



WHEN SAFETY MATTERS - THERE'S ONLY ONE CHOICE

The CABLE SHIELD range of flexible conduit & fittings includes products tested to comply with the rigorous requirements of AS/NZS 2053.1:2001 / IEC 61386:1-2008 Conduit & fittings for electrical installations – General requirements & AS/NZS 2053.8:1995 / IEC 61386:23-2002 Conduit & fittings for electrical installations – Flexible conduits & fittings of metal or composite material.

That means that **CABLE SHIELD** provides peace of mind when it comes to worker safety and asset protection!

Just look at what CABLE SHIELD can bring to your installation:

- The only flexible metallic conduit tested to comply with relevant AS/NZS & IEC standards
- The most user friendly, high performance range
- Peace of mind with regard to operator safety
- Lifetime cost savings with reduced maintenance
- · Maximum asset & infrastructure protection.



The majority of the range is dedicated to the management, protection and connection of electrical cable. This means that our ranges of protection systems, flexible conduit systems and cable glands are core to the line up.

CABLE SHIELD is well positioned to supply both your day to day needs and to provide specifiable products with specific performance criteria.



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QUICK SELECTION GUIDE

CONDUIT	LIQUID TIGHT	TEMP RATING (C)	METAL	PLASTIC	UV STABLE	HALOGEN FREE	FIRE HAZARD	GENERAL CHEMICAL RESISTANCE	TIGHT BENDS	MOVEMENT	GROUNDED	STD COLOURS	PAGE
JACKETEE	METAL	LIC											
LT	\	-10 to 105	Steel	PVC	\		Low	Oils & Acids	✓	\	✓	G, B, O	5
ETX	\	-60 to 150	Steel	TPR	\	✓	Low	Oils	✓	\	✓	В	6
SS	\	-10 to 105	S/Steel	PVC	\		Low	Oils & Acids	✓	\	✓	В	6
EXTRA FLI	EXIBLE M	NETALLIC											
SL		-20 to 250	Steel		\	✓	Low	Oils & Acids	✓	\			10
VJC		-20 to 70	Steel	PVC	\		Low	Oils & Acids	✓	\		В	10
NON-ME	TALLIC												
NM	✓	-18 to 105		PVC	\		Low	Oils & Acids		\		B, O, G	12
SRM	\	-18 to 60		PVC	\		Low	Oils & Acids	✓	\		В, О	12
PA6V2	\	-40 to 115		Nylon	\	✓	Low	Oils & Acids	✓	\		В	14
PA6V0	✓	-40 to 115		Nylon	✓	✓	Extra Low	Oils & Acids	✓	✓		В	14
FC	✓	-5 to 60		PVC	✓		Low	Petroleum	✓	✓		0	18

Colours: G=Grey, B=Black, O=Orange



AUSTRALIAN & NEW ZEALAND STANDARDS

The AS/NZ\$2053 series of standards outlines a range of strict criteria that conduits and fittings for electrical applications need to meet in order to claim standards compliance and provide the specifier and end user with a high level of confidence that the product is fit for purpose. Testing to the standard should only be relied upon when carried out by an independent and accredited third party.

The CABLE SHIELD liquidtight metallic conduits & fittings have been independently tested and comply with:

AS/NZS 2053.1:2001

Conduits & fittings for electrical installations – General requirements

AS/NZS 2053.8:1995

Conduits & fittings for electrical installations – Flexible conduits and fittings of metal or composite material

The combination of these two standards ensures that:

- The internal diameter of the conduit provides the expected carrying capacity.
- The construction is free from burrs, defects or sharp edges that could damage a cable.
- The conduit has sufficient resistance to compression to ensure a Heavy Duty rating.
- The combination of conduit & fitting demonstrates excellent pull-out strength to ensure a safe installation.
- The conduit shows no signs of damage despite 5000 flexings at a rate of 40 per minute.
- The conduit can maintain its Heavy Duty rating at the maximum heat stress of 105°C.
- The conduit is non-flame propagating.

ARE YOU CONFIDENT THAT THE CONDUIT SYSTEM YOU USE MEETS ALL OF THESE CRITERIA?



CABLE SHIELD LIQUIDTIGHT FLEXIBLE HEAVY **DUTY METAL CONDUIT SYSTEMS**

CABLE SHIELD Liquidtight Flexible Metal Conduits are compliant with Australian & New ZealandStandards, designed to provide excellent mechanical and environmental protection in all types of industrial and commercial applications.

These conduits are typically used in installations where there are motion, vibration and bending requirements such as in manufacturing or processing plants or where a high level of mechanical protection is required for an indoor or outdoor cable installation. Three grades of liquidtight jacketed metallic conduit are available to suit different types of environments.

