



COMBUSTION &
CHEMICAL ENGINEERING



CATALOGUE

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Crucibles, Refractories & Furnace Kits

Furnace Filters - Gold Recovery

Aluminised Furnaceman's Protective Clothing

Chemical Splash Protective Clothing

Industrial Liquid and Gas Filtration

Sintered; Stack Emission Gas Sample Filters

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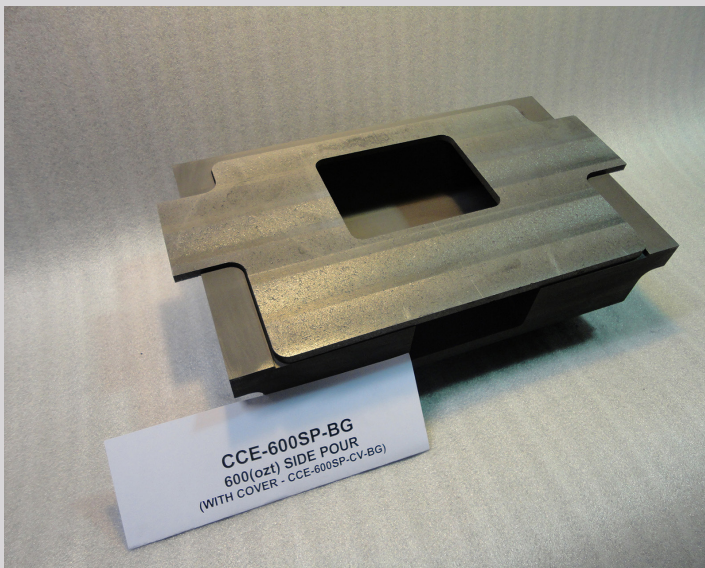
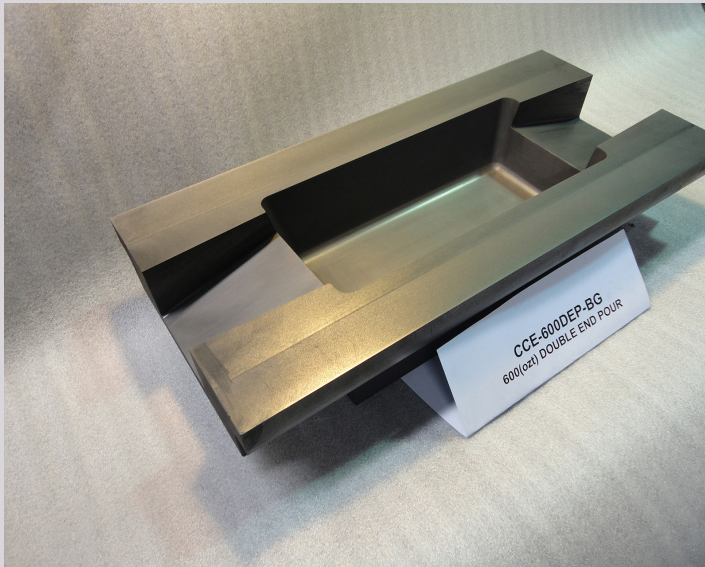
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GOLD & SILVER CARBON BULLION MOULDS



We Supply:

Carbon Bullion Moulds

Cascade Systems

End Pour & Side Pour

Double Side Pour

Advise us of the following % mix and Bar Weight you require:

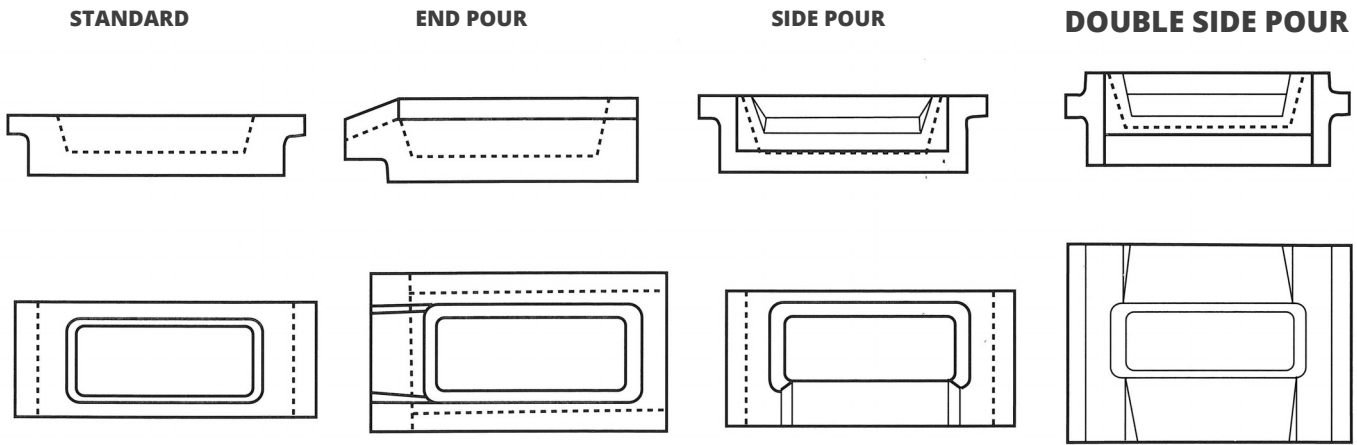
Gold	-	Au%
Silver	-	Ag%
Copper	-	Cu%

We will draw and design a specific Bullion Mould especially for your Gold Room.

We can also design around your nominated Bar Length

CARBON BULLION MOULDS

CASCADE SYSTEM OPTIONS



BULLION BAR SIZE BASED ON S.G OF 19

	15kg	20kg	25kg	30kg
Top Length	210	240	265	265
Base Length	190	217	238	231
Top Width	110	110	110	110
Base Width	90	87	83	76
Height	39	47	54	69

BULLION MOULD DIMENSIONS

	CCE115	CCE115EP	CCE115S9	CCE125	CCE125EP	CCE125SP
Length	300	315	312	400	390	370
Width	150	200	180	170	260	190
Height	69	94	84	84	109	114
	CCE120	CCE120EP	CCE120SP	CCE130	CCE130EP	CCE130SP
Length	300	355	370	400	380	370
Width	200	250	190	170	250	190
Height	77	112	107	109	134	139

Developed by Combustion & Chemical Engineering, "Carbon" graphite moulds are used by Gold Mines throughout Australia, Papua New Guinea, New Zealand, Fiji, Africa, Canada and United State of America.

Compared to cast iron moulds, the advantages of "Carbon" are:

- Light weight
- Bullion does not stick to the mould
- Preheating required
- No release agent required

BULLION MOULDS

The Combustion & Chemical range of bullion moulds are sized on an S.G. of 19 for their specified gravity.

Nominate your product S.G. and the bar weigh you require and we size the mould to suit your requirements, including security boxes.

HIMELT CRUCIBLES



DESCRIPTION

A premium quality Carbon Bonded Silicon Carbide Crucible manufactured using the latest roller forming technology.

Hi-Melt crucibles incorporate a new composition which has been developed to outperform isopressed Japanese products on copper base and associated alloy melting.

APPLICATIONS

Superior Performance for -

- Aggressive erosive conditions/ heavy fluxing on
 - » *copper based alloys*
 - » *precious metal reclamation*
- Furnaces using heavy/ reclaim oil containing metal contaminants.

Metal Casting Temperature

1000°C - 1400°C
(1830°F - 2550°F)

For use in oil and gas fired furnaces

TRIALS

Extensive trials and worldwide marketplace evaluations have been conducted prior to the product launch. Results have shown significant increases in crucible performance.

IDENTIFICATION

Hi-Melt is easily recognisable by its distinctive bright red colour. Crucibles feature a green triangular label with Hi-Melt in black text.

The Hi-Melt reference is HM in front of the pattern size, e.g. *AHM60, AHM350, etc.*

PATTERN RANGE

Hi-Melt crucibles will supplement Morganite's existing product range. All current roller formed sizes and shapes can be catered for in this new premium composition.

