	
CRM	43X Z13 D	0.0125	0.0204	9.55	0.0100	0.05	0.0111	0.981	0.0109	0.0070	....	0.009	....	....	(0.0048)	....	50 x 20	C	
CRM	43X Z14 E	0.015	0.0133	8.05	0.0083	0.031	0.0054	1.13	0.0066	0.0050	0.0096	0.0089	0.0014	0.0047	0.016	....	50 x 20	C	
CRM	43X Z15 C	0.0054	0.0024	7.36	0.0030	0.009	0.004	1.53	0.0019	0.0020	0.005	0.005	0.0020	0.0025	(0.011)	....	50 x 20	C	
CRM	43X Z21 C	0.012	0.047	23.5	0.027	0.12	0.0140	1.81	0.043	0.0104	....	....	0.013	0.0087	0.022	....	50 x 20	C	
CRM	43X Z22 C	0.0060	0.022	27.4	0.0050	(0.36)	0.0061	2.32	0.027	0.0096	....	....	0.0065	0.019	0.038	....	50 x 20	C	
CRM	43X Z23 E	0.0112	0.0242	30.7	0.0042	0.055	0.0115	3.22	0.0236	0.0090	....	....	0.0045	0.0147	0.077	....	50 x 20	C	
																		Form	Price
		Pb	Mg	Al	Cd	Fe	Sn	Cu	Ni	Mn	Cr	Si	Ce	La					
CRM	43X SC1 A	0.0150	0.740	3.75	0.0011	0.073	0.0082	1.903	0.0161	0.0201	0.0082	0.022	....	....			50 x 20	C	
CRM	43X SC2 A	0.0097	0.498	3.41	0.0018	0.046	0.0031	4.80	0.0096	0.0183	0.023	0.0133	....	....			50 x 20	C	
CRM	43X SC3 A	0.0066	0.257	3.14	0.0028	0.018	0.0078	3.03	0.0261	0.0337	0.0108	0.022	....	....			50 x 20	C	spin-casting alloys
CRM	43X SC4 A	0.0064	0.093	4.35	0.0058	0.022	0.0056	1.122	0.0249	0.044	0.009	0.022	....	....			50 x 20	C	
CRM	43X GALF1 A	0.0505	0.0999	4.68	0.0499	0.061	0.0514	4.39	....	....	....	....	0.0569	0.0284			50 x 20	C	
CRM	43X GALF2 A	0.0050	0.0504	5.40	0.0043	0.032	0.0040	0.0585	....	....	....	....	0.0318	0.0158			50 x 20	C	
CRM	43X GALF3 A	0.0032	0.0099	8.37	0.0018	0.018	0.0025	0.507	....	....	....	....	0.0152	0.0076			50 x 20	C	galvan-type alloys
CRM	43X GALF4 A	0.0122	0.0062	10.71	0.0108	0.074	0.0110	2.470	....	....	....	....	0.079	0.041			50 x 20	C	
CRM	43X GALF5 A	0.0084	0.0016	15.03	0.0080	(0.072)	0.0081	0.0114	....	....	....	....	0.0041	0.0019			50 x 20	C	
4.4 High Alloy Zinc		Pb	Mg	Al	Cd	Fe	Sn	Cu	Ni	Bi	Sb	Ag					Size (mm) Ø x H	Form	Price
	44X ZnCd30 A	0.09	....	....	31.0	0.002	0.05	0.05	0.001	0.05	1.03	0.05					40 x 15	C	
4.5 Zn/Al 'Galvalume'		Zn	Si	Fe	Cu	Sn	Pb	Mg	Ca	Ti	Li	Sr	Al				Size (mm) Ø x H	Form	Price
	45X ZnAl1 B	24.6	3.07	0.22	0.057	0.017	0.021	0.044	0.0021	0.016	0.0015	....	bal.				55 x 6	CC	
	45X ZnAl1 A	46.1	1.47	0.185	0.031	0.010	0.039	0.042	....	0.0073	....	0.011	(52.1)				55 x 6	CC	
	45X ZnAl11 A	27.4	2.21	0.139	0.037	0.008	0.010	0.011	0.0020	0.012	(0.001)	....	bal.				55 x 6	CC	

## 5. Aluminium Base

Updated: 8 December 2011

Blocks / Discs

5.1.1 Residuals in Aluminium		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Zr	Co	V	Ag	Bi	Sb	Cd	Ga	As	Hg	Size (mm) Ø x H	Form	Price *
CRM	51X G00H1 D	0.0131	0.054	0.142	0.831	0.0074	0.231	0.243	0.0021	0.096	0.0135	0.0061	(0.001)	....	0.0081	....	0.023	(0.003)	....	....	....	....	40x15 or 50x20	C	
CRM	51X G00H2 E	0.111	0.093	0.350	0.356	0.154	0.119	0.113	0.114	0.0065	0.128	0.0174	0.0150	....	0.0148	....	0.011	0.0265	0.0031	0.011	(0.005)	....	40x15 or 50x20	C	
CRM	51X G00H3 D	0.399	0.0077	0.895	0.313	0.210	0.0115	0.097	0.055	0.083	0.0043	0.095	0.0095	0.0042	0.0142	0.0079	0.076	0.0025	0.0186	0.010	(0.0003)	<0.001	50 x 20	C	
CRM	51X G00H4 B	0.051	0.024	0.028	0.072	0.0309	0.036	0.151	0.021	0.031	0.029	0.040	0.0261	0.030	0.0108	....	0.0202	....	0.0208	0.022	0.0014	0.012	50 x 20	C	
CRM	51X G00H5 B	0.227	0.110	0.739	0.490	0.196	0.161	0.479	0.130	0.201	0.100	0.0249	0.0005	0.045	0.0295	0.11	0.130	0.056	0.0103	0.0122	(0.0005)	<0.001	50 x 20	C	
5.4 Al/Si		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Co	V	Be	Bi	Sb	Cd	Sr	Ga	Zr	Li	Size (mm) Ø x H	Form	Price *
CRM	54X G231H1 C	1.19	0.45	9.82	0.80	0.029	0.31	0.60	0.145	0.082	0.022	0.089	....	....	(0.0002)	....	....	....	(0.003)	....	....	....	40x13 or 50x17	C	
CRM	54X G231H2 C	0.868	0.159	11.6	0.131	0.191	0.171	0.397	0.082	0.127	0.085	0.0469	....	....	0.0146	....	....	....	(0.0006)	....	....	....	50 x 15	C	
CRM	54X G231H3 C **	0.42	0.035	13.2	0.38	0.46	0.09	0.135	0.01	0.01	0.13	0.063	....	....	0.0003	....	....	....	....	** provisional values	....	....	50 x 15	C	
CRM	54X GS20J1 E	0.308	0.186	18.8	0.79	0.097	0.159	0.43	0.120	0.130	0.129	0.115	....	....	(0.0001)	....	....	....	<0.0001	....	....	....	40x13 or 50x17	C	
CRM	54X GS20J2 E	0.168	0.178	18.7	0.56	0.059	0.091	0.305	0.066	0.075	0.082	0.066	....	....	<0.0001	....	....	....	<0.0001	....	....	....	40x13 or 50x17	C	
CRM	54X GS20J3 D	0.079	0.118	23.9	0.328	0.302	(0.003)	0.030	0.077	(0.012)	0.0055	0.0017	....	....	<0.0001	....	....	....	<0.0001	....	....	....	40x13 or 50x17	C	
CRM	54X GS20J4 D	(0.0037)	0.0050	25.5	0.227	0.146	0.265	0.224	0.0014	(0.0021)	0.107	0.194	....	....	0.0017	....	....	....	(0.002)	....	....	....	40x13 or 50x17	C	
CRM	54X G06H1 R	0.630	0.489	8.43	1.08	0.022	0.611	0.60	0.082	0.133	0.248	0.084	0.015	0.010	....	0.006	....	0.0074	....	....	....	<0.001	40x13 or 50x17	C	
CRM	54X G06H2 S	0.54	0.40	10.19	0.640	0.234	0.55	0.47	0.213	0.116	0.179	0.130	0.0086	0.018	....	0.027	....	(0.0004)	....	....	....	(0.0044)	40x13 or 50x17	C	
CRM	54X G06H3 P **	0.31	0.22	10.0	0.50	0.35	0.21	0.025	0.02	0.05	0.08	0.05	0.02	0.03	....	0.01	....	0.005	....	** provisional values	....	....	50 x 15	C	
CRM	54X G06H4 Q	0.237	0.134	13.21	0.138	0.691	0.139	0.131	0.040	(0.007)	0.124	0.120	0.207	0.011	....	....	....	....	(0.005)	....	....	<0.001	40x13 or 50x17	C	
CRM	54X G06H5 L	0.0229	(0.0022)	13.76	0.210	0.85	0.0067	0.225	(0.0020)	0.022	0.0106	0.026	....	0.008	....	....	....	(0.0002)	....	....	....	(0.0001)	40x13 or 50x17	C	
CRM	54X G13H1 N	1.87	2.89	8.91	0.801	0.0137	1.83	0.37	0.240	0.260	0.112	0.062	0.0051	....	0.0078	<0.001	<0.005	....	<0.001	....	<0.005	....	40x13 or 50x17	C	
CRM	54X G13H2 M	1.29	1.37	10.42	0.767	0.248	1.15	0.530	0.083	0.145	0.166	0.103	0.004	....	....	....	....	....	....	....	....	....	40x13 or 50x17	C	
CRM	54X G13H3 M	0.82	0.89	10.2	0.79	0.43	0.95	0.42	0.050	0.092	0.152	0.060	0.009	....	0.0075	....	....	....	....	....	(0.004)	....	40x13 or 50x17	C	
CRM	54X G13H4 N	0.643	0.78	12.55	0.405	0.617	0.84	0.251	0.055	0.068	0.083	0.0264	(0.001)	....	0.0047	<0.001	0.045	....	0.026	....	0.021	....	40x13 or 50x17	C	
CRM	54X G13H5 L	0.216	0.092	13.26	0.715	0.119	0.115	0.070	0.013	0.009	0.032	0.044	0.0016	....	0.0049	....	....	....	(0.033)	....	....	....	50 x 17	C	
CRM	54X G25D1 L	0.010	0.67	3.37	0.721	0.815	0.262	0.359	(0.0033)	<0.005	0.099	0.140	....	0.016	0.0011	0.112	....	....	....	....	(0.004)	....	40x15 or 50x20	C	
CRM	54X G25D2 K	0.130	0.59	3.93	0.576	0.479	0.139	0.169	0.073	0.042	0.152	0.150	0.105	(0.006)	0.049	0.22	....	0.011	....	....	....	....	40x15 or 50x20	C	
CRM	54X G25D3 R	0.117	0.208	5.97	0.454	0.289	0.111	0.092	0.074	0.054	0.078	0.061	....	0.011	0.0032	....	....	....	....	0.016	....	....	40x15 or 50x20	C	
CRM	54X G25D4 N	0.161	0.074	7.41	(0.115)	0.091	0.095	0.107	0.160	0.091	(0.131)	0.021	0.049	(0.002)	0.0191	0.092	....	0.0176	....	....	....	....	40x15 or 50x20	C	
CRM	54X G25D5 L	0.273	(0.0011)	8.14	0.191	(0.0046)	0.0082	0.020	0.273	0.130	0.0068	0.0097	0.0024	(0.0025)	0.022	....	....	....	....	....	....	....	40x15 or 50x20	C	
CRM	54X G25D6 A	0.0021	0.715	5.97	0.080	0.0096	0.0044	0.0050	(0.003)	(0.002)	0.0071	0.0009	....	0.0133	0.0220	....	....	....	....	0.0027	....	....	50 x 15	C	
5.5 Al/Si/Cu		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Co	V	Bi	Sb	Be	Li	Size (mm) Ø x H	Form	Price *				
CRM	55X G900J1 E	1.02	0.94	0.14	0.81	0.008	0.005	0.26	0.35	0.32	<0.005	0.002	....	....	....	....	....	....	....	....	....	....	40x15 or 50x20	C	
CRM	55X G900J2 G **	72	0.60	0.23	0.50	0.20	0.083	0.29	0.22	0.24	0.08	0.08	....	....	0.37	0.04	0.0035	(0.005)	....	** provisional values	....	....	50 x 17	C	
CRM	55X G900J3 F	0.41	0.38	0.82	0.29	0.56	0.21	0.39	0.14	0.15	0.16	0.25	0.070	....	....	(0.029)	....	....	....	....	....	....	40 x 15	C	
CRM	55X G900J4 F	0.249	0.459	1.39	0.306	0.75	0.351	0.149	0.088	0.153	0.171	0.343	....	(0.010)	0.285	....	....	....	....	....	....	....	40x15 or 50x20	C	
CRM	55X G900J5 E	0.024	0.009	1.65	0.18	1.16	0.41	0.023	0.014	0.006	0.33	0.46	....	....	....	....	....	....	....	....	....	....	40x15 or 50x20	C	

Price\* - Where two sizes are available the price for the smaller is given, the price for the larger is available on request.