Type LT

- General Purpose
- Moisture & Oil resistant
- Superior temperature range







CAT No.*	NOMINAL SIZE (MM)	TRADE SIZE (INCH)	ID (MM)	OD (MM)	MIN BEND RADIUS (MM)	LENGTH (M)	COLOUR
LT016	16	3/8	12.6	17.8	50	10, 25, 150	G, B, O
LT020	20	1/2	16.1	21.1	65	10, 25, 150	G, B, O
LT025	25	3/4	21.0	26.5	75	10, 25, 150	G, B, O
LT032	32	1	26.5	33.1	100	10, 25, 120	G, B, O
LT040	40	11/4	35.1	41.8	120	10, 50	G, B, O
LT050	50	11/2	40.4	47.9	140	10	G, B, O
LT063	63	2	51.6	59.9	180	10	G, B, O
LT080	80	3	78.4	88.4	300	10	G, B, O
LT100	100	4	102.1	113.8	350	10	G, B, O

^{*}Catalogue Number Construction

Catalogue Number = Base Code + Colour + Length

Colours - Grey (G), Black (B), Orange (O)

Example -20mm Grey 25mm roll = LT020-G-25



Type SS

- Stainless Steel core
- Moisture & Oil resistant
- Marine & Coastal applications





CAT No*	NOMINAL SIZE (MM)	TRADE SIZE (INCH)	ID (MM)	OD (MM)	MIN BEND RADIUS (MM)	LENGTH (M)	COLOUR
SS020-B	20	1/2	16	21.1	65	25, 150	Black
SS025-B	25	3/4	21	26.5	75	25, 150	Black
SS032-B	32	1	26.7	33.1	100	25	Black

Characteristics of LT & SS

- LT is tested to AS/NZS 2053.1:2001 & AS/NZS 2053.8:1995
- SS is made to the same exactly standards as Type LT but with a stainless steel core
- Flexible with excelent mechanical strength
- UV Resistance
- Temperature rating -10 to 105°C (intermittent to 150°C)
- HLT has a spiral wound, electrogalvanised, interlocked, steel core for superior strength
- SS has a spiral wound, interlocked, stainless steel core for harsh environments
- Durable PVC jacket creates a liquidtight conduit resistant to most oils, acids and vapours
- IP 66 when used with CABLE SHIELD liquidtight fittings
- Non-flame propagating
- Grounded due to the continuous metal core.

Type ETX

- Extra high temperature resistance
- Steel core
- Moisture & Oil resistant
- RoHS Compliant







CAT No*	NOMINAL SIZE (MM)	TRADE SIZE (INCH)	ID (MM)	OD (MM)	MIN BEND RADIUS (MM)	LENGTH (M)	COLOUR
ETX016	16	3/8	12.5	17.8	50	25, 150	Black
ETX020	20	1/2	16	21.1	65	25, 150	Black
ETX025	25	3/4	21	26.5	75	25, 150	Black
ETX032	32	1	26.7	33.1	100	25	Black
ETX040	40	1 1/4	35.4	41.8	120	10	Black
ETX050	50	11/2	40.3	47.8	140	10	Black
ETX063	63	2	51.6	59.9	180	10	Black

Characteristics of ETX

- Made to the same exactly standards as Type LT but for extra high temperatures
- Flexible with excellent mechanical strength
- Excellent UV Resistance
- Temperature rating -60 to 150°C (intermittent to 165°C)
- Spiral wound, interlocked galvanised steel core for superior strength
- High performance thermoplastic vulcanizate (TPV) jacket creates a liquidtight conduit almost unaffeacted by temperature extremes and with exceptional resistant to most oils and chemicals
- IP 66 when used with CABLE SHIELD liquidtight fittings
- Flammability rating of UL 94-H
- Grounded due to the continuous metal core.



CABLE SHIELD LIQUIDTIGHT FITTINGS

CABLE SHIELD liquidtight conduit fittings are designed to safely and securely attach CABLE SHIELD conduits to enclosures, machinery or bulkheads.

The comprehensive range of CABLE SHIELD fittings are the only range made to comply with Australian/New Zealand and IEC standards. CABLE SHIELD fittings ensure that the complete system is liquidtight to an IP66 rating and are available in three materials for different applications. The popular CABLE SHIELD steel fittings have become the market standard and provide superior strength in industrial applications.