PERFORMANCE

- Superior erosion resistance
- Enhanced thermal shock resistance
- Resistance to chemical attack
- Improved oxidation protection
- High mechanical strength

SALAMANDER SILICON SARBIDE CRUCIBLES FOR TILTING FURNACES

TUBE POUR

Pattern Number	Working Capacity - Brass		Height		Outside diameter			
	lbs	Kgs	in	mm	Top		Bottom	
					in	mm	in	mm
TPX1153	397	180	24 7/8	632	13 3/4	249	9 1/2	240
TPX58	827	375	31 7/8	810	16 1/2	418	10	255
TPX711	1,014	460	33 5/8	855	17 1/4	437	11 5/8	295
TPX10	1,157	525	37	940	17 3/8	440	11 5/8	295
TPX57	1,411	640	31 1/2	800	21 5/8	550	13 3/4	350
TPX15	1,918	870	38 3/8	975	21 5/8	550	13 3/4	350
TPX830	2,502	1,135	46 7/8	1,190	21 1/4	541	12 5/8	320
TPX980	3 726	1 690	48	1 220	26 3/4	680	15 3/8	390

'SPOUTED' CRUCIBLES

TPX173	254	115	20	510	12 1/4	310	9 1/2	235
TPX400	419	190	23 5/8	600	14 7/8	378	8 7/8	225
TPX540	419	190	19 3/8	491	15 3/4	400	11 1/4	285
TPX723	525	238	25 1/4	641	16 1/8	410	9 5/8	245
TPX740	584	265	21 3/8	543	17 1/2	443	12 1/4	310
TPX600	639	290	31 3/4	806	14 3/8	365	10	255
TPX843	672	305	26 1/2	673	17	432	9 7/8	250
TPX980	3,726	1,690	48 1/2	1,220	26 3/4	680	11 5/8	295
TPX714	1,014	461	33 1/2	850	17 1/4	437	11 5/8	295
TPX12	1,157	525	37	940	17	440	11 5/8	295
TPX89	1,224	555	30	760	21 3/8	543	12 3/8	315
TPX13	1,951	885	38 3/8	975	21 5/8	550	13 3/4	350

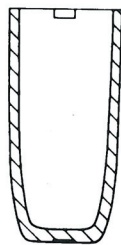
SALAMANDER CLAY-GRAPHITE CRUCIBLES

A5/0	0.20	0.09	1 3/8	35	1 1/4	32	1	24
A3/0	0.48	0.22	2	52	1 3/4	46	1	30
A1/0	1.23	0.56	2 5/8	67	2 7/8	60	1	41
A0.5	2.2	1.0	3	78	2 5/8	68	1	48
A1	3.3	1.5	3 7/8	97	3 1/8	79	2	55
A2	5.5	2.5	4 1/4	109	3 3/4	95	2	61
A3	8.2	3.7	5	127	4 1/8	105	2 3/4	70
A4	12.3	5.6	5 1/2	141	4 1/2	114	3	76
A5	15	6.8	6	152	4 7/8	124	3 3/8	86
A6	20	9.0	6 1/2	165	5 1/8	130	3 3/4	95
AB	28	12.5	7 1/4	184	6 1/8	156	4 1/4	108
A10	39	18	7 7/8	200	6 1/4	160	4 3/8	110
A12	40	18	8 1/4	210	6 3/4	171	4 3/4	121
A16	51	23	9 1/8	232	7 1/4	184	5 1/8	130
A20	66	30	10 1/4	260	7 3/4	197	5 3/4	145
A25	79	36	11	280	8 1/4	210	6 1/8	155
A40	110	50	12 1/2	318	9 1/8	232	6 1/4	160
A50	132	60	12 3/4	324	9 3/4	248	7 1/8	180
AAQ	196	77	14 1/4	362	10 7/8	276	7 1/2	190
A70	205	93	14 3/4	375	11 1/2	292	7 7/8	200
ABO	231	105	15 3/8	397	11 3/4	300	8 1/4	210
A90	253	115	15 3/8	397	12	310	8 5/8	220
A100	264	120	15 3/4	400	12 3/4	324	9	230
A120	304	138	17 3/4	435	13 1/8	333	9 1/2	240
A150	370	168	17 3/4	452	14 1/4	362	9 7/8	250
A200	526	239	19 3/8	491	15 3/4	400	11 1/4	285

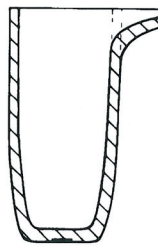
CRUCIBLE DATA, DIMENSIONS & WORKING CAPACITIES

Pattern Number	Working Capacity - Brass (kg)	Height (mm)	Outside Top (mm)	Diameter Bottom (mm)	Zinc Kg	Alum. Kg	Silver Kg	Gold Kg	Brass Kg	Bronze Kg
TPX173	115	510	310	235	98	37	145	266	115	112
A100	120	400	324	230	103	39	151	277	120	117
TPX1153	180	632	349	240	154	58	226	416	180	176
TPX58	375	810	418	225	321	121	472	867	375	366
TPX10	525	940	440	295	449	170	660	1213	525	512
Specific Gravity					7.14	2.7	10.5	19.3	8.35 AVG	8.15 AVG
Melting Temp.					420°C	660°C	960°C	1063°C	1250°C AVG	1150° to 1500°C

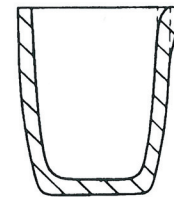
Working capacity of crucibles is calculated as 90% of the brimful when melting BRASS - Specific Gravity = 8.35



TPX1153
TPX58
TPX10



TPX173



A100

HOW TO GET THE BEST RESULT FROM YOUR CRUCIBLE

1. Handle with care and ensure no damage to glaze.
2. Do not stack one crucible inside another.
3. Keep dry at all times.
4. Install the crucible centrally in the furnace with correct distances between crucible and grip bricks (or top rings where applicable).
5. Heat crucible steadily to uniform red heat before charging.
6. Charge ingots or large pieces with great care and ensure they are not wedged in the crucible.
7. Melt the charge as quickly as possible.
8. Use the least quantity of fluxes and place in the crucible after some metal has melted.
9. Do not heat the metal to a higher temperature than is required.
10. Lifting tongs, when used, must fit the crucible correctly.
11. Pour the metal as soon as it is ready and recharge immediately.
12. Do not allow molten metal to solidify in the crucible.
13. Scrape out dross after each heat while it is still hot.





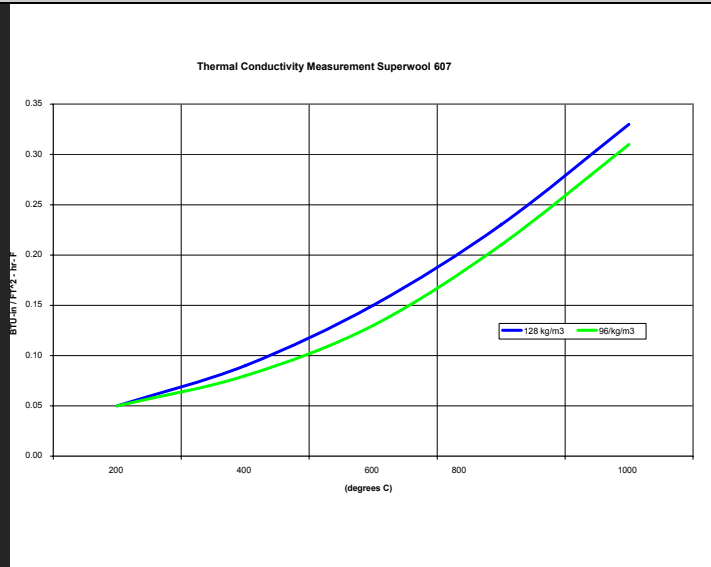
Superwool 607 Blanket is made from high temperature insulation glass fibres and has a classification temperature of 1100°C.

Superwool 607 Blanket is made from long Superwool Fibres. It is needled from both sides and does not contain any lubricant or binder. It has an excellent tensile strength prior to and after heating and does not emit any fume or smell. The thermal stability of Superwool fibres (Grade 607) the excellent strength and flexibility prior to and after heating make Superwool fibres (Grade 607) ideal for a wide variety of industrial and building applications.