## 5. Aluminium Base

Updated: 8 December 2011

Blocks / Discs

5.6 Al/Cu		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Co	V	Be	Bi	Sb	Zr	Ag	Li	Size (mm) Ø x H	Form	Price *	
CRM	56X G14H2 C	4.61	0.97	0.18	0.31	0.48	1.82	0.16	0.03	0.07	0.20	0.08	....	....	....	....	....	....	....	....	40 x 15	C		
CRM	56X G14H4 C	3.82	1.72	0.504	0.251	0.122	2.37	0.091	0.050	0.037	0.069	0.0309	0.0288	0.0252	....	....	....	....	....	....	50 x 20	C		
CRM	56X G250J1 C	3.82	0.075	0.26	0.41	0.040	1.33	0.28	0.101	0.125	0.008	0.0067	0.008	0.102	<0.0005	....	(0.003)	(0.003)	....	....	40x15 or 50x20	C		
CRM	56X G250J2 C	4.81	0.060	0.211	0.346	0.225	1.10	0.155	(0.0016)	(0.004)	0.210	0.063	0.195	0.018	....	....	0.324	0.247	....	....	40x15 or 50x20	C		
CRM	56X G250J3 C	4.90	(0.001)	0.11	0.079	0.278	0.92	0.103	0.024	0.031	0.162	0.024	0.264	0.036	0.0014	....	0.35	0.275	....	....	40x13 or 50x18	C		
CRM	56X G250J5 D	4.36	0.022	0.205	0.535	0.150	1.77	0.086	0.076	0.097	0.051	0.047	0.34	0.021	0.0022	....	0.076	0.22	....	....	40x15 or 50x20	C		
CRM	56X G250J7 A	5.14	0.06	0.23	0.43	0.17	1.30	0.185	<0.01	<0.01	0.247	0.09	1.48	....	....	....	0.24	<0.01	....	....	40 x 15	C		
CRM	56 X G2000J1 C	3.29	1.70	0.099	0.086	1.27	0.0046	0.864	0.022	0.099	0.0053	0.0007	0.00044	0.0097	....	0.008	....	0.293	0.0048	(0.0001)	40x15 or 50x20	C		
CRM	56 X G2000J2 C	3.73	1.292	0.517	1.38	0.937	0.149	0.711	1.114	0.092	0.096	0.0200	0.056	0.170	0.0054	0.078	....	0.188	0.0446	0.0112	50 x 20	C		
CRM	56 X G2000J3 C	4.78	1.018	0.773	0.382	0.589	0.091	0.114	0.375	0.0157	0.196	0.0573	0.108	0.0099	0.0039	0.152	....	0.0268	0.0105	0.0019	40x15 or 50x20	C		
CRM	56 X G2000J4 C	5.02	0.505	1.33	0.705	0.271	0.089	0.0131	0.879	0.0092	0.135	0.053	0.0247	0.0132	....	0.0049	....	0.105	0.0122	0.0025	40x15 or 50x20	C		
CRM	56 X G2000J5 C	5.52	0.39	0.321	0.98	0.007	0.204	0.368	0.69	<0.005	0.063	0.0078	0.077	0.027	0.0050	0.136	....	0.064	0.234	0.009	40x15 or 50x20	C		
CRM	56X G2011 A	5.70	0.0102	0.089	0.632	0.0183	0.0044	0.0188	0.332	0.0037	0.0121	0.0031	....	....	....	0.527	....	....	....	....	50 x 20	W		
CRM	56X G2014 A **	4.40	0.46	0.61	0.245	0.58	0.008	0.20	0.011	0.005	0.023	0.077	....	....	....	....	....	0.14	....	**provisional values	50 x 20	W		
5.6.1 Al/Cu/Ag		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Ag	Size (mm) Ø x H	Form	Price *								
CRM	56X A201.1 A	4.49	0.198	0.193	0.089	0.310	0.0066	0.0113	0.0020	(0.0025)	0.132	0.0029	0.494	50 x 20	C									
5.7 Al/Cu/Si		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Co	V	Be	Sb	Cd	Ga	Zr	Li	Size (mm) Ø x H	Form	Price *	
CRM	57X G12H1 C	5.54	0.40	2.52	0.88	0.032	0.31	1.03	0.016	0.095	0.114	0.069	0.113	0.15	0.0019	....	0.012	....	0.07	0.008	40x15 or 50x20	C		
CRM	57X G12H2 B	8.5	0.32	2.57	1.30	0.15	0.35	0.71	0.17	0.27	0.15	0.03	....	....	....	....	....	....	....	....	40 x 15	C		
CRM	57X G12H3 C	8.69	0.296	1.48	0.350	0.117	0.479	0.554	0.092	0.132	0.196	0.086	0.039	0.0126	0.0016	....	0.0055	....	(0.001)	....	50 x 20	C		
CRM	57X G12H4 B	12.8	0.18	1.26	0.37	0.58	0.17	0.40	0.01	0.04	0.06	0.07	....	....	....	....	....	....	....	....	40 x 15	C		
CRM	57X G12H5 G	12.2	0.028	0.55	0.19	0.073	0.11	0.072	0.068	0.067	0.036	0.016	0.054	0.033	0.003	0.066	0.023	0.017	0.045	....	40x15 or 50x20	C		
CRM	57X G12H6 A	8.28	0.292	1.63	0.85	0.223	0.387	6.74	0.110	0.108	0.108	0.054	0.0247	0.0143	(0.0003)	....	0.0028	....	0.0262	....	50 x 20	C		
5.8 Al/Zn		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Co	Be	Zr	Cd	Sb	Li	Size (mm) Ø x H	Form	Price *			
CRM	58X G40H6 B	0.111	(0.003)	0.09	0.08	0.004	0.008	7.55	<0.002	<0.005	0.064	0.005	0.006	(0.002)	(0.004)	0.032	<0.0005	(0.004)	....	....	40x15 or 50x20	C		
CRM	58X G40H7 B	0.050	0.304	0.161	0.101	0.078	0.142	7.16	0.054	0.067	0.0045	0.0018	0.026	0.0012	0.0030	0.027	0.007	(0.0003)	....	....	40x15 or 50x20	C		
CRM	58X G40H8 B	0.14	0.69	0.1	0.30	0.20	0.22	6.5	0.090	0.010	0.063	0.22	....	....	(0.004)	....	....	....	....	....	40x15 or 50x20	C		
CRM	58X G40H9 C	0.172	0.960	0.347	0.320	0.0372	0.062	4.83	0.190	0.068	0.279	0.241	0.0150	(0.0001)	0.157	....	....	....	....	....	50 x 20	C		
CRM	58X G40H10 C	0.188	1.25	0.224	0.361	0.269	0.097	4.66	0.044	0.042	0.187	0.468	0.050	(0.0003)	0.215	....	....	....	....	....	50 x 20	C		
5.9 Al/Zn/Mg/Cu		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Co	V	Bi	Cd	Ga	Zr	Be	As	Mo	Size (mm) Ø x H	Form	Price *
CRM	59X G77J1 F	2.41	4.83	0.15	0.21	0.46	0.17	1.91	0.125	0.126	0.178	0.24	0.018	0.005	0.06	0.004	(0.013)	0.01	....	0.004	0.004	40x15 or 50x20	C	
CRM	59X G77J2 E	2.37	3.04	0.206	0.293	0.239	0.527	3.25	0.127	0.0054	0.0156	0.0966	....	0.0153	....	0.0023	....	0.152	....	....	....	40x15 or 50x20	C	
CRM	59X G77J3 F	1.30	2.53	0.647	0.70	0.246	0.402	4.72	0.108	0.122	0.148	0.150	0.032	0.0181	0.0297	0.0095	....	0.0144	....	....	....	50 x 20	C	
CRM	59X G77J4 E	0.81	1.47	0.59	1.04	0.224	0.0037	5.30	0.073	0.219	0.119	0.071	....	0.0067	....	0.00054	....	0.080	....	....	....	40x15 or 50x20	C	
CRM	59X G77J5 D	0.122	0.72	0.30	1.32	0.030	1.38	7.57	(0.003)	<0.01	0.058	0.050	....	0.007	....	0.012	0.020	....	....	....	....	40x15 or 50x20	C	
CRM	59X G77J6 B	1.08	2.60	0.094	0.293	0.0318	0.0248	12.02	0.0123	0.0267	0.020	0.0127	0.0087	0.0107	....	0.0015	....	0.261	0.0079	....	....	50 x 17	C	
CRM	59X G7075 A **	1.65	2.35	0.15	0.24	0.075	0.005	5.65	0.02	0.001	0.060	0.20	....	....	....	....	0.01	0.001	....	....	**provisional values	50 x 20	W	

Price\* - Where two sizes are available the price for the smaller is given, the price for the larger is available on request.

## 5. Aluminium Base

Updated: 8 December 2011

Blocks / Discs

5.11 Al/Mg		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Co	V	Be	Cd	Ga	Zr	Na	B	Li	As	Mo	Size (mm) Ø x H	Form	Price *	
CRM	511X G05H1 H	0.32	2.02	0.42	0.79	0.012	0.125	0.47	0.023	0.178	0.204	0.242	....	0.053	(0.0002)	0.013	....	(0.002)	....	....	....	....	....	....	40x15 or 50x20	C	
CRM	511X G05H2 G	0.37	3.12	0.35	0.60	0.186	0.22	0.26	0.068	0.154	0.079	0.30	....	(0.001)	0.004	0.002	0.012	(0.002)	(0.002)	(0.024)	....	....	....	....	40x15 or 50x20	C	
	511X G05H3 H	0.093	3.97	0.21	0.41	0.40	0.090	0.092	0.107	0.096	0.25	0.095	....	....	0.0074	....	....	....	....	....	....	....	....	....	40x15 or 50x20	C	
	511X G05H4 F	0.056	5.1	0.11	0.14	0.55	0.040	0.062	0.15	0.14	0.048	0.029	....	....	0.014	....	....	....	....	....	....	....	....	....	50 x 20	C	
CRM	511X G05H5 F	0.071	9.22	0.141	0.129	1.110	0.0129	0.019	0.185	0.0089	0.0157	0.0113	....	0.041	0.0062	....	....	0.107	....	....	....	....	....	....	50 x 20	C	
CRM	511X G10H4 C	0.163	10.24	0.244	0.193	0.228	0.117	0.117	0.080	0.075	0.155	0.083	....	....	0.0061	....	....	....	....	....	....	....	....	....	50 x 20	C	
CRM	511X G10H5 B	0.0227	13.97	0.050	0.057	0.098	0.036	0.029	0.165	0.013	0.0052	0.0017	....	....	0.0274	....	....	....	....	....	....	0.0032	....	....	50 x 20	C	
CRM	511X G3000B1 C	0.287	0.253	0.788	0.669	0.752	0.142	0.0347	0.145	0.163	0.0327	0.0972	....	0.054	....	....	0.051	....	....	....	....	....	....	....	40x15 or 50x20	C	
CRM	511X G3000B2 B	0.20	0.68	0.23	0.335	0.81	0.063	0.098	0.137	0.105	0.111	0.200	0.007	<0.005	0.0017	(0.0007)	0.012	....	....	....	0.017	....	(0.059)	....	40x15 or 50x20	C	
CRM	511X G3000B3 B	0.120	0.80	0.35	0.376	1.06	0.116	0.140	0.062	0.028	0.22	0.056	0.008	<0.005	0.005	(0.001)	0.014	....	....	....	....	(0.006)	(0.093)	....	40x15 or 50x20	C	
CRM	511X G3000B4 C	0.086	1.267	0.130	0.440	0.916	0.0347	0.058	0.0285	0.0456	0.052	0.0121	....	0.0199	0.0140	....	0.0284	....	....	....	....	....	....	....	50 x 20	C	
CRM	511X G5083 A **	0.03	4.00	0.22	0.37	0.59	0.01	0.048	0.007	0.002	0.029	0.24	....	0.01	....	....	....	0.001	....	....	** provisional values				50 x 20	W	
CRM	511X G6063 A **	0.001	0.45	0.42	0.185	0.025	0.002	0.006	0.001	0.001	0.011	0.002	....	0.008	....	....	....	....	....	....	** provisional values				50 x 20	W	
CRM	511X G6082 A	0.0184	0.759	0.753	0.081	0.534	0.0035	0.054	0.0012	0.0011	0.0278	0.0606	....	....	....	....	....	....	....	....	....	....	....	....	50 x 20	W	
CRM	511X G6082 B **	0.014	0.66	0.90	0.18	0.56	0.0035	0.002	0.001	0.001	0.015	0.005	....	....	....	....	....	....	....	....	** provisional values				50 x 20	W	

  

5.11 Al/Mg with Bi, Sn and Pb		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Bi	Zr	Be	Size (mm) Ø x H	Form	Price
CRM	511X G6012	0.114	1.10	1.35	0.285	0.910	0.0154	0.255	1.10	0.040	0.016	0.269	0.552	0.032	0.0072	50 x 17	C	
CRM	511X G6012A	0.351	0.712	0.768	0.71	0.424	0.048	0.060	0.211	1.88	0.197	0.0223	0.701	0.0480	0.0110	50 x 17	C	
CRM	511X G6023 A	0.451	0.512	1.21	0.51	0.556	0.036	0.0260	0.0110	1.037	0.0117	0.0054	0.353	0.0110	0.0020	50 x 17	C	
CRM	511X G6065 A	0.214	1.180	0.495	0.74	0.131	0.0144	0.164	0.0310	0.0251	0.112	0.0759	1.27	0.144	0.0011	50 x 17	C	
CRM	511X G6262 A	0.267	0.881	0.649	0.58	0.163	0.028	0.198	0.0081	0.539	0.045	0.121	0.444	0.0051	0.0011	50 x 17	C	
CRM	511X G6262 B	0.243	0.829	0.557	0.329	0.0737	0.0034	0.0209	0.499	(0.001)	0.0194	0.0666	0.424	....	....	50 x 20	W	

  

5.14 Al/Mn		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Zr	Size (mm) Ø x H	Form	Price *
CRM	514X 9091.1 C	0.046	(0.001)	0.035	0.081	6.93	(0.0026)	0.029	0.016	0.013	0.0017	<0.005	0.184	40x15 or 50x15	C	
CRM	514X 9091.3 D	0.62	0.148	0.74	0.94	11.3	0.141	0.223	0.111	0.019	0.424	0.106	<0.005	40x15 or 50x15	C	

  

5.17 Sacrificial Anode		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	In	Ga	Cd	Size (mm) Ø x H	Form	Price
CRM	517X LF1 A	0.0020	0.0097	0.248	0.101	0.0013	0.0010	3.71	(0.002)	(0.005)	0.0396	(0.001)	0.0187	0.0164	<0.0005	45 x 20	C	

  

5.18 Pressed Powder Alloys		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Co	V	Ca	Mo	Zr	Sr	B	P	Size (mm) Ø x H	Form	Price
CRM	518X 429 A	1.023	1.25	28.9	0.201	0.0165	0.014	0.0042	0.0020	....	0.0163	0.0034	2.22	0.0090	0.020	....	....	0.0006	(0.002)	(0.004)	65 x 25	HIP	
CRM	518X 905 A	2.51	0.645	0.10	2.54	0.994	4.98	0.0052	(0.001)	(0.0024)	0.587	0.0090	0.0033	0.0186	(0.0007)	0.807	0.77	....	....	....	45 x 40	HIP	

Price\* - Where two sizes are available the price for the smaller is given, the price for the larger is available on request.