Metric Thread Fittings





Straight

90 Degree

		Zinc Plated Steel			Nickel Plated Brass			Stainless Steel		
CONDUIT SIZE (MM)	THREAD SIZE	Straight	90 Deg.	45 Deg.	Straight	90 Deg.	45 Deg.	Straight	90 Deg.	45 Deg.
16	M16 X 1.5	LTCM-09	LTCM-209	LTCM-309	LTCM-B09	LTCM-B209	LTCM-B309	LTCM-S09	LTCM-S209	LTCM-S309
16	M20 X 1.5	LTCM-10	LTCM-20	LTCM-30	LTCM-B10	LTCM-B20	LTCM-B30	LTCM-S10	LTCM-S20	LTCM-S30
20	M20 X 1.5	LTCM-11	LTCM-21	LTCM-31	LTCM-B11	LTCM-B21	LTCM-B31	LTCM-S11	LTCM-S21	LTCM-S31
25	M25 X 1.5	LTCM-12	LTCM-22	LTCM-32	LTCM-B12	LTCM-B22	LTCM-B32	LTCM-S12	LTCM-S22	LTCM-S32
32	M32 X 1.5	LTCM-13	LTCM-23	LTCM-33	LTCM-B13	LTCM-B23	LTCM-B33	LTCM-S13	LTCM-S23	LTCM-S33
40	M40 X 1.5	LTCM-14	LTCM-24	LTCM-34	LTCM-B14	LTCM-B24	LTCM-B34	LTCM-S14	LTCM-S24	LTCM-S34
50	M50 X 1.5	LTCM-15	LTCM-25	LTCM-35	LTCM-B15	LTCM-B25	LTCM-B35	LTCM-S15	LTCM-S25	LTCM-S35
63	M63 X 1.5	LTCM-16	LTCM-26	LTCM-36	LTCM-B16	LTCM-B26	LTCM-B36	LTCM-S16	LTCM-S26	LTCM-S36
80	3″	LTC-18*								
100	4"	LTC-19*								

^{*}NPT thread - NPT locknut included with fitting.

NPT Thread Fi	ttings	STEEL					
CONDUIT SIZE (MM)	THREAD SIZE	STRAIGHT	90 Deg.	45 Deg.			
16	3/8	LTC-10	LTC-20	LTC-30			
20	1/2	LTC-11	LTC-21	LTC-31			
25	3/4	LTC-12	LTC-22	LTC-32			
32	1	LTC-13	LTC-23	LTC-33			
40	1 1/4	LTC-14	LTC-24	LTC-34			
50	11/2	LTC-15	LTC-25	LTC-35			
63	2	LTC-16	LTC-26	LTC-36			
70	21/2	LTC-17	LTC-27	LTC-37			
80	3	LTC-18	LTC-28	LTC-38			
100	4	LTC-19	LTC-29	LTC-39			

^{*}Note – NPT fittings include locknuts.

F	G Thread Fitt	tings	STEEL				
	CONDUIT SIZE (MM)	THREAD SIZE	STRAIGHT	90 Deg.	45 Deg.		
	16	PG11	LTCP-1011	LTCP-2011	LTCP-3011		
	16	PG13.5	LTCP-1013	LTCP-2013	LTCP-3013		
	20	PG16	LTCP-1116	LTCP-2116	LTCP-3116		
	25	PG21	LTCP-1221	LTCP-2221	LTCP-3221		
	32	PG29	LTCP-1329	LTCP-2329	LTCP-3329		
	40	PG36	LTCP-1336	LTCP-2336	LTCP-3336		

Characteristics

- IP66 liquidtight rating
- Rated for use in Class II (DIP) environments
- Supplied complete with grounding cone and sealing ring
- Fitting will swivel on conduit until tightened, for ease of installation.
- External threaded male fittings for threaded entries and knockouts
- Flanged grounding cones for excellent pull out strength
- High quality nickel & zinc plating for superior durability
- Insulated throat to protect conductors.

SEALSAFE FITTINGS

Male Barrier Fittings

Female Barrier Fittings

CONDUIT

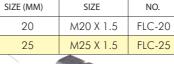
SIZE (MM)

20

25

	_	
CONDUIT SIZE (MM)	THREAD SIZE	CAT NO.
20	M20 X 1.5	FLC-20
25	M25 X 1.5	FLC-25

ZONE 1BARRIER FITTIN



THREAD

SIZE (IN)

3/4" BSP

1" BSP

ZONE 1 BARRIER FITTING

NO.

FLC-075

FLC-100

Characteristics

- For use with flexible metallic liquidtight conduits
- Can be used in Zone 1 (Explosive Gas) environments
- Type of protection Exd IIB Zone 1,DIP Zone 21
- Nickel plated brass for strength and durability
- IP65 protection for a liquidtight installation
- Multi-part fitting with the ease of installation of a union
- Co-extruded epoxy used to block flame path ground conductors
- Simply insert the conduit into the gland nut and attach to the back body
- Free turning gland nut locks the front and back bodies together
- Inspection hole in nut to ensure correct position after assembly.