PHYSICAL PROPERTIES

Maximum temperature rating (°C)	1100
Colour	White
Specific Heat @ 540°C (kcal/kg°C)	1.05
Permanent Linear Shrinkage (%)	
Heating for 24 hrs @ 800°C	0.5
Heating for 24 hrs @ 900°C	1.5
Heating for 24 hrs @ 1100°C	2.5
Tensile Strength (kPa)	
@ 64 kg/m ³ density	24
@ 96 kg/m ³ density	44
@ 128 kg/m ³ density	58
@ 160 kg/m ³ density	73

THERMAL PROPERTIES



ACOUSTIC PROPERTIES

Frequency	Sound Absorption Coefficient	
	25mm / 96kg/m ³	25mm / 128 kg/m ³
125	0.07	0.09
250	0.29	0.54
500	0.73	0.86
1000	0.92	0.94
2000	0.96	0.94
4000	0.99	0.96
Noise Reduction Coefficient	0.72	0.82

Chemical Properties

CHEMICAL ANALYSIS %	
SiO ₂	60 – 70
Al ₂ O ₃	< 0.8
CaO + MgO	25 – 40

CERAMOL* 258

Ceramic coating

Product Description Water based ceramic coating for the prevention of metal adhesion and penetration in all ferrous and non-ferrous alloys.

Application CERAMOL* 258 is a zircon silicate coating with special additives which prevent, to a large extent, the adhesion and penetration of molten metals. CERAMOL* 258 can be used to protect crucibles during pouring and transport ladles prolonging the service life. Furnace tools and cast iron tipper ladles can also be coated in CERAMOL* 258, the coated items are practically in as-new condition at each filling. CERAMOL* 258 can be used in ferrous castings to protect against metal penetration and burn on in any hot spot area, including riser contact and chromite faced areas.

Viscosity in supplied state	Approximately 86 ps
Suspension after 24 hours	Maximum 2%
Density	2.5 g/ml
Colour	Beige
Baume	110°

Technical Data

Description	Unit	Lower	Upper
Density	g/ml	2.52	2.57
Baume	°C	104	120
Viscosity	ps	80	100

Properties

CERAMOL* 258 is supplied ready for use. It can be diluted with water if required to improve the application properties and is best applied by brush, swab, spray or dip, extra dilution with water may be required for spray or dip application. For furnace tools and all refractories the best results are achieved by heating the surface to a maximum temperature of 100°C. Above this temperature there may be issues with the CERAMOL* 258 not adhering correctly, as the steam escaping from the CERAMOL* 258 while drying will disrupt the bonding. Thick coating layer can be achieved by multiple applications, allowing the coating to dry between applications. CERAMOL* 258 can be applied to any bonded sand surface by brush as supplied; CERAMOL* 258 must be dried thoroughly before coming in contact with molten metal.

Other Uses

Insulating Blanket/Boards or Bricks – suitable as a protective coating and sealer against flame impingement and gas erosion.

Ladles/Launders – suitable as a release and protective coating for all molten ferrous and nonferrous alloys allowing easier removal of skull build-ups.

Refractory Concretes – as a protective coating against many types of aggressive environments prolonging the life of the concrete linings.

Metal Surfaces – prevents molten metal splashes from adhering to metal surfaces allowing easier clean up.

Packaging

25 kg drums

Storage & Shelf Life

Storage life approximately six (6) months.

Health and Safety

For further information consult the Material Safety Data Sheet No. 4621-75.

Further Remarks

For safety reasons the product mentioned above must only be used according to these application guidelines. The data provided above is for guidance only and does not represent a specification. All rights to make technical changes to improve the product are reserved.

PRODUCT INFORMATION SHEET
CONVENTIONAL MONOLITHICS

SHIRACAST 160AR

SHIRACAST® 160AR is a high temperature castable based on high purity chamotte blended with low iron, calcium aluminate cement.

SHIRACAST 160AR features high abrasion resistance and good strength throughout its temperature range.

TYPICAL PROPERTIES

Bulk Density (kg/m ³)					
After Heating to 110°C.....	2220 – 2320	Al ₂ O ₃			%
After Firing to 1000°C.....	2090 – 2190	SiO ₂			56
After Firing to 1600°C.....	2190 - 2290	Fe ₂ O ₃			37
		TiO ₂			0.6
Cold Crushing Strength (MPa)		CaO.....			1.5
After Heating to 110°C.....	50 – 75	MgO.....			4.8
After Firing to 1000°C.....	40 – 60	Alkalies.....			Tr
After Firing to 1600°C.....	90 - >100				0.4
		Maximum Service Temperature (°C):			1600
Modulus of Rupture (MPa)		Nominal Shelf Life (months):			12 months
After Heating to 110°C.....	9 – 14				
After Firing to 1000°C.....	6 – 10				
After Firing to 1600°C.....	11 - 15				
Permanent Linear Change (%)		Installation Procedure.....			IP/001
After Heating for 24 hrs at 110°C.....	-0.1 to 0.0	Heat Up Schedule.....			HS/001
After Firing for 5 hrs at 1000°C.....	-0.3 to -0.1				
After Firing for 5 hours at 1600°C....	-1.9 to -1.4				

APPLICATION DATA

CASTING

Net Quantity of Dry Material Required for Placement (kg/m ³)	2140
Water Required for Mixing (%)	10.0 – 12.0

PLIBRICO 85P
TS LES70312 MX7 MOLD

**Monolithic
Refractory
Product Information**

A high alumina phosphate bonded mouldable exhibiting high strengths.

Service Temperature:	1700 °C	Material Required:	2915 kg/m ³
Typical Water Required:	-	Maximum Grain Size:	7 mm
Setting:	Chemical	Shelf Life:	4 months

Chemical Analysis

SiO ₂	TiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	P ₂ O ₅
11.0	2.1	82.0	0.8	0.3	3.5

Typical Physical Properties

Tested in accordance with Australian Standards

Prefired to (°C)	Bulk Density (kg/m ³)	Cold Crushing Strength (N/mm ²)	Cold Modulus of Rupture (N/mm ²)	Permanent Linear Change (%)
110	2650	20.0	7.0	-0.20
1100	2650	40.0	10.0	-0.50
1400	2670	50.0	10.0	-0.50

Other Physical Properties

Tested in accordance with Australian Standards

Prefired to (°C)	Apparent Porosity (%)	Thermal Conductivity (W/m.K)	Hot Modulus of Rupture (N/mm ²)	Permanent Volume Change (%)
1100	20.0	-	-	-
1400	21.0	-	-	-

Formerly:

Drying & Firing:	LES.7804	Installation Method:	N/A	Mixing / Installation:	LER.7303
Shotcreting:	N/A	Pumping:	N/A	MSDS Reference:	5342-72

The physical and/or chemical properties and specifications of the product set forth above represent typical average results obtained in accordance with generally accepted standard test methods conducted under controlled conditions, and are subject to normal manufacturing variations. Vesuvius reserves the right to modify the properties and specifications at any time without prior notice.

NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS INFORMATION, THE SUITABILITY OF THE PRODUCT FOR A PARTICULAR PURPOSE, OR THE RESULTS TO BE OBTAINED BY THE USE OF THE PRODUCT. USERS EXPRESSLY ASSUME ALL RISKS AND LIABILITIES ARISING FROM THE USE OF OR RELIANCE UPON THIS INFORMATION.

MagnaShield® Aramid Glove - Fully Woven



MagnaShield® Aramid gloves are manufactured using a combination of specially designed Aramid fabrics which provide excellent contact heat and abrasion protection and T-Gard® N260 Meta-Aramid lining to provide additional thermal protection.

- > Fully Woven Para-Aramid Palm and back
- > T-Gard® N260 Meta-Aramid lining for additional thermal protection
- > Wear seams are welted for additional protection
- > All seams are sewn with heat resistant aramid thread for extra durability

Size	SKU
305mm	KGLFW12FK
457mm	KGLFW18FK

G-Flex Nitrile Technical Safety Gloves



The G-Flex® Nitrile cut proof technical safety glove features excellent dexterity and sensitivity by combining a super lightweight Nitrile coating on a durable 18-gauge seamless nylon liner, while also providing excellent wet and dry grip.

Sizes	SKU
7	Part ELG300007
8	Part ELG300008
9	Part ELG300009
10	Part ELG300010
11	Part ELG300011

Welding Gloves



Tecasafe Plus Men's FR Classic Shirt

Tecasafe® plus Men's FR Classic Shirt with Perforated FR Silver reflective tape. Orange Tecasafe® plus 195 gsm/ 5.8 oz. The Tecasafe® plus FR Classic Shirts feature Electrical arc flash & flash fire protection, while also being extremely comfortable to wear.

Product Code	Items	Size
TSVSL57000RT4	Orange vented shirt with FR tape 7.0 oz	5-6XL



ArcSafe T40 Arc Flash Switching Bib & Brace Trousers ATPV 40 PPE 4 (HRC4)

Tecasafe® plus Men's Fire Retardant Cargo Style Work Trousers with Perforated FR Silver reflective tape. Navy blue Tecasafe® plus 195 gsm/ 5.8 oz. With two side pockets plus two cargo style pockets and rear patch pocket. All stress points are bar tacked for extra strength. The Tecasafe® plus FR Trousers feature Electrical arc flash & flash fire protection, while also being extremely comfortable to wear.