## 6. Magnesium Base

Updated: 8 December 2011

Blocks / Discs

6.1 Residuals in Pure Magnesium		Al	Zn	Mn	Zr	Cu	Si	Fe	Ni	Ca	Sn	Pb	Ag	Be	Cd	Ce	La	Nd	Y	Size (mm) Ø x H	Form	Price	
CRM	61X MGP1 A **	0.014	(0.002)	0.0035	<0.0005	0.0008	0.005	0.027	(0.001)	<0.001	<0.002	<0.002	<0.0002	<0.0002	<0.0002	<0.001	<0.001	....	....	45 x 20	C		
CRM	61X MGP2 A **	0.065	0.0122	0.0118	(0.0007)	0.0109	0.031	0.0061	0.0029	0.0138	0.0073	0.0061	0.003	<0.0001	0.0063	0.0019	0.0014	....	....	Unsuitable for use with glow-discharge systems	45 x 20	C	
CRM	61X MGP3 A **	0.096	0.0196	0.0137	(0.0014)	0.0292	0.044	0.014	0.0048	0.054	0.0155	0.0148	0.0125	<0.0001	0.0154	0.0055	0.0038	....	....	45 x 20	C		
CRM	61X MGP4 A **	0.0247	0.0158	0.0100	0.030	0.0108	0.037	(0.0044)	0.0028	0.028	0.0067	0.0066	0.0203	<0.0001	0.0071	0.0041	0.0030	....	....	45 x 20	C		
CRM	61X MGP5 A	0.119	0.099	0.201	....	0.092	0.094	0.0048	0.0176	....	0.0352	0.0357	0.0342	0.0018	0.0292	0.049	0.0382	0.0446	0.0132	40x15 or 50x20	C		
CRM	61X MGP6 A	0.0449	0.010	0.0125	....	0.0067	0.044	0.0041	0.0025	(0.001)	0.0091	0.0120	0.0043	....	0.0025	0.0209	0.0137	0.0238	0.0375	40x15 or 50x20	C		
6.3 Mg/Mn		Al	Zn	Mn	Zr	Cu	Si	Fe	Ni	Ca	Sn	Pb	Ag	Ce	La	Be	Cd	Ti	Size (mm) Ø x H	Form	Price *		
CRM	63X MGE1 D	0.056	0.0514	0.492	<0.001	0.0486	0.040	0.0045	0.0091	(0.014)	0.0033	0.0113	0.0197	0.0010	0.0006	0.00036	....	0.00012	40 x 18	C			
CRM	63X MGE2 B	0.0432	0.0245	1.75	....	0.0203	0.019	0.0020	0.0035	0.0015	0.0024	0.0020	0.0090	....	....	....	0.0009	....	40x15 or 50x20	C			
CRM	63X MGE3 B	0.015	0.022	2.36	<0.001	0.012	(0.009)	0.004	0.0023	0.13	0.0055	0.005	....	....	....	....	0.0009	<0.001	40x15 or 45x20	C			
6.4 Mg/Al		Al	Zn	Mn	Cu	Si	Fe	Ni	Sn	Pb	Be	Ce	La	Nd	Form	Price *							
CRM	64X MGQ1 A	1.083	0.235	0.377	0.0840	0.062	0.0034	0.0041	0.0195	0.0199	0.00036	....	....	....	AZ10A	40x15 or 50x20	C						
CRM	64X MGQ2 A	4.53	0.107	0.378	0.0151	0.051	0.0041	0.0061	0.0107	0.0107	0.0013	....	....	....	AM50A	40x15 or 50x20	C						
CRM	64X MGQ3 A	8.66	0.0039	0.206	0.0349	0.083	0.0090	0.0032	0.0019	0.0022	0.0041	....	....	....	AM90A	40x15 or 50x20	C						
CRM	64X MGQ4 A	6.50	0.188	0.183	0.310	0.067	0.0040	0.0068	0.0282	0.0322	0.00029	....	....	....	AM60A	40x15 or 50x20	C						
CRM	64X MGQ5 A	5.76	0.0465	0.276	0.0072	0.052	0.0043	0.0010	0.0050	0.0056	0.0013	....	....	....	AM60B	40x15 or 50x20	C						
CRM	64X MGQ6 A	2.31	0.072	(0.26)	0.0045	(0.97)	(0.004)	0.0026	0.0055	0.0060	0.0007	....	....	....	AS21A	Mn and Si segregation	40x15 or 50x20	C					
CRM	64X MGQ7 A	4.02	0.061	(0.43)	0.0167	(1.05)	0.0028	0.0053	0.0096	0.0126	0.00042	....	....	....	AS41A	Mn and Si segregation	40x15 or 50x20	C					
CRM	64X MGQ8 A	1.030	0.0442	0.700	0.0019	0.045	0.0018	0.0004	0.0022	0.0008	0.00015	....	....	....	AZ10-mod	40x15 or 50x20	C						
CRM	64X MGQ9 A	2.14	0.243	0.0684	0.0104	(0.37)	0.0069	0.0020	0.0076	0.0096	0.0015	0.111	0.083	0.114	AS21B	Si segregation	40x15 or 50x20	C					
6.5 Mg/Al/Zn		Al	Zn	Mn	Cu	Si	Fe	Ni	Sn	Pb	Be	Ca	Ag	Ce	La	Cd	Sr	Hg	Size (mm) Ø x H	Form	Price *		
CRM	65X MGA1 J **	5.45	1.26	0.060	0.221	0.20	0.021	0.021	0.072	0.012	0.006	0.029	0.012	0.009	0.007	0.013	....	....	++ unsuitable for use with glow-discharge	45 x 20	C		
CRM	65X MGA5 A	8.00	0.411	0.401	0.0195	0.110	0.006	0.0201	0.0124	0.042	0.0013	(0.014)	0.0050	....	....	0.0035	0.0004	....	40x15 or 50x20	C			
CRM	65X MGA11 A	3.63	1.59	0.044	0.0496	0.022	0.0048	0.0134	0.093	0.0190	0.0021	0.102	(0.0002)	(0.0005)	(0.0005)	0.0014	....	0.006	40x15 or 50x20	C			
CRM	65X MGA12 A	5.68	3.18	0.198	0.266	0.0142	0.0053	0.0148	0.0021	0.010	(0.0036)	0.037	0.0128	0.0009	0.0007	0.0121	....	(0.016)	40x15 or 50x20	C			
CRM	65X MGA13 A	7.45	0.925	0.092	0.125	0.022	(0.008)	0.0039	0.043	0.0085	(0.010)	0.0064	0.0074	0.0024	0.0021	0.0055	....	(0.033)	40x15 or 50x20	C			
CRM	65X MGA14 A	9.09	0.685	0.282	0.0102	0.080	0.008	0.0082	0.0085	0.006	0.0029	0.016	0.0016	0.0120	0.0111	0.0014	....	(0.082)	40x15 or 50x20	C			
CRM	65X MGA15 A	10.67	0.348	0.067	0.0273	0.034	0.010	0.0026	0.0021	0.0051	0.0062	(0.0014)	0.030	0.0069	0.0048	0.0034	....	0.011	40x15 or 50x20	C			
CRM	65X MGA16 A	6.78	4.03	0.271	0.099	0.023	0.0073	0.0057	0.028	0.050	0.0011	0.0024	0.0035	0.0017	0.0012	0.0066	....	0.005	40x15 or 50x20	C			
CRM	65X MGA17 A	4.20	0.128	0.203	0.0215	0.33	0.0069	0.0141	0.0050	0.0009	....	0.021	0.0064	....	....	0.0049	....	....	40x15 or 50x20	C			
CRM	65X MGA18 A	6.75	0.502	0.192	0.052	0.043	0.0081	0.0074	0.0114	0.0244	0.00051	....	....	....	....	....	....	....	AZ61A	40x15 or 50x20	C		
CRM	65X MGA19 A	8.97	2.17	0.322	0.0426	0.196	0.0085	0.0065	0.0489	0.0489	0.00025	....	....	....	....	....	....	....	AZ92A	40x15 or 50x20	C		
CRM	65X MGA20 A	5.87	1.32	0.067	0.0131	0.052	0.0078	0.0025	0.0320	0.0075	0.0018	....	....	....	....	....	....	....	AZ61A	40x15 or 50x20	C		
CRM	65X MGA21 A	12.37	5.11	0.0777	0.0020	0.028	0.0140	0.0010	0.0063	0.0048	0.0006	....	....	....	....	....	....	....	AZ125A	40x15 or 50x20	C		
CRM	65X MGA22 A	8.62	0.89	0.40	0.078	0.085	0.0060	0.0058	0.0033	0.0038	0.0006	....	....	....	....	....	....	....	AZ91A	40x15 or 50x20	C		
CRM	65X MGA23 A	9.75	0.555	0.130	0.0155	0.027	0.0085	0.0011	0.0024	0.0019	0.0024	....	....	....	....	....	....	....	AZ91D	40x15 or 50x20	C		

Price\* - Where two sizes are available the price for the smaller is given, the price for the larger is available on request.

## 6. Magnesium Base

Updated: 8 December 2011

Blocks / Discs

6.5 Mg/Al/Zn - continued		Al	Zn	Mn	Cu	Si	Fe	Ni	Ca	Sn	Pb	Ag	Ce	La	Be	Cd	Ti	Size (mm) Ø x H	Form	Price *	
	<b>65X MGB1 C</b>	2.34	1.71	0.61	0.195	0.14	0.006	0.012	0.004	0.012	0.013	0.03	0.010	0.010	0.0006	0.07	.....		Sold Out	40 x 15	C
CRM	<b>65X MGB2 C</b>	2.67	0.95	0.333	0.113	0.069	0.010	0.0028	0.011	0.0047	0.0036	0.0099	0.0009	0.0007	0.0008	0.0115	0.0003			40 x 18	C
CRM	<b>65X MGB3 B **</b>	3.19	0.608	0.0122	0.0214	0.012	(0.005)	0.0020	0.030	0.0050	0.0037	(0.002)	.....	.....	0.0029	0.012	(0.003)		See note below	45 x 20	C
CRM	<b>65X MGB4 C</b>	3.86	0.333	0.031	0.0183	0.037	(0.009)	0.0003	0.0010	0.0050	0.0037	0.0046	0.0003	(0.0001)	0.0033	0.00016	(0.0008)			40 x 18	C
6.6 Mg/Zn		Al	Zn	Mn	Zr	Cu	Si	Fe	Ni	Ca	Sn	Pb	Ag	Ce	La	Nd	Be	Sr	Size (mm) Ø x H	Form	Price *
CRM	<b>66X MGC3 B</b>	0.011	4.97	0.020	0.13	0.009	(0.003)	(0.001)	0.006	.....	<0.002	0.003	0.001	.....	.....	.....	.....	.....		40 x 15	C
CRM	<b>66X MGC4 C</b>	0.039	6.81	0.166	<0.001	0.0024	0.06	0.006	0.0009	.....	0.021	0.0030	0.0074	.....	.....	.....	(0.0001)(0.00014)			40x15 or 50x20	C
CRM	<b>66X MGD1 B</b>	0.147	1.19	0.125	.....	0.066	(0.073)	0.0029	0.0162	.....	0.026	0.026	.....	0.065	0.031	0.064	.....	.....		40x15 or 50x20	C
	<b>66X MGD3 B **</b>	0.041	1.97	0.28	0.029	0.058	0.020	0.023	0.002	(0.07)	0.007	0.009	0.005	0.004	0.004	.....	0.0003	.....	See note below	45 x 20	C
CRM	<b>66X MGD4 B</b>	0.0012	2.77	0.0053	0.69	0.0041	<0.001	0.0010	.....	.....	(0.001)	(0.001)	(0.002)	0.015	0.014	.....	<0.0002	.....		40 x 15	C
CRM	<b>66X MGD5 A</b>	0.040	6.25	0.307	.....	2.88	0.134	0.008	0.0120	(0.030)	0.104	0.097	0.044	.....	.....	.....	<0.0005	.....		40x15 or 50x20	C
6.7 Mg/Rare Earth		Al	Zn	Mn	Zr	Cu	Si	Fe	Ni	Sn	Pb	Ag	La	Ce	Nd	Pr	Size (mm) Ø x H	Form	Price		
CRM	<b>67X MGF5 B</b>	0.094	6.29	0.171	<0.001	0.0735	0.0026	0.0290	0.0004	<0.001	<0.0005	<0.0005	0.239	0.412	0.011	0.100				40 x 15	C
6.8 Mg/Ag/Rare Earth		Al	Zn	Mn	Zr	Cu	Si	Fe	Ni	Sn	Pb	La	Ag	Ce	Nd	Pr	Total R.E.	Size (mm) Ø x H	Form	Price	
CRM	<b>68X MGH1 B</b>	<0.002	0.053	0.0027	0.47	0.0046	<0.005	<0.002	(0.0006)	<0.002	<0.002	0.034	3.21	0.040	3.05	(0.014)	.....			40 x 17	C
	<b>68X MGH6 A</b>	0.23	0.21	0.17	<0.01	0.11	0.01(5)	0.03	0.01	<0.002	<0.005	.....	1.13	.....	.....	.....	(1.0)			40 x 15	C
The rare-earths in the above product were added as Neodymium rich R.E, but breakdowns of the individual R.E. values are not available.																					
6.9 Mg/Y/Rare Earth		Al	Zn	Mn	Zr	Cu	Fe	Ni	Pb	Ce	La	Nd	Pr	Gd	Sm	Size (mm) Ø x H	Form	Price			
CRM	<b>69X MGY4 A</b>	(0.0023)	0.495	0.0104	0.29	0.0011	0.0012	0.0009	(0.001)	0.011	0.0078	2.36	0.0056	1.54	0.0083					60 x 6	CC

Samples marked \*\* may be unsuitable for use with glow discharge analysers.