Metric Female Hub Fittings

Female hub fittings are used to connect conduit to a male thread. This would normally occur when connecting to threaded rigid conduit or a male threaded fitting. The combination of a female hub fitting and a standard straight fitting enables the operator to securely join two lengths of conduit.

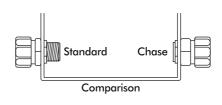
CONDUIT SIZE (MM)	CONNECTOR THREAD SIZE	STEEL CAT NO.	BRASS CAT NO.
16	M16	LTCM-609	LTCM-B609
16	M20	LTCM-60	LTCM-B60
20	M20	LTCM-61	LTCM-B61
25	M25	LTCM-62	LTCM-B62
32	M32	LTCM-63	LTCM-B63
40	M40	LTCM-64	LTCM-B64
50	M50	LTCM-65	LTCM-B65
63	M63	LTCM-66	LTCM-B66



Metric Space Saver (Chase) Fittings

Special compact version of a fitting enables space-saving assembly thanks to the male nipple (supplied with fitting) that can be screwed into the female thread of the body.

CONDUIT SIZE (MM)	STR.	90 DEG.
16	LTCM-40	LTCM-50
20	LTCM-41	LTCM-51
32	LTCM-42	LTCM-52
40	LTCM-43	LTCM-53



Metric Locknuts

THREAD NICKEL PLATED SIZE BRASS		UNPLATED BRASS	STAINLESS STEEL				
M12 X 1.5	12 X 1.5 LNB12N		LNS12				
M16 X 1.5	LNB16N	LNB16	LNS16				
M20 X 1.5	LNB20N	LNB20	LNS20				
M25 X 1.5	LNB25N	LNB25	LNS25				
M32 X 1.5	LNB32N	LNB32	LNS32				
M40 X 1.5	LNB40N	LNB40	LNS40				
M50 X 1.5	LNB50N	LNB50	LNS50				
M63 X 1.5	LNB63N	LNB63	LNS63				



Metric Sealing "O" Ring

THREAD SIZE (MM)	CAT NO.
M16	SOR-09
M20	SOR-11
M25	SOR-12
M32	SOR-13
M40	SOR-14
M50	SOR-15
M63	SOR-16

Metric Enlargers & Reducers

Provides for the installation of a fitting to an enclosure with a smaller or larger opening.
Constructed from durable nickel plated brass

Constructed from durable flicker plated brass.						
CAT NO.	OUTER THREAD (MALE)	INNER THREAD (FEMALE)				
ENLARGER						
MEM-M16/M20	M16	M20				
MEM-M20/M25	M20	M25				
MEM-M25/M32	M25	M32				
REDUCERS						
MRM-M20/M16	M20	M16				
MRM-M25/M20	M25	M20				
MRM-M32/M25	M32	M25				
MRM-M40/M32	M40	M32				
MRM-M50/M40	M50	M40				

Conduit Cutting Vice

Take the hassle out of making fast and clean conduit cuts with this robust cutting vice that can be hand held or bench mounted. Fantastic tool for use in the field or the workshop.



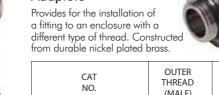


1	X /
CONDUIT SIZE (MM)	CAT NO.
16	LT-OF
20	LT-1F
25	LT-2F
32	LT-3F
40	LT-4F
50	LT-5F
63	LT-6F

FLANGED FOR EXCELLENT PULLOUT STRENGTH



Adaptors



CAT NO.	OUTER THREAD (MALE)	INNER THREAD (FEMALE)				
PG TO METRIC ADAPTORS						
APM-M16 IP09	PG9	M16				
APM-M20 IP11	PG11	M20				
APM-M20 IP13	PG13.5	M20				
APM-M20 IP16	PG16	M20				
APM-M25 IP21	PG21	M25				
APM-M32 IP21	PG21	M32				
APM-M32 IP29	PG29	M32				
APM-M40 IP29	PG29	M40				
APM-M40 IP36	PG36	M40				





CABLE SHIELD EXTRA FLEXIBLE METALLIC CONDUIT SYSTEMS

CABLE SHIELD Extra Flexible Metal Conduits are designed to provide excellent protection in tight-spot and dynamic installations.

As the name suggests, this class of conduit is used in tight-spot installations, most commonly in commercial and industrial applications. The inherent flame resistance of the unjacketed product makes it suitable for a range of uses where high mechanical strength yet extreme flexibility is required eg building fire systems. The vacuum jacketed VJC is also suitable for static, tight bend or dynamic installations such as machinery centres and robotics but adds increased protection from moisture ingress.