Product Code	Items	Size
TSTRS580NAT1P	Navy cargo with FR tape 5.8 oz	72R-132R / 72S-102S

Welding Apparel

ArcSafe T9 Arc Flash Switching Jacket with Reflective Trim

These garments are manufactured from materials conforming to AS/NZS 1906.4:2010 Retroreflective materials and devices for road traffic control purposes - High-visibility materials for safety garments. These garments are certified to Australian Standard AS/NZS 4602:1999 High Visibility Safety Garments Class D/N by SAI Global.

This ArcSafe® Arc Flash protective garment has been independently tested by Kinectrics to ASTM F2621-06 Standard Practice for Determining Response Characteristics and Design Integrity of Arc Rated Finished Products in an Electric Arc Exposure.



Product Code	Items
EASCJT9	ArcSafe® T9 Jacket
EASCJT9T1	ArcSafe® T9 Jacket with Reflective Trim

ArcSafe T40 Arc Flash Switching Bib & Brace Trousers ATPV 40 PPE 4 (HRC4)

The ArcSafe® T40 Arc Switching Trousers are a classic Elliotts ArcFlash suit made from orange Tencate Tecasafe Plus and Q8 thermal liner with an ATPV 40 PPE 4. This fabric system is inherently flame resistant and provides protection against electrical arc flashes and flash fires



Product Code	Items
EASCTT40	ArcSafe® T40 Trousers
EASCTT40T1	ArcSafe® T40 Trousers with Ref Trim

Arc Flash Systems

FURNACEMAN'S APPAREL

Ellgard® Aluminised Fire Suits are made from aluminised rayon which meets the requirements of BS 6249 Part 1: 1982. Suits are available in a two piece coat and trousers combination or a one piece coverall.

Coat

- › Fabric coat hanger loop for drying
- › Helmet & visor with an aluminised rayon neck flap
- › Contoured collar designed for maximum thermal protection
- › Thermal throat tab with velcro closure
- › Heavy duty zipper with 50mm velcro closure system on outside storm flap for extra heat and moisture protection
- › "Y" style design coat to provide ease of mobility and minimum coat rise
- › Sleeves feature velcro closure tabs for total protection

Trousers

- › Trousers feature an adjustable velcro side tab
- › Trousers braces are included
- › Cuffs feature velcro closure tabs for total protection
- › Steel toe moulded boots



Part #	Component
FFG4	Gloves
ARNF23	Neck Flap
623742	Boots
623746	Helmet / Visor
CER100U	Coat
TER100U	Trousers
CAR100U	Coverall
EGSSTCT	Coat/Trouser Suit
EGSSCA	Coverall Suit



Ellgard® Aluminised Turnouts

- Each Suit contains:
- › Hood
 - › Coat
 - › Trousers
 - › Boots
 - › Gloves

Proximity Suit

The flexible, lightweight Aluminised Nomex® Outer Shell is combined with a durable moisture barrier and thermal liner.

Part No.	Component
CENA25	Coat
CENA25BA	Coat with BA Accommodation
TENA25	Trousers
ANOB30NA	Overboots
PS700PA	Complete Suit
PS700PABA	Complete Suit with BA Accommodation

Approach Suit

The flexible, lightweight Aluminised Kevlar® Outer Shell is combined with a thermal liner.

Part No.	Component
CEA100	Coat
CEA100BA	Coat with BA Accommodation
TEA100	Trousers
AKOB30A	Overboots
AKAS2A	Complete Suit
AKAS2ABA	Complete Suit with BA Accommodation

Suit Features:

- › Hood features an internal hard cap with polycarbonate visor and ELLGARD® gold heat reflective visor
- › Fabric coat hanger loop for drying
- › Contoured collar designed for maximum thermal protection. Thermal throat tab with Velcro closure
- › Heavy duty zipper with 50mm Velcro closure system on outside storm flap for extra heat and moisture protection.
- › "Y" style design coat to provide ease of mobility and minimum coat rise
- › Trousers have an adjustable Velcro side tab
- › Braces included
- › Boots feature Velcro closure tab and heat resistant soles

Furnace Jacket & Trousers



The Elliotts FJA127L furnace jacket features a side closure with an action back for greater movement. This design is a generous fit and provides the wearer with 360 degrees of protection and is available in 4 different fabric options.

Furnace Jack - Side Closure Action

- › Length 1270mm
- › Centre front closure of 50mm flame resistant hook and loop with pull tabs
- › Sewn with heat resistant aramid thread for extra durability
- › Sleeve tabs with hook and loop closure to assist in donning gloves
- › Proban lined collar for additional comfort which helps manage perspiration

Length	Furnace Jack - Side Closure Action Back (Lined)
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1270mm	Part # FAR530LJA127
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Trousers

- › Manufactured from Aluminised Kevlar® or Aluminised Preox
- › Insulated with 100% pure wool fabric (optional)
- › Fitted with 50mm adjustable webbing braces and hip straps

	Aluminised Kevlar®	Aluminised Preox
Unlined	Part # AKT36U	Part # APC36U
Lined	Part # AKT36WL	Part # APC36WL

Smocks

Aluminised Smocks are manufactured from Aluminised Kevlar® or Aluminised Preox Fabrics, in 1/4 back style or fully closed back design. Both styles are available unlined or fully insulated with 100% pre wool fabric.



- › Double thickness wool back with press stud fastening
- › Adjustable waist belt

- › Double Double thickness wool back with press stud fastening
- › Adjustable waist belt

	Aluminised Kevlar®	Aluminised Preox
Unlined	Part # AKS48U	Part # APS48U
Lined	Part # AKS45WL	Part # APS48WL

	Aluminised Kevlar®	Aluminised Preox
Unlined	Part # AKS50U	Part # APS50U
Lined	Part # AKS50WL	Part # APS50WL

1/4 Back Style

Size	Length	Arm Length	Chest Fit (from shoulder point)
M	980mm	685mm	1020mm
L	1030mm	685mm	1070mm
XL	1050mm	685mm	1120mm
XXL	1070mm	715mm	1170mm

Closed Back Style

Size	Length	Arm Length	Chest Fit (from shoulder point)
M	1350mm	685mm	1020mm
L	1400mm	685mm	1070mm
XL	1435mm	685mm	1120mm
XXL	1450mm	715mm	1170mm

Aprons

- › Bib style
- › Aluminised Kevlar® or Preox
- › Insulated with 100% Pure Wool Fabric (optional)
- › Fitted with adjustable leather straps and buckles
- › Size 121cm x 91cm

	Aluminised Kevlar®	Aluminised Preox
Unlined	Part # AKA4836U	Part # APA4838U
Lined	Part # AKA4836WL	Part # APA4836WL

Apron



Sleeves & Leggings

Leggings



- › Aluminised Preox
- › Insulated with 100% Pure Wool (optional)
- › Fitted with adjustable leather strap and buckles
- › Length 406mm

	Aluminised Preox
Unlined	Part # APL16U
Lined	Part # APL16PW

Sleeves



- › Aluminised Kevlar® or Preox
- › Shoulder length
- › Fitted with adjustable leather strap and buckles

	Aluminised Kevlar®	Aluminised Preox
	Part # AKS30U	Part # APS30U

Accessories



- › Chest length
- › Build-in safety cap and visor frame
- › Choice of polycarbonate or Ellgard-45 (Gold-heat) visors
- › Insulated with pure wool

Polycarbonate Visor

Aluminised Preox Part # APH27PV

Ellgard-45 Visor (Gold)

Aluminised Preox Part # APH27GRV



- › Protection from high radiant heat
- › Ellgard-45 gold visor
- › Fitted to clear polycarbonate visor and safety hat

High Heat Reflective Hat Visor Part # ELLGARD45H

Gold Plated Visor Part # ELLGARD 45

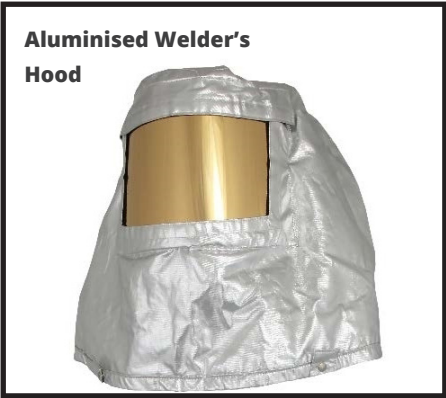
Cured polycarbonate backing visor Part # CPV250S



- › To be worn over safety footwear
- › Fully insulated
- › Heat resistant rubber sole
- › Quick release adjustment ankle strap

Aluminised Preox Part # APOB30WL

Aluminised Kevlar Part # AKOB30WL



- › Shoulder length
- › Complete with modified lift front welding helmet

Aluminised Preox Part # APH29C



- › Made from either Cx407 or CA340 aluminised materials.
- › Fitted hook and loop tape for attachment to safety helmets
- › Universal size

Neckflap Part #FCA340NF



- › Silk screen wall dispenser
- › Product manufactured to AS3504
- › Available in standard or custom sizing

Size

Part # FGB1010 1m x 1m

Part # FGB1218 1.2m x 1.8m

Radiant Heat Protection Gloves

Different palm materials include Chrome Leather, Pyrocore Leather and Kevlar combined with a fully aluminised back, fully insulated wool lining and wear seams welted for extra strength provide the ultimate protection for hazardous areas.