Price\* - Where two sizes are available the price for the smaller is given, the price for the larger is available on request.

## 7. Tin Base

Updated: 2 December 2011

Blocks / Discs

7.1 Tin with Impurities		As	Bi	Sb	Pb	Cu	Fe	Cd	Zn	Ni	Al	Ag	Cr	In	Au	Te	Se	Ga	Ge	Hg	Size (mm) Ø x H	Form	Price	
CRM	71X PB3 A	0.0022	0.0103	0.0024	2.77	0.0074	....	0.0008	0.0016	....	....	0.0011	....	....	....	....	....	....	....	....	40 x 15	C		
CRM	71X PB4 A	0.0045	(0.002)	0.0059	4.00	0.0014	....	0.0027	0.0063	....	....	0.0047	....	....	....	....	....	....	....	....	40 x 15	C		
CRM	71X SR0 B	0.0008	(0.0025)	0.0034	0.0113	0.0013	0.0008	0.0015	0.0034	0.0004	0.0197	0.0018	....	0.0047	0.0007	0.0009	0.0005	0.0027	....	0.0044	40 x 15	C		
CRM	71X SR1 E	0.0102	0.0107	0.0156	0.0324	0.0111	(0.0021)	0.0104	0.0146	0.0041	(0.0016)	0.0212	....	0.0120	0.0014	0.0112	(0.0015)	0.0049	....	0.0142	40 x 15	C		
CRM	71X SR2 F	0.0070	0.0403	0.074	0.151	0.116	0.0133	0.0351	0.0058	0.0183	0.0022	0.0305	0.0031	0.0597	0.0077	0.0246	....	....	0.009	0.140	40 x 15	C		
CRM	71X SR3 F	0.097	0.123	0.128	0.306	0.121	0.0203	0.100	0.054	0.0371	(0.0014)	0.050	....	0.104	0.0145	0.070	0.0031	0.0339	....	0.115	40 x 15	C		
7.2 Tin with Antimony		As	Bi	Sb	Pb	Cu	Fe	Cd	Zn												Size (mm) Ø x H	Form	Price	
	72X SA4R B	0.03	0.1	4.0	0.08	0.02	0.1	0.003	0.007												40 x 15	C		
	72X SA5R B	0.02	0.005	5.0	0.025	0.005	0.003	0.02	0.001												40 x 15	C		
	72X SA6R B	0.05	0.25	6.0	0.25	0.1	0.05	0.01	0.02												40 x 15	C		
7.3 Tin White Metals (Pewter, Babbitt)		As	Bi	Sb	Pb	Cu	Fe	Cd	Zn	Ni	Al	Ag	Co	In	S	P						Size (mm) Ø x H	Form	Price
CRM	73X SC1 A	0.008	0.084	1.48	0.067	2.02	0.0025	0.006	0.003	0.0041	0.0025	0.010	<0.001	0.008	<0.002	....						40 x 15	C	
CRM	73X SC2 A	0.035	0.62	3.07	0.029	1.06	0.030	0.036	0.003	0.0048	(0.002)	0.006	0.021	(0.002)	<0.001	....						40 x 15	C	
CRM	73X SC3 A	0.029	0.020	4.60	0.040	0.222	0.017	0.024	0.0014	0.0136	0.001	0.013	0.006	0.031	(0.002)	....						40 x 15	C	
CRM	73X SC4 B	0.0268	0.153	5.94	0.429	2.63	0.0014	0.0085	(0.001)	0.0130	(0.002)	0.0525	0.0020	0.0143	....	0.005						40 x 15	C	
CRM	73X SC5 A	0.013	0.43	7.03	0.136	0.57	0.004	0.008	0.001	0.0058	0.003	0.063	0.011	0.036	(0.001)	....						40 x 15	C	
CRM	73X SC6 A	0.204	0.115	0.092	0.100	5.17	0.007	0.0125	0.01	0.013	(0.003)	0.08	0.0050	0.058	(0.004)	....						40 x 15	C	
CRM	73X SC7 A	0.047	0.009	14.01	0.356	6.51	0.046	0.0018	(0.003)	0.008	0.001	0.006	0.0160	0.014	<0.001	....						40 x 15	C	
CRM	73X SC8 B **	0.13	0.050	5.5	0.105	3.75	0.053	0.10	0.003	0.034	0.001	0.03	0.02	0.025	0.003	....	** provisional values					40 x 15	C	
CRM	73X SC9 A	0.53	0.066	8.18	0.20	8.47	0.037	0.078	(0.003)	0.008	<0.001	0.004	0.0030	0.010	(0.008)	....						40 x 15	C	
CRM	73X SC11 B	0.292	0.560	12.01	0.061	11.18	0.011	1.75	0.063	0.452	0.0025	0.066	....	....	....	0.019						40 x 15	C	
CRM	73X SC12 B	(0.034)	0.0301	7.50	0.091	6.03	0.024	0.758	0.0210	0.115	0.0015	0.842	0.0210	....	....	....						40 x 15	C	
CRM	73X SC13 A **	0.06	0.018	4.2	0.27	4.2	0.05	0.002	0.012	....	0.005	....	....	....	....	0.015	** provisional values					40 x 15	C	
7.4 Tin Lead-Free Solders		As	Bi	Sb	Pb	Cu	Fe	Cd	Zn	Ni	Al	Ag	P	Se	Au	Co	Ge	In				Size (mm) Ø x H	Form	Price
CRM	74X AM E	0.045	0.175	1.06	0.119	2.97	(0.016)	0.0072	(0.002)	0.0203	(0.008)	0.562	0.018	0.0115	....	....	....	....				40 x 15	C	
CRM	74X E F	0.0092	0.0099	0.0168	0.0248	2.94	0.0008	0.0003	(0.005)	0.0069	(0.001)	0.667	(0.001)	0.0008	....	....	....	0.0074				40 x 15	C	
CRM	74X HA G	0.0032	0.0639	2.10	0.077	0.629	0.0029	0.0018	2.73	0.0133	(0.002)	2.80	(0.001)	(0.001)	....	....	....	0.0090				40 x 15	C	
CRM	74X HB F	0.028	(0.007)	5.40	0.036	4.56	0.014	0.0095	0.0117	1.27	0.0013	0.070	(0.002)	<0.001	....	....	....	....				40 x 15	C	
CRM	74X HN E	0.010	0.122	0.037	0.0404	3.82	0.010	0.0057	(0.0009)	0.185	0.005	0.143	(0.002)	0.0016	....	....	....	....				40 x 15	C	
CRM	74X TC F	0.024	0.106	0.124	0.183	4.99	0.0031	0.0150	0.004	0.0167	(0.001)	0.039	(0.002)	0.0473	....	....	....	0.0215				40 x 15	C	
CRM	74X BZ1 A	0.0119	3.03	0.031	0.0238	0.026	0.011	0.0012	8.27	0.0097	0.0021	0.004	....	....	....	....	....	....				40 x 15	C	
CRM	74X AB1 A	0.0280	0.997	0.0111	0.0353	0.0285	0.0435	0.0199	....	0.0036	....	3.58	....	....	0.0010	0.0032	....	0.0262				40 x 15	C	
CRM	74X GE1 A	....	....	....	0.0339	0.662	....	0.0059	....	0.0289	0.065	0.052	....	....	....	....	0.046	....				38 x 13	C	
CRM	74X GE2 A	....	....	....	0.0467	0.713	....	0.0086	....	0.031	0.068	0.079	....	....	....	....	0.479	....				38 x 13	C	

## 7. Tin Base

Updated: 8 December 2011

Blocks / Discs

7.4 Tin Lead-Free Solders		As	Bi	Sb	Pb	Cu	Fe	Cd	Zn	Ni	Al	Ag	S	P	In	Au	Se	Co	Hg	Ge	Size (mm) Ø x H	Form	Price
CRM	74X OA A	0.080	1.065	0.0098	0.128	3.41	0.007	0.00063	(0.002)	0.0025	(0.001)	0.100	....	0.0072	0.0034	(0.0001)	....	....	....	....	40 x 15	C	
CRM	74X WS A	0.0105	0.0063	1.49	0.037	4.58	(0.004)	0.00140	0.0009	0.0048	(0.001)	0.298	....	0.0122	0.0032	(0.0002)	....	....	....	....	40 x 15	C	
CRM	74X CA1 B	....	0.0131	0.0169	0.077	0.682	....	0.0071	....	....	0.0262	0.440	....	....	....	0.0053	....	....	....	....	40 x 15	C	
CRM	74X CA2 A	0.0100	0.0329	0.0737	0.0331	0.782	0.0021	0.0010	0.0003	0.0308	0.0002	3.50	(0.005)	0.0055	0.0062	0.0014	0.0015	....	0.0007	....	40 x 15	C	
CRM	74X CA2 B	0.018	0.0365	0.079	0.0496	0.795	0.0023	0.0017	0.0005	0.0361	<0.001	3.50	....	0.010	0.0053	0.0009	0.0022	0.0019	0.0017	0.023	40 x 15	C	
CRM	74X CA3 B	0.0039	0.0156	0.0266	0.0491	0.0869	0.006	0.00045	0.0009	0.0077	0.0010	2.98	....	0.031	0.0042	0.007	....	....	....	0.0093	40 x 15	C	
CRM	74X CA4 B	0.0094	0.061	0.039	0.080	0.502	0.0043	0.00075	(0.001)	0.0542	(0.002)	3.02	....	(0.001)	0.0041	....	0.0027	0.0085	....	....	40 x 15	C	
CRM	74X CA5 A	0.0353	0.0207	0.133	0.0116	1.098	0.0019	0.0025	0.0009	0.0147	(0.0003)	4.01	0.0006	0.0108	0.0111	0.0049	0.003	....	0.0006	....	40 x 15	C	
CRM	74X CA6 A	0.0086	0.008	0.0078	0.0176	0.629	0.0061	0.00033	0.0006	0.0194	0.0006	0.282	(0.0008)	0.0046	0.0218	0.0106	0.0007	....	0.0064	....	40 x 15	C	
CRM	74X CA7 A	0.0095	0.0081	0.0103	0.0965	0.333	0.0047	0.0045	....	0.0007	....	4.21	....	0.003	0.0026	....	....	....	0.053	....	40 x 15	C	
CRM	74X CA8 B	0.0144	0.0172	0.0180	0.084	0.950	0.0043	0.0101	....	0.0020	....	2.47	....	0.010	0.0062	....	....	0.0202	0.101	0.0020	40 x 15	C	
CRM	74X CA9 A	0.0173	0.0364	0.076	0.038	0.097	0.0085	0.0015	0.0010	0.0039	0.0007	1.002	....	0.011	0.0165	0.0025	....	....	....	0.0049	40 x 15	C	