Type SL

- Extra Flexible
- Low Fire Hazard



CAT NO.	NOMINAL SIZE (MM)	TRADE SIZE (IN)	ID (MM)	OD (MM)	MIN. BEND RADIUS	LENGTH (M)	COLOUR
SL-07	10	1/4	7	9	23	25	Galvanised
SL-08	12	5/16	10	13	35	25	Galvanised
SL-10	16	3/8	13	16	41	25	Galvanised
SL-11	20	1/2	17	20	51	25	Galvanised
SL-12	25	3/4	21	25	63	25	Galvanised
SL-13	32	1	29	32	70	25	Galvanised
SL-14	40	11/4	38	42	92	10	Galvanised
SL-15	50	11/2	49	55	118	10	Galvanised



Type VJC

- Extra Flexible
- Galvanised steel core
- Moisture & oil resistant



CAT NO.	NOMINAL SIZE (MM)	TRADE SIZE (IN)	ID (MM)	OD (MM)	MIN. BEND RADIUS	LENGTH (M)	COLOUR
VJC-07	10	1/4	7	10	35	25	Black
VJC-08	12	5/16	10	14	43	25	Black
VJC-10	16	3/8	14	17	45	25	Black
VJC-11	20	1/2	17	21	58	25	Black
VJC-12	25	3/4	21	26	71	25	Black
VJC-13	32	1	29	34	95	25	Black
VJC-14	40	1 1/4	38	44	122	10	Black
VJC-15	50	11/2	49	57	140	10	Black

Characteristics of SL & VJC

- Extra flexible with excellent mechanical strength
- Thin, vacuum extruded jacket of VJC has minimal effect on the core flexibility
- PVC jacket of VJC is UV Resistant
- Temperature rating -20 to 250°C for SL and -20 to 70°C for VJC
- Helically wound, electrogalvanised, interlocked, steel core for superior strength
- Non-flame propagating.

FITTINGS





SL/VJC Fittings

These fittings are designed to fit both the SL & VJC series.

CONDUIT SIZE (MM)	THREAD SIZE	FIXED	SWIVEL
10	M10 X 1.0	VJCM-B07F	VJCM-B07
12	M12 X 1.5	VJCM-B08F	VJCM-B08
16	M16 X 1.5	VJCM-B09F	VJCM-B09
16	M20 X 1.5	VJCM-B10F	VJCM-B10
20	M20 X 1.5	VJCM-B11F	VJCM-B11
25	M25 X 1.5	VJCM-B12F	VJCM-B12
32	M32 X 1.5	VJCM-B13F	VJCM-B13
40	M40 X 1.5	VJCM-B14F	VJCM-B14
50	M50 X 1.5	VJCM-B15F	VJCM-B15
63	M63 X 1.5	VJCM-B16F	VJCM-B16

Characteristics

- Nickel plated brass for professional quality finish and durability
- High crush resistance with excellent pull out strength
- Excellent vibration resistance
- IP40 system using SL and IP54 using VJC.



DIP System

Did you know – you can use standard **CABLE SHIELD** liquidtight fittings (see page 7) in conjunction with VJC conduit and create a DIP rated system?

All you need to do is change the gland ring with the suitable one below and you now have a hazardous dust area system.

Nylon Gland Ring

CONDUIT SIZE (MM)	CAT NO.
16	VJ-0G
20	VJ-1G
25	VJ-2G
32	VJ-3G





Conduit Ferrules (Grounding Cones)

CONDUIT SIZE (MM)	CAT NO.
16	LT-OF
20	LT-1F
25	LT-2F
32	LT-3F
40	LT-4F
50	LT-5F
63	LT-6F



CABLE SHIELD LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT SYSTEMS

The CABLE SHIELD Flexible Non-Metallic Conduit systems offer a lightweight, liquidtight flexible conduit solution for demanding applications. The CABLE SHIELD system ensures fast, easy installations and long-lasting, high performance in a variety of environments.

These conduits are manufactured from a range of advanced technology resins and utilise the latest processing methods to produce a comprehensive selection including two styles and a wide selection of fittings. They are recommended for machine tools, motor hook-ups, food processing equipment, extensions from wireways, sensor and microswitch wiring in control consoles.

Type NM

- Heavy duty
- Liquid tight
- PVC







CAT NO.*	NOMINAL SIZE (MM)	TRADE SIZE (IN)	ID (MM)	OD (MM)	LENGTH (M)	COLOUR
NM-016	16	3/8	12.3	17.8	30	B, G, O
NM-020	20	1/2	15.8	21.1	30	B, G, O
NM-025	25	3/4	20.8	26.4	30	B, G, O
NM-032	32	1	26.4	33.08	30	B, G, O

*Catalogue Number Construction

Catalogue Number = Base Code + Colour + Length

Colours – Standard - Black (B), By special order - Grey (G), Orange (O)

Example – 20mm Black 30m roll = LTC020-B-30

Characteristics of NM

- Liquidtight, lightweight, non-metallic Type B Conduit
- \bullet Working temperature -18°C to 105°C
- IP68 system when used with CABLE SHIELD fittings
- Tested to UL and CSA requirements
- Fast installation, even in tight, cramped spaces
- Smooth inner diameter allows easy wire pulling
- Smooth outer jacket is UV and oil resistant
- Flammability rating UL1660
- Good tensile strength for excellent pullout protection.