Magnashield Aluminised Gloves

- › Aluminised Aramid or Preox back to reflect radiant heat
- › Chrome leather palm and cuff
- › Wool lined for extra thermal protection
- › Wear seams are welted for additional protection and all seams are sewn with heat resistant Kevlar® thread for extra durability
- › **Length - 406mm**

Aluminised Kevlar® Back

Aluminised Preox Back

Part # AKG16WS

Part #APG16WS

Pyrocore Leather

- › Pyrocore heat treated leather palm and cuff
- › Designed for medium temperature contact
- › Ideal for foundry use where hot metal contact is experienced
- › Sewn in Kevlar®
- › Wool lining
- › **Length - 406mm**

Aluminised Kevlar® Back

Aluminised Preox Back

Part # AKG16WSP

Part #APG16WSP

Kevlar®

- › Woven Kevlar® palm and cuff
- › Designed for high temperature contact
- › Applications include handling of molten metal ladles where protection from contact and radiant heat is encountered
- › Sewn in Kevlar® thread
- › Wool lining
- › **Length - 406mm**

Aluminised Kevlar® Back

Aluminised Preox Back

Part # AKG16WSK

Part #APG16WSK

Kevlar Heat Protection Gloves & Mitts



Woven/Felt Kevlar Glove

- › Woven Kevlar palm with Kevlar felt back and cuff
- › Fully wool lined

304mm	Part # KGL12FK
457mm	Part # KGL18FK



Fighter Premium Handling Gloves

- › Superior quality chrome leather palm
- › Knuckle bar style with heavy-duty safety cuff
- › Seams are sewn with heat resistant Kevlar® thread for extra durability
- › Lined palm for additional protection and comfort

270mm	Part # KB436A
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MagnaShield® Aramid Glove

- › Full Loop Pile Kevlar Palm and back
- › Wool lined for additional thermal protection
- › Wear seams are welted for additional protection
- › All seams are sewn with heat resistant Kevlar® thread for extra durability

305mm	Part # KGLP12
457mm	Part # KGLP18



MagnaShield® DLK35 Heat Resistant Gloves

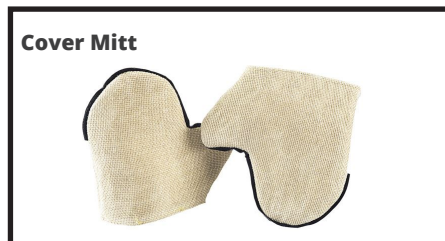
- › Contact temperature level 4 (500°C) requires 15 seconds while Fortes HC35 achieved 21 seconds; Convective heat level 4 requires 18 seconds while HC35 achieved 37 seconds.
- › Exclusive technology of double layer liner offering the best protection against high temperature.
- › The MOST flexible and comfortable heat resistant glove in the market, well up to 500°C.
- › Both sides silicone coated providing excellent grip, extra heat resistance and durability.
- › 360° breathability to keep your hands cool while wearing.
- › Multiple launderings while both heat and cut resistant level remain the same.

350mm	Part # ELG8000
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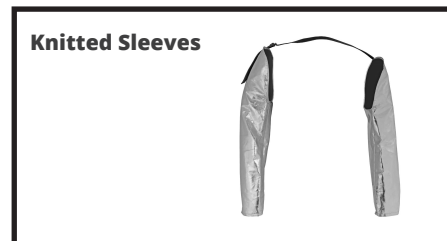
- › Woven Kevlar palm with Kevlar felt back and cuff
- › Fully wool lined

Part # KGS10



- › Woven Kevlar mitt felt back
- › Unlined

Part # KCM10



- › Fully knitted Kevlar sleeve
- › Velcro fastening
- › Thumb hole
- › Length - 430mm

FAR 530 SLV

Contact Heat Protection

Fortamid fabrics combine the use of an inner core of filament glass fibre with wrapped with an outer sheath of aramid fibre. The resulting composite structure allows temperatures of up to 450°C to be withstood, well in excess of the levels which can be tolerated by 100% pure aramid.

However by contrast, Fortamid needlefelts which are produced from 100% para aramid contain high levels of entrapped air, giving excellent heat insulation

Lining Fabrics

Gloves and mitts are usually lined with a wool to offer greater thermal protection.

Outer Fabric Choices

The following test results offer a guide to the performance of the Outer Fabric choices:

Description	Weight (g/m ² ± 10%)	Thickness (mm nominal)
Fortamid Woven with FR fleecy cotton backed	820	2.2
Fortamid Woven with neoprene skin weavelocked	660	1.8
Kevlar Loop Pile	880	2.0
Fortamid Needlefelt	240	2.0

Characteristics

- › High tensile strength
- › Excellent resistance to abrasion
- › Good resistance to acid attack
- › Stands up well to rough handling and general wear and tear
- › Suitable for use at temperatures up to 180°C for long term exposure, 350°C for short term exposure e.g. handling hot objects

Test Data

The following test results offer a guide to the performance of the Outer Fabric choices:

Fabric	Contact Heat EN702	Convective Heat EN367	Radiant Head EN366	Small Splashes of Molten Metal 348	Large Splashes of Molten Metal EN373	Abrasion Resistance EN388	Tear Resistance
Kevlar Woven Cotton Back	2	3	1	2	1	2	4
Kevlar Felt 240gsm	2	3	-	4	2	1	4

Test Data Gloves and Mitts EN407

Property	EN 407 Requirements			KGLFW18FK/ KMLFW18FK			KGLP18/KMLP18		
5.1 Burning Behaviour	Level	Afterflame	Afterglow	Level: 4			Level: 4		
	2	≤ 10s	≤ 120s	3SFT	15SFT		3SFT	15SFT	
				Afterflame Time	0s	0 s	Afterflame Time	0s	0 s
				Afterglow Time	0s	0s	Afterglow Time	0s	0s
				Melting (Yes/No)	No	No	Melting (Yes/No)	No	No
	4	≤ 2s	≤ 5s	Dripping (Yes/No)	No	No	Dripping (Yes/No)	No	No
			Seam Split (Yes/No)	-	No	Seam Split (Yes/No)	-	No	
5.3 Convective Heat	Level	HTI		Level: 4			Level: 4		
	1	≤ 4		Result: HTI=30			Result: HTI=41		
	2	≤ 7							
	3	≤ 10							
	4	≤ 18							
5.4 Radiant Heat	Level	t3		Level: 1			Level: 4		
	1	≤ 5s		Result: t3=20s			Result: t3=17s		
	2	≤ 30s							
	3	≤ 90s							
	4	≤ 150s							

Heat Protection Mitts - T1000

- › Non asbestos glass fibre
- › Working temperature of 800°C
- › Thickness of 2.2mm
- › Mitts are wool lined to give greater thermal protection
- › Sewn in Kevlar thread
- › Wear seams welted in leather



- › Mitt wool lined ambidextrous
- › All seams are sewn with heat resistant Kevlar® thread for extra durability
- › Reversible design
- › 406mm long

Part # TM16WL



- › Manufactured from T1000 Material
- › Reversible design
- › All seams are sewn with heat resistant Kevlar® thread for extra durability
- › Unlined

Part # TCM10

Heat Protection Mitts - Heatshield®

- › Non asbestos glass fibre
- › Working temperature of 500°C
- › Thickness of 2.2mm
- › Mitts are wool lined to give greater thermal protection
- › Sewn in Kevlar thread
- › Wear seams welted in leather
- › Mitt wool lined ambidextrous
- › 406mm long

Heatshield® is manufactured from E Glass fibre which is a non combustible, flexible, inorganic material that has been specifically designed to provide retention of heat.