## 8. Lead Base

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Blocks / Discs

8.1 Binaries: Pb/Sb, Pb/As & Pb/Mg		Sb	As	Mg														Size (mm) Ø x H	Form	Price																	
CRM	81X PA0.5 C	0.481	....	....														40 x 15	C																		
CRM	81X PA1.0 C	0.989	....	....														40 x 15	C																		
CRM	81X PA2.0 D	1.996	....	....														40 x 15	C																		
CRM	81X PA3.5 E	3.49	....	....														40 x 15	C																		
CRM	81X PA7.0 D	7.02	....	....														40 x 15	C																		
CRM	81X PA10.0 C	9.60	....	....														40 x 15	C																		
CRM	81X PA12.5 D	12.72	....	....														40 x 15	C																		
	81X PAs1 A	....	1.25	....														40 x 15	C																		
	81X PMg1 A	....	....	1.15														40 x 15	C																		
	81X PMg2 A	....	....	0.173														40 x 15	C																		
	81X PMg3 A	....	....	0.023														40 x 15	C																		
8.2 Pb/Ag		Sn	Sb	Bi	Cu	As	Ag	Zn	Cd	Fe	In	Al														Size (mm) Ø x H	Form	Price									
CRM	82X PAg 1.5R E	0.036	0.386	0.065	0.27	0.005	1.55	(0.004)	....	....	....	....														40 x 15	C										
CRM	82X PAg 2.5R D	0.082	0.246	0.13	0.26	0.009	2.21	(0.0024)	....	....	....	....														40 x 15	C										
CRM	82X PAg 3.5R D	0.25	0.106	0.290	0.073	0.020	3.54	(0.0004)	0.0027	<0.001	0.037	0.0015														40 x 15	C										
CRM	82X PAg 6.0R A	0.50	0.48	0.52	0.18	0.021	5.93	0.007	0.010	<0.001	0.008	<0.001														40 x 15	C										
	82X PAG0.7 A	....	....	....	....	....	0.733	....	....	....	....	....														40 x 15	C										
	82X PAG0.9 A	....	....	....	....	....	0.903	....	....	....	....	....														40 x 15	C										
8.3 Lead with Impurities		Sn	Sb	Bi	Cu	As	Ag	Fe	Zn	Cd	In	Ni	Te	Se	Au	Tl	Na	Hg	Pt	S														Size (mm) Ø x H	Form	Price	
CRM	83X PR1 J	0.0059	0.0048	0.0551	0.0039	0.0287	0.123	(0.0007)	0.006	0.0932	0.0356	0.0004	0.0016	(0.001)	....	....	....	....	(0.0016)	....														40 x 15	C		
CRM	83X PR2 F	0.104	0.050	0.0310	0.0346	0.0235	0.0537	....	(0.0008)	0.0021	0.0012	0.0026	0.0114	(0.002)	0.0008	0.0012	0.0021	0.0041	....	....														40 x 15	C		
CRM	83X PR3 F	0.050	0.095	0.162	0.0551	0.0017	0.0033	....	(0.0011)	0.0479	0.0069	0.0142	0.0021	0.0104	0.0041	0.0125	0.0026	0.0103	....	....														40 x 15	C		
CRM	83X PR4 G	0.0112	0.0164	0.0187	0.0138	0.0054	0.0146	....	....	0.0083	0.0030	(0.0009)	0.0198	0.0053	(0.0023)	0.0033	....	0.044	....	....														40 x 15	C		
CRM	83X PR5 D	0.0011	0.0002	0.0080	0.0006	0.0002	0.0004	....	0.0001	0.0002	0.0001	0.0001	0.0002	0.0001	....	....	....	0.0002	....	....														40 x 15	C		
CRM	83X PR7 B	0.189	0.795	0.479	0.176	0.051	0.290	(0.0008)	(0.0006)	0.455	0.653	(0.0015)	0.0097	0.0052	....	....	....	....	0.0047	....														40 x 15	C		
CRM	83X PR8 C	0.603	0.259	1.186	0.066	0.155	0.505	....	....	0.211	0.224	0.0020	0.0011	0.0064	0.0082	....	0.0073	0.089	....	....														40 x 15	C		
CRM	83X PR11 A **	0.12	0.50	0.012	0.057	0.011	0.002	0.0001	....	0.0008	....	0.001	....	....	....	....	....	....	....	0.005	**provis														40 x 15	C	
CRM	83X PR12 A **	0.001	0.0001	0.012	0.036	0.0003	0.002	0.0001	....	0.0012	....	0.001	....	....	....	....	....	....	....	0.0001	**provis														40 x 15	C	
8.4 Battery Alloys (Pb/Sn/Ca)		Sn	Sb	Bi	Cu	As	Ag	Zn	Cd	Ni	Al	Te	Ca	Hg														Size (mm) Ø x H	Form	Price							
CRM	84X BA1 H	0.899	(0.002)	0.0174	0.0009	0.0007	0.0082	0.0048	0.0019	(0.0004)	0.0240	(0.0005)	0.0960	....														40 x 15	C								
CRM	84X BA2 C	0.490	0.0010	0.0319	0.0033	0.0008	0.0107	0.0129	0.0040	0.00025	0.0127	....	0.0754	(0.003)														40 x 15	C								
CRM	84X BA3 C	0.341	0.010	0.0411	0.006	(0.0006)	0.0082	(0.0055)	0.0044	(0.0004)	0.0026	0.0004	0.0163	....														40 x 15	C								
CRM	84X BA4 C	0.0480	0.0078	0.0260	0.0064	(0.003)	0.0020	0.0065	0.0092	(0.0004)	0.0015	0.0205	0.0014	....														40 x 15	C								
CRM	84X BA8 C	0.324	(0.0006)	0.0166	0.0007	0.0003	0.0046	0.0031	0.00065	(0.0002)	0.0283	....	0.125	0.0017														40 x 15	C								
CRM	84X BA9 B	2.92	0.0022	0.0186	0.0026	<0.0005	0.0017	0.0020	0.0010	(0.0003)	0.0154	<0.0005	0.109	....														40 x 15	C								
CRM	84X BA10 A	1.51	0.0008	0.0190	0.0005	0.0005	0.0015	0.0003	0.0002	(0.0002)	0.0100	(0.0002)	0.0596	....														40 x 15	C								

More battery alloys are on the next page

## 8. Lead Base

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Blocks / Discs

8.4 Battery Alloys (continued)		Sn	Sb	Bi	Cu	As	Ag	Fe	Zn	Cd	Ni	Al	Te	Se	Ca	Mn	Mg	S	Size (mm) Ø x H	Form	Price
CRM	84X BA11 A	1.304	0.0079	0.0165	0.0026	0.0005	0.0023	....	0.0005	0.0006	....	0.0125	....	....	0.0552	....	....	....	40 x 15	C	
CRM	84X BA12 A	1.527	0.0008	0.0173	0.0020	0.0005	0.0050	....	0.0023	0.0010	....	0.0172	....	....	0.0646	....	....	....	40 x 15	C	
CRM	84X BA13 A	1.716	0.0010	0.0370	0.0007	0.0008	0.0075	....	0.0047	0.0014	....	0.0198	....	....	0.0738	....	....	....	40 x 15	C	
CRM	84X BA20 A	0.299	0.0030	0.0194	....	....	0.0290	....	0.0438	0.0057	....	0.0483	....	....	0.334	....	....	....	40 x 15	C	
CRM	84X BA21 A	0.161	0.0091	0.0224	....	....	0.0122	....	0.0136	0.0057	....	0.0067	....	....	0.608	....	....	....	40 x 15	C	
CRM	84X BA22 A	0.108	0.00114	0.0162	....	....	0.0059	....	0.0053	0.00139	....	0.033	....	....	0.911	....	....	....	40 x 15	C	
CRM	84X BA23 A	0.170	0.0020	0.0163	....	....	0.0039	....	0.00218	0.00014	....	0.0229	....	....	1.21	....	....	....	40 x 15	C	
CRM	84X BAHC E	<0.0005	(0.0001)	0.0130	0.0005	(0.00015)	0.0005	<0.0001	(0.00017)	<0.0001	<0.0001	0.0304	(0.0001)	<0.0001	0.139	<0.0001	(0.0001)	<0.0001	55 x 12	C	
8.5 Various Lead Alloys		Sn	Sb	Bi	Cu	As	Ag	Fe	Zn	Cd	In	Ni	Te	Se	Au	Tl	S	Hg	Size (mm) Ø x H	Form	Price
CRM	85X PSn2 B	1.97	0.0269	0.0508	0.0344	0.0047	0.0033	....	0.0005	0.0012	....	0.0010	0.0041	0.0011	....	....	(0.0008)	....	40 x 15	C	
CRM	85X PSb3 G	0.132	2.20	0.0202	0.0351	0.269	0.0046	....	0.00047	0.0041	....	0.0033	0.0063	0.0179	....	....	(0.0009)	....	40 x 15	C	
CRM	85X PSb5 B	0.94	4.87	0.0195	0.0346	0.197	0.0257	....	(0.0017)	0.0011	....	0.0011	0.0018	0.0020	....	....	(0.0040)	....	40 x 15	C	
CRM	85X PSb5 C	0.040	4.46	0.0219	0.0238	0.135	0.0026	....	(0.0006)	0.0009	....	0.0013	0.0015	0.0020	....	....	0.030	....	40 x 15	C	
CRM	85X PSb5 D	0.094	4.68	0.0204	0.0251	0.180	0.0023	....	(0.0020)	0.0013	....	0.0017	0.0018	0.0024	....	....	0.0075	....	40 x 15	C	
CRM	85X PSb8 B	0.041	8.04	0.0178	0.0169	0.0352	0.0049	....	<0.001	0.0010	....	0.0016	0.0043	0.0022	....	....	0.005	....	40 x 15	C	
CRM	85X PSb10 B	0.090	10.00	0.0410	0.169	0.127	0.0020	....	0.015	0.0018	....	0.0027	0.0037	0.0020	....	....	<0.001	....	40 x 15	C	
CRM	85X PSb12 B	0.270	11.50	0.0310	0.330	0.071	0.0019	....	0.071	0.00053	....	0.0033	0.0056	0.0004	....	....	<0.001	....	40 x 15	C	
CRM	85X ANTH E	1.45	6.05	0.0194	0.0291	0.217	0.0071	(0.010)	(0.0007)	0.0046	....	0.0062	0.0071	0.0149	....	....	(0.0036)	....	40 x 15	C	
CRM	85X CADH B	0.096	1.85	0.0292	0.0260	0.201	0.0076	0.0005	0.044	2.09	....	0.0045	0.0121	0.0010	....	....	<0.0005	....	40 x 15	C	
CRM	85X CADL A	0.010	1.54	0.0169	0.0093	0.0065	0.0076	(0.0006)	(0.002)	1.69	....	(0.0005)	0.0030	(0.001)	....	....	....	....	40 x 15	C	
CRM	85X HRH H	0.851	1.107	0.0996	0.072	0.721	0.236	....	....	0.0066	....	0.0012	0.0024	0.0375	....	....	(0.0022)	....	40 x 15	C	
CRM	85X SASH A	0.0130	1.54	0.0602	0.0245	0.683	0.0016	....	....	0.00024	....	0.0005	0.0006	....	....	....	(0.0005)	....	40 x 15	C	
CRM	85X SSBC A	9.70	2.14	0.413	....	0.075	0.456	....	....	0.455	0.209	....	0.0037	0.00290	0.0079	0.0196	(0.0008)	....	40 x 15	C	
CRM	85X SSCH A	2.64	5.52	0.0441	0.177	0.208	0.0134	(0.002)	0.0007	0.0040	....	0.010	0.0070	(0.015)	....	....	0.0035	....	40 x 15	C	
CRM	85X 0494Pb1 A	0.051	0.95	0.0017	0.012	0.049	....	....	....	....	....	....	....	0.004	....	....	....	....	40 x 15	C	
CRM	85X 0494Pb2 B	0.147	1.93	0.0174	0.0361	0.111	0.0302	(0.0010)	....	....	....	....	0.0051	0.0302	....	....	(0.0053)	....	40 x 15	C	
CRM	85X 0494Pb3 C **	0.23	3.0	0.12	0.10	0.25	0.02	(<0.001)	....	....	....	....	0.014	0.03	....	....	(0.01)	....	40 x 15	C	** provisional values
CRM	85X 0616Pb1 B	0.065	1.756	0.0395	0.0496	0.077	0.0048	....	0.0005	0.0029	....	0.0009	0.0048	0.0149	....	....	....	(0.0003)	40 x 15	C	
8.6 Lead Babbitts		Sn	Sb	Bi	Cu	As	Ag	Fe	Zn	Cd	In	Ni	Pd	Te							
CRM	86X PSS1 B	4.29	11.54	0.195	0.0249	0.554	0.0049	0.0018	0.0030	0.0057	0.0074	0.0100	0.0023	....							
CRM	86X PSS2 B	7.00	8.04	0.0646	0.127	1.43	0.0179	(0.001)	0.031	0.066	0.0059	0.0165	0.0049	....							
CRM	86X PSS3 B	9.39	14.13	0.0273	0.489	0.409	0.0140	0.0025	0.0030	0.0170	0.0111	0.0009	....	0.0050							
CRM	86X PSS4 B	10.64	15.93	0.102	0.355	0.241	0.0264	0.0035	0.012	0.0539	0.0174	0.0010	....	0.0146							