Type SRM

- Light duty
- Liquidtight
- PVC







NOMINAL TRADE OD LENGTH CAT NO.* COLOUR SIZE SIZE (MM) (MM) SRM016 16 3/8 12.4 17.8 30 В, О SRM020 20 15.8 211 30 В, О 1/2 SRM025 25 3/, 20.8 26.4 30 В, О

*Catalogue Number Construction

Catalogue Number = Base Code + Colour + Length

Colours – Standard - Black (B), By special order - Orange (O)

Example – 20mm Black 30m roll = EFC020-B-30

Characteristics of SRM

- Liquidtight when used with CABLE SHIELD fittings
- Working temperature 18degC to 60degC
- UL recognized
- Fast installation even in tight, cramped spaces
- Smooth inner diameter allows easy wire pulling
- Good tensile strength for excellent pull out protection
- Flammability rating VW-1 UL224.



CABLE SHIELD NON-METALLIC LIQUIDTIGHT FITTINGS

CABLE SHIELD fittings are designed for use with both Type NM and Type SRM non-metallic conduits. CABLE SHIELD fittings are easy to use an d built to take it!

This engineering breakthrough meets the demand for a tough, reusable, non-metallic liquidtight fitting that provides a reliable seal with high pull-out resistance. CABLE SHIELD fittings are used to terminate NM or SRM conduit to an enclosure with knock-out opening or threaded hub. Installations can be performed quickly and easily because CABLE SHIELD liquidtight fittings can be installed without disassembly.

Metric CABLE SHIELD Fitting

- Liquidtight
- Corrosion resistant



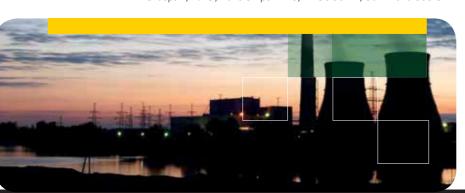


CONDUIT SIZE (MM)	THREAD SIZE	STRAIGHT	90 Deg.
16	M20 X 1.5	LT16P-ISO20	LT916P-ISO20
20	M20 X 1.5	LT20P-ISO20	LT920P-ISO20
25	M25 X 1.5	LT25P-ISO20	LT916P-ISO25
32	1" NPT	LT100P	LT9100P

STRAIGHT FITTING

Characteristics of CABLE SHIELD Fittings

- Ferrule designed to accept variations in conduit sizes and field conduit cuts
- Friction reducing ridges and teeth provide a true double seal and high pull-out resistance
- Elongated gland nut offers additional strain relief for 90° pull and easy hand grip
- Rugged low profile construction provides space savings
- Captivated nitrile (blue) sealing O-ring features pre-determined compression to provide a reliable seal every time at the enclosure
- Steel/electro plated zinc locknut firmly secures fitting to the box or enclosure
- Meets watertight requirements of NEMA Type 4 and Type 6 enclosures and conform to UL and CSA specifications
- Suitable for indoor and outdoor corrosive environments
- Resistant to detergents, cleaners, oils, sanitizers, paints, cutting fluids paints, cutting fluids and wire pulling compounds
- \bullet Body gland weather stabilised thermoplastic (black) rated -40°C to 105°C
- Suitable for hazardous locations Zone 1 Div 2; Zone 21 Div 1 & 2; Groups E,F & G; Zone 31 per NEC; Article 501-4, 502-4 and 503-3.





CABLE SHIELD NYLON CONDUIT SYSTEMS

The CABLE SHIELD Nylon conduits are made from Halogen Free Polyamide 6 (PA6) and are recommended for the insulation and mechanical protection of electrical cables.

Two grades of conduit are available to suit different types of applications:

- Standard Low Fire Hazard and Extra Low Fire Hazard.
- Typical applications include general wiring, machine tools, industrial equipment, automotive, air-conditioning equipment and railway rolling stock.