Heatshield has service temperature of 550°C with 100% duty cycle providing a wide scope, fulfilling most applications.

T1000 is an E Glass fabric with a Vermiculite treatment to enable the fabric to withstand surface temperatures of 800°C continuously.

Lining: mitts are usually lined with a wool to offer greater thermal protection



Part # HSM16WL

Test Data EN407

Property	EN 407 Requirements		TM16WL	HSM16WL
5.3 Convective Heat	Level	HTI		
	1	≤ 4	Level: 4	Level: 4
	2	≤ 7	Result: HTI=39	Result: HTI=39
	3	≤ 10		
	4	≤ 18		
5.4 Radiant Heat	Level	t3		
	1	≤ 5s	Level: 2	Level: 2
	2	≤ 30s	Result: t3=44s	Result: t3=43s
	3	≤ 90s		
	4	≤ 150s		

ELLGARD® Basofil

Basofil heat and flame resistant fibre is an advanced technology melamine fibre that is designed to provide excellent heat insulating properties with low thermal conductivity.

- › Heat protection
- › Excellent dexterity
- › Comfortable
- › 60% Basofil 40% cotton
- › Heavy weight
- › Accurate computerised size specifications
- › Cuff closing overlocked by machine
- › Multiple sizes
- › Machine washable

Inner gloves provide extra insulation when wearing furnace mitts and gloves.

The ELLGARD Basofil glove is a blend of the Basofil fibre (60%) and cotton (40%) in a knitted glove which offers the excellent comfort and dexterity in a heat protective industrial glove.

Just compare the heat blocking performance of the Basofil fibre glove to the following knit gloves.



Size	Length	
M	230mm	Part # ELG4200M
L	255mm	Part # ELG4200L
XL	280mm	Part # ELG4200XI



Threshold Time To Burn (seconds)

Contact Heat Temperature	Basofil/Cotton	Preox Carbon	Meta-Aramid
100°C	62	48	41
250°C	15	11	10
350°C	10	7	6



CHEM-TECH
CHEMICAL SPLASH PROTECTIVE CLOTHING

Combustion and Chemical Engineering
stock a full range of Chem-Tech splash
protective clothing.

Chem-Tech® Chemical Splash Protective Clothing

Chem-Tech® is the latest generation of Chemical Splash Suit fabrics with a breathable hydrophilic PTFE laminate. Elliotts range of Chem-Tech® Chemical Splash Protective Clothing is made from a high performance, high quality 5 layer breathable fabric manufactured specifically for the requirements of chemical splash protection.

High Levels of Comfort and Protection

The Chem-Tech® Standard and FRAS fabrics allows heat vapour to transfer through the fabric while preventing liquid penetration by a variety of chemicals. Chem-Tech® Chemical Splash Protective Clothing allows the body to “breathe”, so your perspiration can evaporate reducing the possibility of heat stress and therefore improving wearer comfort.

The Chem-Tech® range of fabrics allows vapour to transfer through the fabric while preventing liquid penetration by a variety of chemicals. Chem-Tech® Chemical Splash Protective Clothing allows the body to breathe, so your perspiration can evaporate reducing the possibility of heat stress and therefor improving wear comfort. Many coated fabrics are non-breathable, and they do not allow moisture vapour through. Workers incur the risk of heat stress as this hinders the body's physiological cooling process. Chem-Tech® Chemical Splash Protective Clothing can provide the wearer with valuable time to access an emergency shower in the case of an accidental chemical splash.

Chem-Tech® breathable chemical splash fabric has been tested to ISO-11092 for water vapour resistance. Water vapour resistance measures the ability of textile fabrics to transfer body heat and moisture vapour away from the body through protective fabric layers and shows the benefits of wearing garments, which can reduce potential metabolic heat loss.

Chem-Tech® Barrier Technology

Chem-Tech® Chemical Splash Protective Clothing is made from a high performance, high quality 5 layer breathable fabric manufactured specifically for the requirements of chemical splash protection.

Chem-Tech® Features

- › Weight - 302gsm
- › 5 Layer protection
- › Chemical resistant outer PU coating
- › 300D Oxford Fabric
- › Moisture vapour permable hydrophilic Coating
- › Microporous PTFE film membrane
- › Tricot nylon knot liner

Chem-Tech® Material Layers

- › Layer 1 - Chemical, Oil, Soil Repellant treatment on the Outer Fabric
- › Layer 2 - 300D Oxford Outer Fabric
- › Layer 3 - Moisture Vapour Permeable PU Hydrophilic Coating
- › Layer 4 - Moisture Vapour Permeable Microporous PTFE Film Membrane
- › Layer 5 - Tricot Nylon Knit Liner

Chem-Tech® Compliance

- › AS/NZS 4602.1:2011 - High Visibility
- › EN1149-1:1995 - Anti-Static Surface Resistivity
- › AS2755.1:1995 - Flame Resistance textile fabrics
- › AS/NZS ISO 6530:2006 - Liquid chemicals
- › AS3765.1:1990 - Resistance to Liquid Penetration
- › GB12012:1989 - Resistance to Liquid Penetration



Chem-Tech® Coveralls

- › Available in FRAS (Fire-Resistant Anti-Static)
- › Available with and without 3M 8910 Reflective Tape
- › Heavy duty zip with hook and loop storm flap closure system.
- › Hook and Loop closure tabs on cuffs.
- › Two large patch pockets on thighs.
- › Fully seam sealed hood



	Description	Colour	Sizes
Part # CTCA100	General Purpose Chem-Tech® Chemical Splash Coverall	Fluro Orange	S - XXXXL
Part # CTCA105	Flame Retarded Anti-static Chem-Tech® FRAS Chemical Spash Coverall	Fluro Orange	S - XXXXL
Part # CTCA115	Chem-Tech® FRAS Coverall with Full Face Mask Hood	Fluro Orange	S - XXXXL

Chem-Tech® Coat & Trouser Combinations

Trouser

- › Bib and brace design to ensure complete layered protection
- › Side Velcro tab adjusters
- › Velcro closure tabs on pockets
- › Large Pockets
- › All seams heat sealed with seam sealing tape

Coat

- › Hip length style Z59 comfort system
- › Fold away good with draw string closure and peak adjuster strap
- › Heavy duty zip with Velcro closure
- › Two large cargo pockets
- › Internal draw string waist to ensure close fit
- › All seam heat sealed with seam sealing tape



	Description	Colour	Sizes
Part # CTJ100	General Purpose Chem-Tech® Chemical Splash Style 49 Jacket	Fluro Orange	S - 6XL
Part # CTBB100	General Purpose Chem-Tech® Bib & Brace Trouser	Fluro Orange	S - 6XL
Part # CTJ105	Flame Retarded Anti-Static Chem-Tech® FRAS Chemical Splash Style 49 Jacket	Fluro Orange	S - 6XL
Part # TBB105	Flame Retarded Anti-Static Chem-Tech® FRAS Chemical Splash Bib & Brace Trouser	Fluro Orange	S - 6XL

Chem-Tech® Apron

- › Adjustable neck and waist straps
- › Side release buckles for quick donning and doffing
- › Comfortable, lightweight and breathable
- › 1060mm x 610mm



	Description	Colour
Part # CTA100	General Purpose Chem-Tech® Chemical Splash Apron	Fluro Orange
Part # CTA105	Flame Retarded Anti-static Chem-Tech® FRAS Chemical Splash Apron	Fluro Orange

Material Data Specification



Outer Fabric	300D Polyester 100%	300D Polyester 98% carbon fibre 2%
Membrane	An expanded- PTFE membrane providing liquid chemical penetration resistance and moisture vapour performance. A PU Hydrophilic Coating is applied to further improve the performance and increase the chemical hold out performance.	An expanded- PTFE membrane providing liquid chemical penetration resistance and moisture vapour performance. A PU Hydrophilic Coating is applied to further improve the performance and increase the chemical hold out performance.
Inner Lining	Tricot knit to provide additional durability and protection of the inner membrane and PU Coating	Tricot knit to provide additional durability and protection of the inner membrane and PU Coating.
Fabric Weight	320 gsm	320 gsm