# 9. Lead/Tin Solders

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Blocks / Discs

9.1 Tin / Lead Solders		Sn	Sb	Bi	Cu	As	Ag	Fe	Zn	Cd	In	Ni	Al	Te	Au	Hg	Size (mm) Ø x H	Form	Price
CRM	91X S10PR1 C	9.10	0.0278	0.0277	0.0097	0.0045	0.0078	(0.0016)	<0.001	0.0029	....	0.0006	....	....	....	....	40 x 15	C	
	91X S10PR2 C	10.38	0.51	0.15	0.05	0.04	0.05	0.003	0.03	0.007	....	0.003	....	....	....	....	40 x 15	C	
	91X S10PR3 B	11.97	0.26	0.23	0.12	0.02	0.03	0.002	0.003	0.011	....	(0.02)	....	....	....	....	40 x 15	C	
CRM	91X S10P D	10.07	(0.002)	(0.006)	(0.001)	(0.001)	(0.001)	<0.001	<0.0001	<0.0001	<0.001	<0.001	<0.001	....	....	....	40 x 15	C	
	91X S30PR1 B	29.3	0.047	0.057	0.19	0.006	0.007	(0.08)	0.0013	0.0024	....	0.0023	....	....	....	....	40 x 15	C	
CRM	91X S30PR2 C	30.17	0.619	0.158	0.095	0.028	0.060	0.009	0.016	0.0060	....	0.0077	<0.0005	....	0.0017	....	40 x 15	C	
CRM	91X S30PR3 C	30.88	0.269	0.294	0.102	0.0126	0.024	0.0016	(0.003)	0.0115	0.0085	0.0269	....	....	0.0063	....	40 x 15	C	
	91X S30P C	30.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	....	<0.001	....	....	....	....	40 x 15	C	
	91X S40PR1 B	39.1	0.059	0.060	0.20	0.006	0.005	<0.005	0.008	0.001	....	0.002	....	....	....	....	40 x 15	C	
CRM	91X S40PR2 D	40.68	0.596	0.154	0.085	0.010	0.086	0.0096	0.0275	0.0046	....	0.0050	....	....	....	....	40 x 15	C	
	91X S40PR3 B	41.8	0.25	0.25	0.094	0.018	0.022	0.01	0.002	0.010	....	0.016	....	....	....	....	40 x 15	C	
CRM	91X S40P D	40.00	(0.002)	(0.005)	(0.001)	(0.007)	(0.001)	(0.001)	<0.0001	<0.0001	(0.002)	<0.001	<0.0005	....	....	....	40 x 15	C	
	91X S50PR3 C	51.4	0.26	0.25	0.10	0.015	0.020	0.009	0.008	0.002	....	0.016	....	....	....	....	40 x 15	C	
CRM	91X S50PR4 A	54.6	0.098	0.097	1.58	0.044	0.045	(0.0034)	0.0105	0.0118	0.052	0.0114	<0.001	....	0.029	....	40 x 15	C	
CRM	91X S50P E	50.05	(0.002)	(0.005)	(0.002)	(0.006)	(0.001)	(0.001)	<0.0001	<0.0001	(0.003)	(0.001)	<0.0005	....	....	....	40 x 15	C	
CRM	91X S62AG2 A	61.68	0.347	0.168	0.069	0.022	2.03	0.0065	0.0011	0.0016	....	(0.0016)	(0.0011)	....	0.0020	....	40 x 15	C	
CRM	91X S63PR0 B	60.03	0.0182	0.0084	0.0202	0.0094	0.0097	(0.002)	<0.0005	0.0097	0.0048	0.0018	....	0.0034	0.0148	0.004	40 x 15	C	
CRM	91X S63PR1 G	61.45	0.052	0.0588	0.214	0.0064	0.0061	(0.002)	(0.002)	0.0045	0.0308	0.0060	....	0.0047	0.0348	(0.015)	40 x 15	C	
CRM	91X S63PR2 J	62.38	0.539	0.144	0.0733	0.0190	0.054	0.0129	0.004	0.0130	0.0154	0.0092	(0.0014)	0.0032	0.076	....	40 x 15	C	
CRM	91X S63PR3 G	64.01	0.243	0.254	0.101	0.0264	0.0193	0.0078	0.0061	0.0009	0.0097	0.0085	....	0.0068	0.169	(0.038)	40 x 15	C	
CRM	91X S63PR4 A	66.8	0.093	0.030	0.021	<0.002	0.030	<0.005	<0.001	0.021	0.014	<0.005	....	0.006	0.05	....	40 x 15	C	
CRM	91X S63Bi1 A	61.9	0.470	0.597	0.105	<0.002	0.0592	0.0204	(0.002)	0.0095	0.0067	0.0131	(0.0015)	0.0012	0.074	....	40 x 15	C	
CRM	91X S63P H	63.30	(0.003)	(0.006)	(0.003)	(0.007)	(0.001)	(0.002)	<0.0001	<0.0005	(0.004)	(0.001)	<0.0005	....	....	....	40 x 15	C	
9.3 Tin / Lead / Antimony Solders		Sn	Sb	Bi	Cu	As	Ag	Fe	Zn	Cd	In	Ni	Te				Size (mm) Ø x H	Form	Price
CRM	93X S30APR1 C	28.58	2.54	0.059	0.192	0.010	0.0144	(0.012)	(0.0004)	0.0014	0.0094	0.0010	0.0024				40 x 15	C	
CRM	93X S30APR2 C	30.68	1.80	0.168	0.062	0.0178	0.049	0.0026	0.028	0.0061	0.0199	0.042	0.0102				40 x 15	C	
CRM	93X S30APR3 C	33.0	0.96	0.28	0.008	0.018	0.021	0.0026	0.005	0.009	....	0.010	....				40 x 15	C	
	93X S40APR1 A	38.5	2.70	0.06	0.23	0.011	0.007	(0.01)	0.002	0.002	....	0.003	....				40 x 15	C	
	93X S40APR2 A	39.6	2.10	0.19	0.07	0.030	0.052	(0.02)	0.04	0.006	....	0.006	....				40 x 15	C	
	93X S40APR3 A	41.4	1.70	0.26	0.12	0.024	0.021	(0.03)	0.022	0.011	....	0.014	....				40 x 15	C	
	93X S50APR1 A	48.4	3.2	0.052	0.18	0.007	0.010	(0.01)	0.002	0.002	....	0.002	....				40 x 15	C	
	93X S50APR2 A	49.6	2.8	0.15	0.049	0.027	0.055	0.01	0.042	0.006	....	0.014	....				40 x 15	C	
	93X S50APR3 A	51.2	2.3	0.25	0.093	0.023	0.025	(0.02)	0.013	0.010	....	0.010	....				40 x 15	C	

## 9. Other Solders

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Blocks / Discs

9.5	Fusible Alloys																Nominal Melting Temperature °C	Size (mm) Ø x H	Form	Price
		Sn	Sb	Bi	Cu	As	Ag	Fe	Zn	Cd	In	Al	Pb	Co	Ni	Au				
	95X 117 A	7.99	0.012	45.3	0.011	....	0.0047	....	0.0053	4.99	18.6	....	23.1	....	....	....	47	40 x 15	C	
	95X 136 A	12.05	0.023	48.7	0.0029	....	0.0057	....	0.030	0.0091	21.5	....	17.8	....	....	....	58	40 x 15	C	
	95X 158 A	13.5	0.057	50.2	0.048	....	0.002	....	0.044	9.6	0.006	....	27.0	....	....	....	70	40 x 15	C	
	95X 174 A	16.79	0.082	57.12	0.0029	....	0.0076	....	0.036	0.0089	26.2	....	0.081	....	....	....	79	40 x 15	C	
	95X 255 A	0.24	0.32	55.7	0.045	....	0.0019	....	0.035	0.0065	0.010	....	43.7	....	....	....	124	40 x 15	C	
	95X BIS40P1 B	42.3	0.092	57.4	0.0670	0.0101	0.035	(0.001)	....	0.0050	0.0164	....	0.043	....	....	....	138	40 x 15	C	
	95X BIS40P2 A	44.7	0.005	55.3	0.003	0.002	0.005	0.001	0.002	0.0008	0.005	0.002	0.020	0.001	0.002	0.0006	....	40 x 15	C	
	95X BIS40P3 A	38.2	0.020	60.0	0.10	(0.005)	0.29	0.014	0.001	0.005	1.01	0.034	0.106	0.016	0.032	0.009	....	40 x 15	C	
	95X BIS40P4 A	38.2	0.144	58.0	0.21	(0.007)	(0.70)	0.047	0.003	0.009	2.02	0.062	0.210	0.031	0.073	0.009	....	40 x 15	C	
	95X BIS50P1 A	50.0	....	49.8	....	....	....	0.051	0.006	0.022	....	....	....	0.025	....	....	....	40 x 15	C	
	95X BIS50P2 A	50.3	....	49.6	....	0.002	0.090	0.007	....	....	....	0.005	....	....	0.015	....	....	40 x 15	C	
	95X BIS50P3 A	48.6	....	49.8	....	0.073	1.50	0.003	0.002	0.015	....	....	....	....	0.0025	....	....	40 x 15	C	
	95X BIS70P1 A	69.1	....	29.6	....	0.025	1.10	0.010	....	....	0.040	<0.001	....	....	0.029	0.0004	....	40 x 15	C	
	95X BIS70P2 A	65.0	....	32.8	....	....	2.01	....	0.001	....	0.049	<0.001	....	....	....	....	....	40 x 15	C	
	95X CDS50P1 A	50.1	0.113	0.13	0.26	0.027	0.030	(0.0022)	0.007	18.1	0.092	<0.002	31.0	....	....	....	145	40 x 15	C	
	95X PBS40P1 A	42.6	0.016	13.8	0.025	0.005	0.011	(0.0006)	0.0010	0.0043	0.005	(0.0006)	(43.6)	....	....	....	....	40 x 15	C	
	95X SC34 A	34.05	....	....	....	....	....	....	....	(65.99)	....	....	....	....	....	....	....	40 x 15	C	
	95X SC36 A	36.09	....	....	....	....	....	....	....	(63.98)	....	....	....	....	....	....	....	40 x 15	C	

Note: these are not CRMs

# 10. Titanium Base

Updated: 8 December 2011

Blocks / Discs

10.1 Various Ti Alloys		Al	Sn	V	Mo	Nb	Zr	Cr	Fe	Ni	Cu	Si	Y	C	S	N	O	H	Size (mm) Ø x H	Form	Price	
CRM	101X Ti1 A	3.08	....	....	14.98	2.75	....	....	0.035	0.0099	0.05	0.201	0.0030	0.0417	(0.003)	0.005	0.169	0.0069	40 x 13	HIP		
CRM	101X Ti2 A	6.02	2.05	....	2.08	....	3.97	0.0054	0.053	0.0073	(0.003)	0.110	0.0002	0.016	....	0.0053	0.143	0.0076	40 x 13	HIP		
CRM	101X Ti3 A	6.14	0.0215	4.00	0.0213	....	0.0152	0.0194	0.104	0.0303	0.0047	0.013	0.0101	0.0619	....	0.010	0.198	0.0034	40 x 13	HIP		
CRM	101X Ti4 A	3.95	0.072	0.044	0.301	0.070	0.0668	0.0688	0.125	0.779	0.0645	0.072	0.0079	0.115	....	0.0195	0.199	0.0050				
CRM	101X Ti5 A	5.33	2.09	0.0779	3.98	....	2.09	3.00	0.162	0.047	0.277	0.092	0.0111	0.089	0.0114	0.015	0.172	0.0039			continued	
CRM	101X Ti6 A	5.99	0.067	3.95	0.064	0.0639	0.0653	0.0636	0.221	0.0421	0.0632	0.054	0.0087	0.0340	0.0061	0.0137	0.171	0.0043				
Continuation		B	Co	Mn	P	Pd	Ru	Ta	W											Size (mm) Ø x H	Form	Price
	101X Ti4 A	0.0093	0.066	0.0653	0.0076	0.145	0.054	0.096	0.072											40 x 13	HIP	
	101X Ti5 A	0.0098	....	0.073	0.010	....	....	....	0.084											40 x 13	HIP	
	101X Ti6 A	0.0080	0.0621	0.0623	0.0069	0.141	0.062	0.084	0.066											40 x 13	HIP	

Note: These products are available in other thicknesses on request

# 11. Cobalt Base

Updated: 8 December 2011

Blocks / Discs

11.1 Co/Cr/W (Alloy WI 52 Type)		C	Si	S	P	Mn	Ni	Cr	W	Fe	Mo	Nb	Ta	Al	Cu	N	Pb	Sn	Size (mm) Ø x H	Form	Price
CRM	111X 12667 M	0.008	0.749	0.0068	(0.003)	0.52	(0.70)	21.79	8.22	1.36	0.161	1.50	0.145	0.005	0.047	0.085	....	....	43 x 20	C	
	111X 12669 J	....	0.71	....	....	0.57	0.62	22.04	10.65	1.41	....	2.06	....	....	....	....	....	....	40 x 15	C	
CRM	111X 12670 N	(0.007)	0.589	0.026	0.0052	0.48	1.10	19.24	10.95	1.28	(0.057)	2.53	0.105	(0.004)	(0.059)	0.006	....	0.021	40 x 15	C	
	111X 12671 J	....	0.51	....	....	0.61	0.88	20.5	11.8	1.45	....	1.95	....	....	....	....	....	....	40 x 15	C	
	111X 12672 J	0.126	0.78	0.014	....	0.72	0.71	21.8	9.3	1.87	0.29	1.87	0.09	0.27	0.14	....	0.01	0.034	40 x 15	C	
CRM	111X 12673 A	(0.005)	0.82	0.022	0.010	0.52	1.69	19.0	9.75	1.70	0.086	2.35	0.06	<0.005	0.104	0.031	(0.003)	0.074	40 x 15	C	
11.2 Co/Cr/Mo (Stellite 8 / BS 3531 Type)		C	Si	S	P	Mn	Ni	Cr	W	Fe	Mo	Al	Ti	Nb	Cu	B	N	Size (mm) Ø x H	Form	Price	
CRM	112X 14937 S	0.340	1.18	0.0242	0.009	0.407	2.88	25.17	2.84	2.28	7.16	0.012	0.017	0.191	0.093	0.0123	0.142	42-48 x 15	C		
	112X 14942 M	0.090	1.02	....	....	0.46	0.29	28.47	1.67	1.09	6.22	0.18	....	....	....	....	....	40 x 15	C		
CRM	112X 14943 G	0.129	0.58	0.026	0.006	1.20	0.138	30.64	0.060	1.23	7.94	(0.024)	....	0.119	0.229	0.0059	0.056	40 x 15	CC		
CRM	112X 14944 A	0.225	0.71	0.0040	0.0017	0.744	0.128	29.24	<0.02	0.14	6.29	<0.01	....	<0.01	0.006	(0.0004)	0.148	40 x 19	W		
11.3 Co/Cr/Ni/W (Stellite 31 Type)		C	Si	S	P	Mn	Ni	Cr	W	Fe	B	Size (mm) Ø x H	Form	Price							
	113X X401 G	0.56	1.22	....	....	0.20	11.74	25.24	7.09	0.73	0.008	40 x 15	C								
	113X X402 H	0.38	0.32	0.036	0.045	1.26	9.41	24.86	7.96	2.15	....	40 x 15	C								
	113X X403 G	0.52	0.85	0.022	0.021	0.69	10.40	25.03	7.82	1.06	0.006	40 x 15	C								
	113X X404 D	0.51	0.75	0.006	0.002	0.69	10.76	23.7	7.71	1.28	0.001	40 x 15	C								
	113X X405 E	0.48	0.76	0.005	0.002	0.68	10.79	26.7	7.65	1.30	0.001	40 x 15	C								
11.9 Various Cobalt Alloys		C	Si	S	P	Mn	Ni	Cr	W	Fe	Mo	Cu	Nb	Ta	Al	Mg	B	N	Size (mm) Ø x H	Form	Price
CRM	119 X COB1 G	0.065	0.40	0.015	0.026	0.395	20.8	24.7	11.6	14.6	0.40	0.088	0.345	....	0.020	....	....	0.130	40 x 15	CC	
CRM	119X 81601 B	0.396	0.601	0.033	0.021	1.44	19.9	18.56	4.14	(5.37)	4.08	....	4.20	0.104	....	(0.012)	....	0.056	43 x 20	C	
CRM	119 X ST3 K	2.39	0.794	0.063	....	1.09	2.55	29.8	12.1	3.10	0.353	0.078	....	....	....	....	0.148	0.040	40 x 15	CC	