CAT NO	NOMINAL SIZE (MM)	ID (MM)	OD (MM)	MIN BEND RADIUS (MM)	LENGTH (M)
STD LOW FIRE HAZARD					
PTM-PA6V2-10B-50	10	6.5	10	13	50
PTM-PA6V2-12B-50	12	10	13	15	50
PTM-PA6V2-16B-25	16	12	15.8	22	25
PTM-PA6V2-16B-50	16	12	15.8	22	50
PTM-PA6V2-20B-25	20	16.5	21.2	35	25
PTM-PA6V2-20B-50	20	16.5	21.2	35	50
PTM-PA6V2-25B-25	25	23	28.5	45	25
PTM-PA6V2-25B-50	25	23	28.5	45	50
PTM-PA6V2-32B-25	32	29	34.5	50	25
PTM-PA6V2-32B-50	32	29	34.5	50	50
PTM-PA6V2-40B-10	40	36	42.5	80	10
PTM-PA6V2-40B-25	40	36	42.5	80	25
PTM-PA6V2-50B-10	50	48	54.5	100	10
PTM-PA6V2-50B-25	50	48	54.5	100	25
EXTRA LOW FIRE HAZARD					
PTM-PA6V0-12B-50	12	10	13	15	50
PTM-PA6V0-16B-50	16	12	15.8	22	50
PTM-PA6V0-20B-50	20	16.5	21.2	35	50
PTM-PA6V0-25B-50	25	23	28.5	45	50

29

36

48

34.5

42.5

54.5

50

80

100

50

25

25

Conduits

Characteristics

- Flexible with excellent mechanical strength
- Halogen, phosphor and cadmium free
- RoHS compliant
- UV resistant
- Resistant to oils, acid and solvents
- Temperature rating -40°C to 115°C (Intermittent to 150°C)
- Flame Retardant:
 Self extinguishing
 Std Low Fire Hazard V2 (UL94)
 Extra Low Fire Hazard V0 (UL94)
- Medium wall thickness
- IP 68
- Anti-static for underground use.



40

PTM-PA6V0-32B-50

PTM-PA6V0-40B-25

PTM-PA6V0-50B-25

CABLE SHIELD NYLON FITTINGS

A range of high performance fittings with a unique self locking mechanism, for a quick and secure installation offering watertight protection and outstanding pull-off strength.

Metric Fittings







	CONDUIT SIZE (MM)	THREAD SIZE	STRAIGHT	90°	45°
Ī	10	M10 X 1.5	PCM1-10B	PCM2-10B	
	12	M12 X 1.5	PCM1-12B	PCM2-12B	
	16	M16 X 1.5	PCM1-16B	PCM2-16B	
	20	M20 X 1.5	PCM1-20B	PCM2-20B	PCM3-20B
	25	M25 X 1.5	PCM1-25B	PCM2-25B	PCM3-25B
	32	M32 X 1.5	PCM1-32B	PCM2-32B	PCM3-32B
	40	M40 X 1.5	PCM1-40B	PCM2-40B	PCM3-40B
	50	M50 X 1.5	PCM1-50B	PCM2-50B	PCM3-50B

Characteristics

- Made of high quality Polyamide 66 (PA66)
- Halogen, phosphor and cadmium free
- Self extinguishing
- UV resistant
- Self locking, push fit installation onto conduit
- Easy to remove, no tool required
- Complete with locknut
- IP66 rating as standard, increased to IP68 with sealing washer
- Temperature rating -40°C to 115°C (Intermittent to 150°C).







PG Fittings







CONDUIT SIZE (MM)	THREAD SIZE	STRAIGHT	90°	45°
10	PG7	PCPG1-07B	PCPG2-07B	
12	PG9	PCPG1-09B	PCPG2-09B	
16	PG11	PCPG1-11B	PCPG2-11B	
20	PG16	PCPG1-16B	PCPG2-16B	PCPG3-16B
25	PG21	PCPG1-21B	PCPG2-21B	PCPG3-21B
32	PG29	PCPG1-29B	PCPG2-29B	PCPG3-29B
40	PG36	PCPG1-36B	PCPG2-36B	PCPG3-36B
50	PG48	PCPG1-48B	PCPG2-48B	PCPG3-48B

	_		
CONDUIT SIZE (MM)	COUPLING	T-DIST	Y-DIST
10	PAM1-68-10B		
12	PAM1-68-12B		PAY-M12
16	PAM1-68-16B		PAY-M16
20	PAM1-68-20B	PAT-M20	PAY-M20
25	PAM1-68-25B	PAT-M25	PAY-M25
32	PAM1-68-32B	PAT-M32	
40	PAM1-68-40B		
50	PAM1-68-50B		



ACCESSORIES

Spin Couplings

The spin coupling turns a standard fitting into a swivel fitting. The coupler accepts both 45° and 90° screwed fittings and allows easy rotation of the fitting during and after installation.