Certificate or Certification

Chem-Tech

Chem-Tech FRAS

High Visibility

AS4602.1999 High visibility safety garment
EN471:2008 High visibility clothing for professional use

Certified Compliant

Certified Compliant

Anti Static

EN1149-1:1995 Surface Resistivity of Fabric test method

NA

Compliant
1.4 X 10⁹ OHMS

Flame Resistance

AS2755.1-1985 Textile fabrics - Burning behaviour
Determination of ease of ignition of vertically oriented specimens

NA

No Ignition

Liquid Chemicals

AS/NZS ISO 6530-2006 Protection Against Liquid Chemicals

This ISO internationally-recognised test performance method is a measurement of chemical penetration, absorption and repellency for chemical fabrics and materials (see next page)

Test Liquid	%	Penetration		Repellency		Absorption	
		Length	Width	Length	Width	Length	Width
Hydrochloric Acid	37	0.0	0.0	91.2%	90.7%	3.4	3.4
Sodium Hydroxide	40	0.0	0.0	98.4%	99.2%	0.46	0.5
Jet Fuel A1	100	0.0	0.0	75.6%	75.0%	16.2	18.1
Sulphuric Acid	98	0.0	0.0	96.3%	96.9%	4.0	3.83
Nitric Acid	50	0.0	0.0	91.7%	91.3%	4.6	4.6

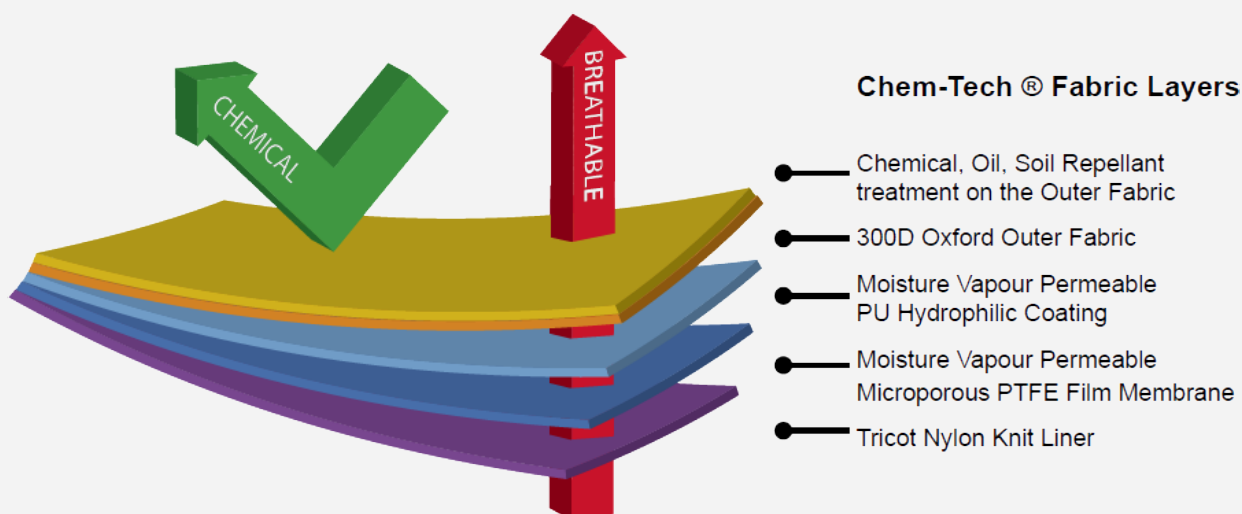
AS3765.1:1990 Resistance to Liquid Penetration(General Purpose) Appendix A – AS3765.1 testing is terminated at 60min.	Sulphuric Acid 98%(conc)	>60 minutes
	Nitric Acid 40%	>25 minutes
	Sodium Hydroxide 12.5M	>60 minutes
	Toluene	>30 minutes
	Tetrachloroethylene	>15 minutes
GB12012-1989 Further testing was completed to GB12012-1989 by a Certified Chinese Laboratory to determine extended resistance times.	Sulphuric Acid 98%(conc)	>180 minutes
	Nitric Acid 40%	>160 minutes
	Hydrochloric Acid 30%	>157 minutes



Chem-Tech® Barrier Technology

Chem-Tech® Chemical Splash Protective Clothing is made from a high performance, high quality 5 layer breathable fabric manufactured specifically for the requirements of chemical splash protection.

Combustion and Chemical Engineering stock a wide range of Chem-Tech products. Ask us for more information.



INDUSTRIAL LIQUID AND GAS FILTRATION

Combustion and Chemical Engineering supplies a comprehensive range of cartridge & bag filtration products designed to address the needs of a myriad of markets and applications including:

- › **Mining & Material Processing**
- › **Chemical & Petrochemical**
- › **General Industrial**
- › **Food & Beverage**
- › **Medical**
- › **Potable Water**



Depth Filter Cartridges

- › High dirt holding capacity
- › Absolute & nominally rated range
- › Choice of media options

Part #



Pleated Filter Cartridges

- › High surface area media for maximum flow
- › Robust cartridge & media construction
- › Available in a diverse range of micron ratings

Part #

Housing Range

Choice of vessel sizes and designs including the choice of material options as well as the choice of either non-coded or coded vessels designed for any application where specific flow rates and even high operating pressure conditions exist.



PCB Series Depth Filter Cartridge

Rigid depth filter cartridges for high efficiency, particulate reduction

The PCB range of rigid, depth disposable cartridge filters represents the latest innovation in cost effective depth filtration.

Using state of the art manufacturing, PCB cartridges employ a unique process which produces controlled fibre diameters to create a cartridge with large void volumes for enhanced dirt capture and extended service life.



All PCB depth filters feature 100% virgin polypropylene fibres with the option of glass microfibres for use in critical processing applications. All cartridges feature a grooved surface structure for greater surface area for enhanced dirt holding, lower pressure drops and longer overall filter life.

All PCB cartridges are designed to yield high particle capture even under pulsating flow. Each grade is benchmarked to yield consistency in terms of end filtrate quality throughout the life of the filter. Available in a range of micron ratings from 0.5 to 100 micron, IRIS PCB filters are available in a range of lengths and end Treatment options including various double open ended (DOE) & single open ended (SOE) configurations.

Features	Benefits
High efficiency, graded density construction Grooved surface	Superior dirt holding capability and lower pressure drops for enhanced overall economics
Rigid filter construction	Consistent and reproducible filtration, without any chance of by-pass
100% polypropylene construction with the option of glass Microfibres for enhanced filter performance in critical applications	Broad chemical compatibility, ideal for use in a myriad of applications
USFDA CFR 21 Listed	Ideal for food & beverage contact
Manufactured Under an ISO 9000 regime	Consistent, reproducible product quality Lot release tested.

Applications

PCB series depth filter cartridges are used in a myriad of applications including :

- › Oil & Gas Processing – Amine & Glycol, Completion Fluids, Waterflood, Hydrocarbon Streams
- › Industrial – Plating, Desalination, process cooling water, strong oxidising acids and bases
- › Food & Beverage – Bottled Water, Soft Drinks, Juice, RTD’s, make up water
- › Pharmaceutical – PRE RO, Rinse Water, Particle control in WFI, API’s

Flow Rates

PCB series rigid depth filters have been developed to fill the need for high contaminant holding capability while also producing consistent reproducible filtration.

For sizing and pressure drop queries please contact **Combustion & Chemical Engineering** directly.

Product Specifications

MATERIALS OF CONSTRUCTION

Filter Media	Polypropylene
End Treatment Options	Various Available

OPERATING PARAMETERS

Maximum Differential Pressure (Forward)	5.1 Bar @ 20C, 2.2 Bar @ 85C
Maximum Operating Temperature	80°C
Recommended Changeout Differential Pressure	35psid (240Kpa)

NOMINAL FILTER DIMENSIONS

Filter Diameter	2.75" (70 mm)
Nominal Lengths	9 3/4", 10", 19 1/2" , 20", 29 1/4", 30", 29" & 40"

PCB - Ordering Guide

PCB Series	Retention Rating (µm)	Cartridge Length	End Treatments	Gaskets / O-Rings
PCB	0.5, 1, 2,3, 5, 10, 20, 30, 50, 75,100	9 3/4", 10", 19 1/2" 20", 29 1/4", 30", 29" & 40"	Code 3,8 &7 DOE & Flat Closed End	EDPM, Viton, Silicone, Encaps PTFE

MicroCel Pleated Filter Cartridge

Absolute rated Pleated Filter Elements

Combustion & Chemical Eng range of MicroCel filter cartridges are a range of custom made cost effective alternatives to Hydraulic, Coalescer and Separator elements to Pall, Porous Media, Parker are other manufacturers. MicroCel cartridges are Beta Ratio 5000 rated filters. Cartridges are designed for use in a myriad of Oil & Gas applications including :

- › Waterflood,
- › Completion / Workover Fluids
- › Produced Water

MicroCel cartridges feature a pleated design, supported internally by a steel core and protected externally by steel end caps, providing positive sealing via an external flat gasket design.