### 13. Noble Metals

Updated: 8 December 2011

Discs

13.1 Silver with Impurities	All Elements ppm																				Size (mm) Ø x H	Form	Price		
	Cu	Pb	Bi	Zn	As	Sb	Se	Hg	Au	Sn	Ir	Pt	Pd	Fe	Te	Mn	Ni	Cd	Ga	Si					
131X AGP2 A	137	112	113	77	48	93	68	<1	138	129	<1	127	130	73	121	20	....	....	....	....	25 x 3	R			
131X AGP3 A	44	31	29	20	19	24	17	<1	36	26	<1	32	32	46	30	12	....	....	....	....	25 x 3	R			
131X AGP4 A	20	5	6	7	5	6	<1	<1	10	<1	<1	10	8	24	7	2	....	....	....	....	25 x 3	R			
R - Samples prepared from rolled strip																				Mounted in Bakelite 30mm diameter					
131X PAg1 A	75	40	40	50	12	50	35	....	120	40	<1	35	180	5	120	35	25	35	60	30	34 x 12	C			
131X PAg2 A	400	12	12	550	8	12	10	....	20	14	<1	10	180	7	15	10	9	5	15	4	34 x 12	C			
C - Samples cast																				R - Samples prepared from rolled strip			**Also available mounted in Bakelite 30mm diameter - price £240.00		
13.2 Silver Copper Alloys	Ag	Cu	Zn																		Size (mm) Ø x H	Form	Price		
	Ag	Cu	Zn																						
132X AGB75 A	75.35	24.29	....																		40 x 10	C			
132X AGB85 A	85.11	14.80	....																		40 x 10	C			
132X AGB88 A	87.60	12.26	....																		40 x 10	C			
132X AGB92 A	91.68	8.04	....																		40 x 10	C			
132X AGB93 A	92.86	7.10	....																		40 x 10	C			
132X AGB95 A	94.40	5.13	....																		40 x 10	C			
132X AGB100 A	99.89	0.136	....																		40 x 10	C			
132X 925Zn1 A	92.50	6.03	1.47																		Unmounted	25 x 3**	R		
132X 925Zn3 A	92.55	4.51	2.94																		Unmounted	25 x 3**	R		
C - Samples cast																				R - Samples prepared from rolled strip			**Also available mounted in Bakelite 30mm diameter - price £240.00		
13.3 Silver Quaternary Alloys	Au	Cu	Pb	Ag																Size (mm) Ø x H	Form	Price			
	Au	Cu	Pb	Ag																					
133X AGQ1 B	0.237	2.493	0.267	bal.																Unmounted	25 x 3**	R			
133X AGQ2 B	0.938	5.761	0.472	bal.																Unmounted	25 x 3**	R			
133X AGQ3 B	2.007	9.76	0.970	bal.																Unmounted	25 x 3**	R			
R - Samples prepared from rolled strip																				**Also available mounted in Bakelite 30mm diameter - price £240.00					

Note: these are not CRMs

# 16. Setting Up Samples

Updated: 8 December 2011

Blocks / Discs

All of these samples have been prepared to meet the daily setting up requirements of laboratories using Direct Reading Spectrometers.

Analytical Data are supplied with each sample but are not certified as accurate as these are not intended to be used as Primary Reference Materials.

16.2 Steel	C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	Al	Ti	V	W	As	Co	Nb	Pb	Bi	Sb	Zn	Zr	Size (mm) Ø x H	Form	Price			
162X FESUS1	1.1	1.8	0.35	0.15	0.8	0.5	25.0	0.45	0.3	0.05	0.6	0.4	0.4	0.2	0.005	1.1	0.05	0.005	0.005	0.015	0.002	0.04	43 x 20	c				
16.4.2 Aluminium	Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Co	Be	Sb	Ca	Sr	Zr	Ag							Size (mm) Ø x H	Form	Price	
164X ALSUS7	4	0.15	0.9	0.55	0.06	1.1	0.12	0.11	0.01	0.3	0.01	0.2	0.1	0.12	<0.001	0.003	0.18	....							50 x 25	c		
164X ALSUS8	0.75	0.9	9.5	0.25	0.45	0.12	0.25	0.001	0.13	0.02	0.06	0.025	0.015	0.03	<0.001	0.07	0.025	0.09							50 x 25	c		
16.5.1 Pure Copper	All Elements ppm																			Size (mm) Ø x H	Form	Price						
	Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	Sb	P	S	Cr	Co	Ag	Mg	C	Se	O	N							
165X CUSUS1	0.7	11	0.4	8	1	0.05	0.05	0.05	0.01	0.05	0.1	1	11	0.01	0.1	0.05	0.01	(0.5)	0.05	(370)	(6)	50 x 45	w					
16.5.2 Copper	Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	Sb	P	S	Cr	Co	Mg	Cd	Se	Cu							Size (mm) Ø x H	Form	Price
165X MNB5 SUS	1.6	0.20	38	0.55	1.1	3.2	0.40	....	0.20	....	....	....	....	....	....	....	....	....	55							40 x 17	CC	
165X PB10 SUS	11.0	0.04	0.05	0.002	0.06	0.001	0.001	0.02	<0.001	0.02	0.15	0.002	0.03	0.001	0.01	....	....	0.01	89							42 x 18	CC	
165X ALB1 SUS	0.03	0.20	0.06	2.8	5.3	9.0	0.10	0.005	0.08	0.015	....	0.015	....	0.01	....	0.04	....	....	82							40 x 18	CC	
165X WSB4 SUS	1.0	0.25	5.5	0.80	0.25	0.35	4.5	0.03	1.5	0.01	0.08	0.08	0.002	0.03	....	0.08	0.003	....	85							40 x 17	CC	
165X GM4 SUS	2.7	5.2	6.5	0.03	1.9	0.001	0.002	0.01	0.0005	0.01	0.01	0.005	0.12	0.0005	....	....	0.0002	....	83.6							40 x 17	CC	
16.6 Magnesium	Al	Zn	Mn	Zr	Cu	Si	Fe	Ni	Ca	Sn	Pb	Ag	Be	Cd	Sr							Size (mm) Ø x H	Form	Price				
166X MGSUS1	0.04	6.8	0.17	<0.001	0.002	0.06	0.005	0.001	<0.001	0.02	0.003	0.007	0.0001	....	0.0001							40 x 40	€					
166X MGSUS2	8	0.4	0.4	....	0.02	0.12	0.005	0.02	0.015	0.01	0.04	0.005	0.0015	0.004	0.0003							40 x 40	c					

## 16. Setting Up Samples

Updated: 8 December 2011

Blocks / Discs

All of these samples have been prepared to meet the daily setting up requirements of laboratories using Direct Reading Spectrometers.

Analytical Data are supplied with each sample but are not certified as accurate as these are not intended to be used as Primary Reference Materials.

16.8 Lead																		Size (mm)	Form	Price			
	Sn	Sb	Bi	Cu	As	Ag	Fe	Zn	Cd	In	Ni	Te	Se	Tl	Au	S	Hg	Ø x H					
168X PBSUS1	1.3	6.2	0.04	0.03	0.37	0.01	0.002	0.001	0.015	0.01	0.003	0.01	0.01	0.001	0.001	0.002	....	45 x 30	C				
168X PBSUS5	0.9	0.35	0.35	0.06	0.35	0.2	<0.001	....	0.09	0.08	0.001	0.003	....	0.002	0.0005	0.0005	0.02	50 x 25	C				
168X PBSUS6	0.15	0.12	0.22	0.10	0.025	0.04	<0.001	0.002	0.015	0.01	0.003	0.0005	0.003	0.03	0.001	0.0005	....	45 x 35	C				
16.8.1 Lead for fire assay																							
	ppm Pt	ppm Pd	ppm Au	ppm Rh	ppm Ru	ppm Ir	ppm Ag	ppm Fe	ppm Bi	ppm Cu	ppm Ni	ppm Te	ppm As	ppm Sb	ppm Tl	ppm S							
168X PBSUS PM1	55	20	35	12	0.1	2	40	1	100	5	3	1	2	1	10	2		48 x 28	C				
16.9 Zinc																		Size (mm)	Form	Price			
	Pb	Mg	Al	Cd	Fe	Sn	Cu	Ni	Mn	Bi	Sb	Ti	Tl	In	Ag	Cr	Si	Ø x H					
169X ZN SUS1	0.6	0.002	0.35	0.3	0.05	0.3	0.35	0.06	0.001	0.005	0.2	0.001	0.06	0.25	0.04	0.001	0.003	50 x 20	C				
16.90 Zinc control sample																		Size (mm)	Form	Price			
	Pb	Mg	Al	Cd	Fe	Sn	Cu												Ø x H				
1690X ZnChk1	0.005	0.02	4	0.005	0.025	0.003	1.2												50 x 20	C			
1690X ZnChk2	2	<0.001	0.01	0.12	0.75	1	0.42												50 x 20	C			
16.11 Tin																		Size (mm)	Form	Price			
	As	Bi	Sb	Pb	Cu	Fe	Cd	Zn	Ni	Al	Ag	Co	In	Au	Se	Te	Tl	Pt	Ø x H				
1611X SNSUS6	0.08	0.09	0.13	0.95	0.50	0.050	0.008	0.005	0.030	....	0.08	0.015	0.005	0.003	0.001	0.001	0.005	....	50 x 20	C			
1611X SNSUS7	2.3	2.6	11.1	0.32	12.3	(0.05)	0.018	0.03	0.10	<0.001	0.12	0.0005	0.050	0.0005	0.005	0.003	0.03	0.0005	50 x 20	C			
16.12 Cobalt																		Size (mm)	Form	Price			
	C	Si	S	P	Mn	Ni	Cr	W	Fe	Mo	Al	Nb	Cu	B	Sn	Pb	Ta	Ti	V	Co	Ø x H		
1612X COSUS1	1.0	1.6	0.07	0.05	1.7	17	26	8.0	3.5	6.5	1.5	2.2	0.15	0.01	0.08	0.01	0.02	0.20	0.25	~30	43 x 20	C	

## 18. Gases in Metals

Updated: 8 December 2011

Powders

18.1	Gases in Tool Steels	C	S	N	O	Approximate Matrix Composition	Size grams	Price
CRM	18X D7 A	2.32	0.0111	0.0124	0.072	12% Cr, 4% V, 1% Mo	100	
CRM	18X H13 A	0.344	0.0080	0.0115	0.063	5% Cr, 1% V, 1.5% Mo, 1% Si	100	
CRM	18X HcX A	1.555	0.0103	0.0111	0.141	22% CR, 3% Mo, 3% W, 2% V, 1% Si	100	
CRM	18X M3/2 A	0.994	0.0166	0.0269	0.105	4% Cr, 6% W, 6% Mo, 3% V	100	
CRM	18X M3/2-D A	0.992	0.0178	0.0421	0.408	4% Cr, 6% W, 6% Mo, 3% V	100	

These materials are supplied in powder form - particle size approximately <200u

## Chippings

Updated: 8 December 2011.

Chippings are made to order from the currently available material as detailed in this catalogue.  
Most of the MBH range of discs are also available in chippings form. Please see the sections earlier for general composition information.  
Please note that the certification for chippings may differ slightly from the disc certification. This is caused by a review of the relevant analytical techniques used in certifying the material applicable to the chippings form of the material

*Note: chippings are made to order and are non-returnable*

Please enquire for availability, quantity and price.

# Listing of New Materials Added to this Catalogue.

Updated: 12 December 2011.