MicroCel filters are comprised of a resin impregnated cellulose medium. The process used to produce the MicroCel media utilizes a manufacturing technique which locks in the cellulose fibres creating a structure that is both robust and fixed eliminating the possibility of any fibre flexing or shifting which might otherwise alter the size of the flow passages hence reducing removal efficiency.

MicroCel filters are available in a range of grades from 10 through to 50 micron absolute.



Features	Benefits
Absolute rated, Beta Ratio 5000	Consistent & reproducible filtrate quality
High efficiency, fixed pore structure	High throughputs and superior dirt holding for enhanced overall economics
Resin Impregnated Cellulose Media or Bonded Glass	Broad chemical compatibility, ideal for use in a myriad of applications
Custom Designed Options	Designed to retrofit various offerings from Pall & PM

MicroCel Filter Elements - Performance Characteristics

Cartridge Length	Liquid Removal Rating Percent Removal 99.98% (B/R) 5000	Effective Filter Area (per 1 Hi") (Sq. ft.)	Media Description
MC-10	10	14.5	Resin & Impregnated Cellulose
MC-20	20	14.5	
MC-30	30	13	
MC-40	40	13	
MC-50	50	13	

MicroCel Filter Elements - Performance Characteristics

Cartridge Class	Micron Rating	Length	Gasket Material
MC	10	19.5"	N-Nitrile
	20	20"	S- Silicone
	30	29.25"	V-Viton
	40	30"	B- Buna N
	50	39"	
		40"	
		50"	

For a comprehensive list of our filtration stocks.
Contact us at info@candce.com.au or 07 4728 2818

Visit our website for more information about how Combustion and Chemical Engineering can assist you.

Filtration Problem Analysis Sheet

To enable our engineers to evaluate your filtration applications, fill out this handy checklist and send it back to us.

Upon receipt, we will make the necessary calculations leading to a specific equipment recommendation.

APPLICATION:

a) Volume Required _____ (CFM) Dust System Static Pressure _____ In (H₂O)
Temp. _____ (°F)

b) Ventilate Dust Points _____ Air Sweep product _____ Provide Clean Air _____
Absorb or Condense Gas _____ Collect Liquid Droplets _____

POLLUTANT DESCRIPTION:

a) Composition _____

b) Solid _____ Liquid _____ Gas _____

c) Particle Size Distribution: Above 10 micron _____ %, 5-10 micron _____ %
1-5 micron _____ %, Less than 1 micron _____ %

d) Moisture Content _____ % by weight (or by volume; or lb. H₂O)/lb. dry air; or lb./hr.)

e) Corrosive _____ Sticky _____ Free Flowing _____ Fluffy _____
Soluble in Water _____ Hygroscopic _____ Abrasive _____
Explosive _____ Flammable _____

f) Less than 5 gr./ft.³ _____ 5-10 gr./ft.³ _____ Over 10 gr./ft.³ _____

COLLECTOR LOCATION:

a) Outside _____ Inside _____ On Ground _____ On Roof _____

b) Clearance Available: Height _____ Width _____ Length _____

c) Elevation _____ (in ft. above sea level)

d) Temperature Extremes: High _____ Low _____

DISPOSAL OF COLLECTED MATERIAL:

a) Return to Process _____ Discharge to Hopper or Drums _____
Pipe or Conveyor to Dump Point _____ Screw Conveyor _____ Other _____

SCRUBBING LIQUID AVAILABLE:

a) Source _____ Quantity _____ Recirculate? _____
% Solids in Liquid _____ pH _____
Neutralizer Required _____ Temperature _____ °F

ELECTRICITY:

Volts _____ Phase _____ Hz. _____ Special Requirements _____

COMPRESSED AIR:

Pressure _____ CRM _____ Dry _____

QUOTE:

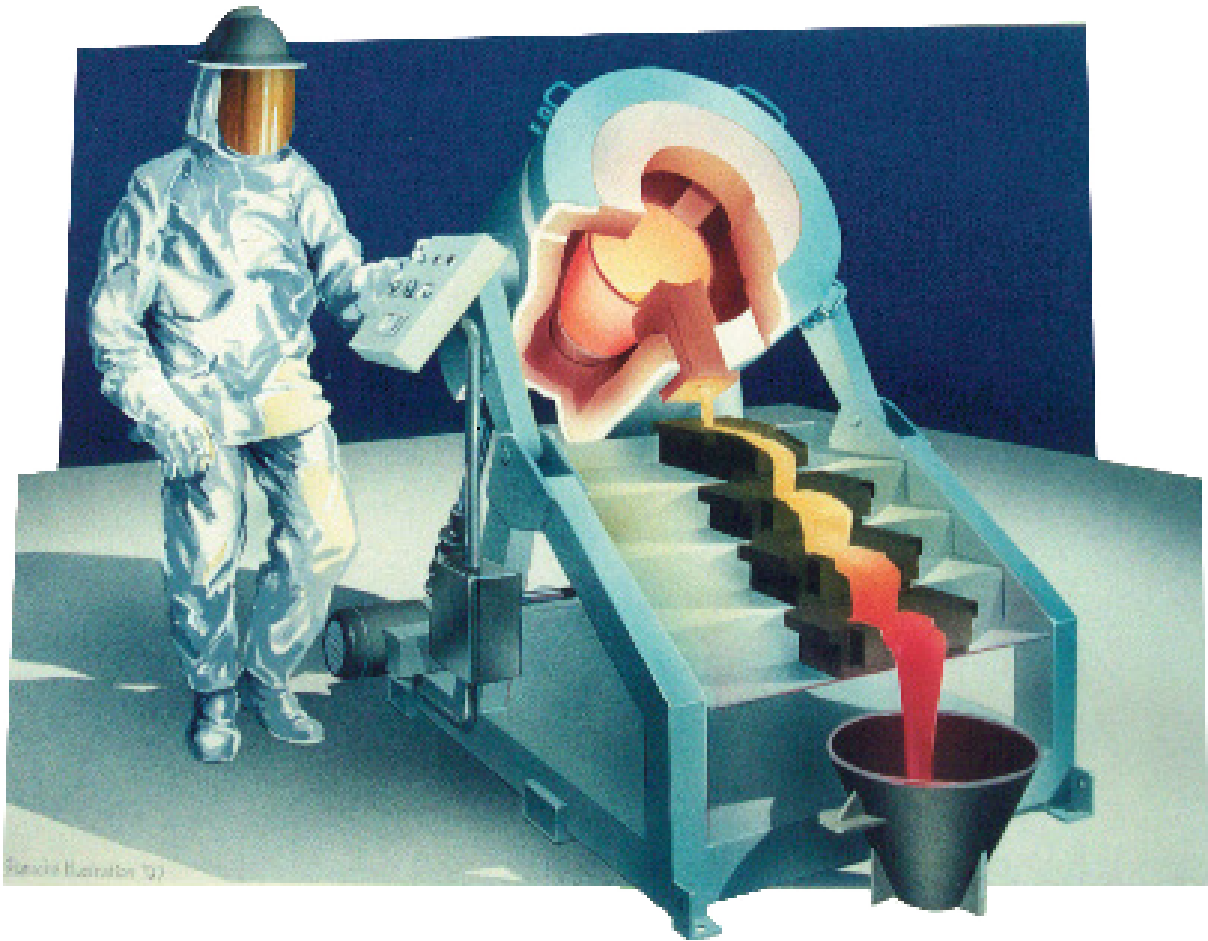
Collector _____ Fan _____ Drives _____ Motors _____
Dust Removal Equipment _____ Recirculation Tank _____

TO:

Company Name _____
Attention of _____
Title _____
Street _____
City _____ State _____ Postcode _____
Phone _____
Number of Copies _____
Delivery Desired _____



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