Blocks / Discs

1.2.2 Residuals in Mild Steel		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	Al	Ti	W	As	Co	Zn	N	Size (mm) Ø x H	Form	Price			
CRM	12X 10180 A	0.170	0.221	0.0336	0.0104	0.806	0.101	0.095	0.0220	0.176	0.0143	0.0243	....	....	0.0058	....	0.0031	0.0106		40 x 20	W			
CRM	12X 10400 A **	0.41	0.22	0.029	0.016	0.75	0.061	0.13	0.016	0.14	0.010	0.028	....	....	0.007	....	0.003	0.014	** provisional values	40 x 15	W			
1.2.3 Low Alloy Steel		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	Al	V	W	As	Co	Zn	N	Size (mm) Ø x H	Form	Price			
CRM	12X 41300 A **	0.32	0.18	0.015	0.01	0.54	0.08	0.97	0.21	0.125	0.006	0.044	....	....	0.0045	....	0.002	0.009	** provisional values	38 x 15	W			
CRM	12X 43400 A **	0.415	0.25	0.028	0.012	0.58	1.37	1.17	0.22	0.18	0.006	0.014	....	....	0.008	....	0.003	0.009	** provisional values	40 x 15	W			
CRM	12X 44220 A **	0.413	1.68	0.001	0.005	0.86	1.90	0.83	0.39	0.03	0.0015	0.028	0.076	....	0.0025	....	....	0.002	** provisional values	38 x 15	W			
CRM	12X 15CDV6 A **	0.17	0.15	0.008	0.007	0.81	0.04	1.35	0.86	0.022	0.0015	0.02	0.235	....	0.003	....	....	0.006	** provisional values	40 x 15	W			
1.3.2 Austenitic Stainless Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	Al	Co	Nb	N	B	V	Sb	Ti	W	Ca	Size (mm) Ø x H	Form	Price
CRM	13X 30300 A	0.041	0.422	0.312	0.0205	1.83	8.60	17.62	0.334	0.025	....	....	0.0255	....	0.034	0.0035	0.091	....	....	....	....	40 x 15	W	
CRM	13X 30403 A	0.0200	0.288	0.025	0.029	1.495	7.93	18.27	0.193	0.217	....	....	0.101	0.0185	0.081	....	0.113	....	....	0.018	....	40 x 15	W	
CRM	13X 34700 A	0.016	0.483	(0.0006)	0.028	1.290	9.38	17.19	0.393	0.163	....	0.023	0.131	0.330	0.0166	0.0008	0.123	....	....	0.146	....	38 x 15	W	
CRM	13X 31603 A	0.0245	0.335	0.0240	0.0285	1.78	10.19	16.84	1.99	0.325	0.0054	0.009	0.057	(0.008)	0.081	0.0011	0.095	....	....	0.045	0.003	40 x 15	W	
1.3.5 Special Stainless Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Al	Ti	V	W	Co	Nb	N	Size (mm) Ø x H	Form	Price				
CRM	13X 31008 A	0.062	0.510	0.0040	0.030	1.232	19.35	24.45	0.337	0.157	....	....	0.079	0.166	0.078	0.012	0.063	38 x 15	W					
1.3.6 Precipitation Hardening Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Ti	Al	V	Co	Nb	W	B	N	Size (mm) Ø x H	Form	Price			
CRM	13X PH13800 A **	0.04	0.07	0.003	0.007	0.03	7.90	12.5	2.05	0.045	0.01	1.06	0.019	0.022	....	....	....	0.003	** provisional values	38 x 15	W			
CRM	13X PH17400 A	0.0200	0.349	0.0215	0.0202	0.829	4.52	15.74	0.061	3.09	....	....	0.112	0.0411	0.184	....	....	0.0342		41 x 15	W			
CRM	13X PH17700 A **	0.072	0.55	<0.001	0.019	0.49	7.00	16.95	0.34	0.15	0.045	1.18	0.035	0.046	0.022	0.01	0.004	0.018	** provisional values	38 x 15	W			
CRM	13X 66286 A	0.036	0.216	(0.0006)	0.0173	1.172	25.21	15.00	1.190	0.195	1.92	0.193	0.264	0.083	....	0.098	0.0044	0.0040		38 x 15	W			
CRM	13X PH2S143 A	0.044	0.478	0.0022	0.0205	0.544	5.20	13.45	1.325	1.61	....	....	0.087	0.0475	0.222	0.019	....	0.024		32 x 15	W			
CRM	13X FV520B A **	0.02	0.33	0.002	0.022	0.65	5.30	13.75	1.32	1.45	....	....	0.09	0.025	0.30	0.025	....	0.018	** provisional values	40 x 15	W			
1.3.7 High Nitrogen Stainless Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Al	V	W	Co	Nb	B	N	Size (mm) Ø x H	Form	Price				
CRM	13X NSA9 A	0.020	0.476	0.0008	0.0246	1.593	5.46	22.59	3.10	0.242	....	0.071	(0.024)	0.071	0.012	....	0.156		40 x 15	W				
CRM	13X NSA10 A	0.0180	0.375	0.0007	0.0206	5.23	12.98	20.67	2.636	0.170	....	0.151	(0.061)	0.060	0.143	0.0031	0.342		38 x 15	W				
1.4.2 Tool Steels		C	Si	S	P	Mn	Ni	Cr	Mo	Cu	Sn	Al	V	W	N	Alloy Type	Size (mm) Ø x H	Form	Price					
CRM	14X 72305 A **	1.08	0.20	0.003	0.015	0.34	0.085	0.42	0.020	0.15	0.011	0.004	0.005	....	0.007	W-5	** provisional values	40 x 15	W					
2.12 Ni/Cu (Monel Type)		C	Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al	Mg	S	P	Nb	Pb	Ni	Size (mm) Ø x H	Form	Price				
CRM	212X 04400 A **	0.14	0.25	1.03	32.5	2.05	0.15	0.03	0.04	0.015	0.032	0.051	0.001	0.003	....	....	(bal)	** provisional values	40 x 15	W				
CRM	212X 05500 A **	0.14	0.16	0.65	29.5	1.15	0.08	....	....	0.64	3.0	0.01	0.002	0.004	....	....	(bal)	** provisional values	38 x 15	W				

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## Listing of New Materials Added to this Catalogue (2).

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																			Size (mm)	Form	Price	
		C	Si	Mn	Cu	Fe	Cr	Mo	Co	Ti	Al	S	P	Ta	W	Nb	Ni	N	Ø x H			
2.19	Various Nickel Alloys																					
CRM	<b>219X 20004 A **</b>	0.222	0.91	14.05	0.318	9.42	13.65	0.105	0.112	0.51	....	0.0030	0.015	0.078	....	1.55	59.0	....	** provisional values	40 x 15	CC	
CRM	<b>219X 86182 A **</b>	0.148	0.81	7.62	0.151	7.89	15.80	0.078	0.046	0.42	....	0.0040	0.009	0.031	....	2.16	64.8	....	** provisional values	40 x 15	CC	
3.1.2	Brass - Trace Elements																		Size (mm)	Form	Price	
		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	Sb	Cr	Co	Cd	C	Ag	Cu	Ø x H			
CRM	<b>31X TB5 A **</b>	0.105	0.58	40.4	0.18	0.08	0.045	0.12	0.34	0.44	0.30	0.17	0.05	0.025	0.50	....	0.21	55.9	** provisional values	40 x 15	CC	
3.1.7	Leaded Brass																		Size (mm)	Form	Price	
		Pb	Sn	Zn	Fe	Ni	Mn	Al	Si	As	Bi	Sb	P	S	Co	Ag	Se	Cd	Cu	Ø x H		
CRM	<b>31X 7835.9 A **</b>	1.05	1.48	14.4	0.41	0.10	0.001	0.090	....	0.11	0.84	0.44	0.040	0.012	0.080	2.1	0.25	0.065	78.5	** provisional values	40 x 15	CC
3.2.2	Leaded Bronze																		Size (mm)	Form	Price	
		Sn	Pb	Zn	Fe	Ni	Al	Si	As	Mn	Bi	Sb	P	S	Co	Cd	Ag	Cu	Ø x H			
CRM	<b>32X LB17 A **</b>	5.98	9.90	0.63	0.45	0.46	0.37	....	1.50	0.29	0.22	4.2	0.045	....	0.008	0.15	0.91	74.8	** provisional values	40 x 15	CC	
4.1.1	Zinc with Impurities																		Size (mm)	Form	Price	
		Pb	Mg	Al	Cd	Fe	Sn	Cu	Ni	Mn	Bi	Sb	Ti	Cr	Si	Co	Ø x H					
CRM	<b>41X 4380Zn10 A</b>	0.0043	0.184	0.0004	0.0007	0.49	0.0014	0.0022	0.063	....	....	0.0005	....	0.117	....	....		50 x 18	C			
4.1.2	Galvanising Alloys																		Size (mm)	Form	Price	
		Pb	Mg	Al	Cd	Fe	Sn	Cu	Ni	Mn	Bi	Sb	As	Cr	Co	V	Ø x H					
CRM	<b>41X GLV9 A</b>	0.0043	0.0014	0.547	0.0028	0.0039	0.0028	0.0037	0.0009	0.0027	0.0019	0.0048	....	....	0.0005	....		50 x 20	C			
CRM	<b>41X GLV10 A</b>	0.0066	0.0040	0.969	0.0030	0.0051	0.0062	0.0073	0.0022	0.0062	0.0031	0.0009	....	....	0.0002	....		50 x 20	C			
4.2	Zn/Al																		Size (mm)	Form	Price	
		Pb	Mg	Al	Cd	Fe	Sn	Cu	Ni	Mn	Sb	Cr	Si	Tl	In	Ce	Ø x H					
CRM	<b>42X Z15 A</b>	0.0074	0.0026	9.99	0.0023	0.026	0.0006	0.0028	0.0017	0.0037	0.0006	0.0003	....	....	0.0024	....		50 x 20	C			
CRM	<b>42X Z16 A</b>	0.0090	0.105	12.28	0.0045	0.033	0.0034	0.235	0.0039	0.0028	....	0.0007	0.011	(0.003)	0.0051	....		50 x 20	C			
4.5	Zn/Al 'Galvalume'																		Size (mm)	Form	Price	
		Zn	Si	Fe	Cu	Sn	Pb	Mg	Ca	Ti	Li	Sr	Al	Ø x H								
	<b>45X ZnAl7 A</b>	46.1	1.47	0.185	0.031	0.010	0.039	0.042	....	0.0073	....	0.011	(52.1)		55 x 6	CC						

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## Listing of New Materials Added to this Catalogue (3).

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5.6 Al/Cu		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Co	V	Be	Bi	Sb	Zr	Size (mm) Ø x H	Form	Price *	
CRM	56X G2011 A	5.70	0.0102	0.089	0.632	0.0183	0.0044	0.0188	0.332	0.0037	0.0121	0.0031	....	....	....	0.527	....	....		50 x 20	W	
CRM	56X G2014 A **	4.40	0.46	0.61	0.245	0.58	0.008	0.20	0.011	0.005	0.023	0.077	....	....	....	....	....	0.14	** provisional values	50 x 20	W	
5.9 Al/Zn/Mg/Cu		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Co	V	Bi	Cd	Ga	Zr	Size (mm) Ø x H	Form	Price *	
CRM	59X G7075 A **	1.65	2.35	0.15	0.24	0.075	0.005	5.65	0.02	0.001	0.060	0.20	....	....	....	....	0.01	0.001	** provisional values	50 x 20	W	
5.11 Al/Mg		Cu	Mg	Si	Fe	Mn	Ni	Zn	Pb	Sn	Ti	Cr	Co	V	Be	Cd	Ga	Zr	Size (mm) Ø x H	Form	Price *	
CRM	511X G5083 A **	0.03	4.00	0.22	0.37	0.59	0.01	0.048	0.007	0.002	0.029	0.24	....	0.01	....	....	....	0.001	** provisional values	50 x 20	W	
CRM	511X G6063 A **	0.001	0.45	0.42	0.185	0.025	0.002	0.006	0.001	0.001	0.011	0.002	....	0.008	....	....	....	....	** provisional values	50 x 20	W	
CRM	511X G6082 A	0.0184	0.759	0.753	0.081	0.534	0.0035	0.054	0.0012	0.0011	0.0278	0.0606	....	....	....	....	....	....	** provisional values	50 x 20	W	
CRM	511X G6082 B **	0.014	0.66	0.90	0.18	0.56	0.0035	0.002	0.001	0.001	0.015	0.005	....	....	....	....	....	....	** provisional values	50 x 20	W	
7.3 Tin White Metals (Pewter, Babbitt)		As	Bi	Sb	Pb	Cu	Fe	Cd	Zn	Ni	Al	Ag	Co	In	S	P	Size (mm) Ø x H	Form	Price			
CRM	73X SC13 A **	0.06	0.018	4.2	0.27	4.2	0.05	0.002	0.012	....	0.005	....	....	....	....	0.015	** provisional values	40 x 15	C			
8.1 Binaries: Pb/Mg		Sb	As	Mg	Size (mm) Ø x H	Form	Price															
	81X PMg1 A	....	....	1.15	40 x 15	C																
	81X PMg2 A	....	....	0.173	40 x 15	C																
	81X PMg3 A	....	....	0.023	40 x 15	C																
8.2 Pb/Ag		Sn	Sb	Bi	Cu	As	Ag	Zn	Cd	Fe	In	Al	Size (mm) Ø x H	Form	Price							
	82X PAG0.7 A	....	....	....	....	....	0.733	....	....	....	....	....	40 x 15	C								
	82X PAG0.9 A	....	....	....	....	....	0.903	....	....	....	....	....	40 x 15	C								
8.3 Lead with Impurities		Sn	Sb	Bi	Cu	As	Ag	Fe	Zn	Cd	In	Ni	Te	Se	Au	Na	Hg	Pt	S	Size (mm) Ø x H	Form	Price
CRM	83X PR11 A **	0.12	0.50	0.012	0.057	0.011	0.002	0.0001	....	0.0008	....	0.001	....	....	....	....	....	....	0.005	** provisional values	40 x 15	C
CRM	83X PR12 A **	0.001	0.0001	0.012	0.036	0.0003	0.002	0.0001	....	0.0012	....	0.001	....	....	....	....	....	....	0.0001	** provisional values	40 x 15	C
13.2 Silver Copper Alloys		Ag	Cu	Zn	Size (mm) Ø x H	Form	Price															
	132X AGB75 A	75.35	24.29	....	40 x 10	C																
	132X AGB85 A	85.11	14.80	....	40 x 10	C																
	132X AGB93 A	92.86	7.10	....	40 x 10	C																
	132X AGB100 A	99.89	0.136	....	40 x 10	C																

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