CONDUIT SIZE (MM)	METRIC THREAD SIZE	CAT. NO.	PG THREAD SIZE	CAT. NO
16	M16 X 1.5	PCMS-16	PG11	PCPGS-11
20	M20 X 1.5	PCMS-20	PG16	PCPGS-16
25	M25 X 1.5	PCMS-25	PG21	PCPGS-21
32	M32 X 1.5	PCMS-32	PG29	PCPGS-29
40	M40 X 1.5	PCMS-40	PG36	PCPGS-36
50	M50 X 1.5	PCMS-50	PG48	PCPGS-48

Characteristics

- Made from high quality nickel plated brass
- · Metric and PG threads
- IP66 as standard, IP68 with sealing washer.



Mounting Brackets

A range of mounting brackets for quickly and easily attaching **CABLE SHIELD** conduit to equipment and structures.

CONDUIT SIZE (MM)	CAT. NO.	MOUNTING HOLE (MM)
10	PTSSM-10B	4.2
12	PTSSM-12B	4.2
16	PTSSM-16B	4.2
20	PTSSM-20B	4.2
25	PTSSM-25B	4.2
32	PTSSM-32B	4.2
40	PTSSM-40B	4.2
50	PTSSM-50B	4.2

Characteristics

- Made from Polyamide 66
- Feature an inbuilt snap cover, easily releasable and reusable
- Screw mounted for secure installation
- Temperature rating -40°C to 115°C
- Halogen free
- UV resistant
- Flame retardant self extinguishing.





P Clamps

P Clamps are used to mount conduit on equipment or structures.



CONDUIT SIZE (MM)	CAT. NO.	FIXING SCREW
10	PTCM-10	M4
12	PTCM-12	M4
16	PTCM-16	M4
20	PTCM-20	M4
25	PTCM-25	M5
32	PTCM-32	M5
40	PTCM-40	M6
50	PTCM-50	M6

Characteristics

- Made from plated steel with UV resistant PVC cover
- Screw fixed for a secure installation.



Locknuts

THREAD SIZE	CAT. NO.	PG THREAD SIZE	CAT. NO.
M10 X 1.5	PAM-LN-10B	PG7	PAPG-LN-07B
M12 X 1.5	PAM-LN-12B	PG9	PAPG-LN-09B
M16 X 1.5	PAM-LN-16B	PG11	PAPG-LN-11B
M20 X 1.5	PAM-LN-20B	PG16	PAPG-LN-16B
M25 X 1.5	PAM-LN-25B	PG21	PAPG-LN-21B
M32 X 1.5	PAM-LN-32B	PG29	PAPG-LN-29B
M40 X 1.5	PAM-LN-40B	PG36	PAPG-LN-36B
M50 X 1.5	PAM-LN-50B	PG48	PAPG-LNL-48B

Characteristics

- Made from Polyamide 66
- Temperature rating -40°C to 100°C
- Metric or PG Threads.



End Sleeves

End sleeves are used to transition from conduit to a cable. The sleeve seals and protects the cable passing through the end of the tubing.

CONDUIT SIZE (MM)	CAT. NO.
10	TAEC-M10
12	TAEC-M12
16	TAEC-M16
20	TAEC-M20
25	TAEC-M25
32	TAEC-M32
40	TAEC-M40
50	TAEC-M50



Characteristics

- Made from Thermoplastic Elastomer (TPE)
- Temperature rating -40°C to 100°C (Intermittent to 150°C).

Flanges

The CABLE SHIELD flange can be combined with a straight or elbow connector to create a complete flange connector for mounting on enclosures or equipment.

METRIC THREAD SIZE	CAT. NO.
M25 X 1.5	PCFM-M25
M32 X 1.5	PCFM-M32
M40 X 1.5	PCFM-M40
M50 X 1.5	PCFM-M50



Characteristics

- Made of high quality Polyamide 66 (PA66)
- Halogen, phosphor and cadmium free
- Self extinguishingUV Resistant
- IP67 rating
- Temperature rating -40°C to 115°C (Intermittent to 150°C).

Sealing Washers

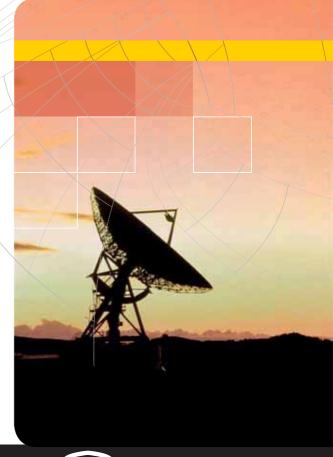
Sealing washers are used on the fitting thread to seal between the fitting and the enclosure and provide an IP68 seal.



METRIC THREAD SIZE	CAT. NO.	PG THREAD SIZE	CAT. NO.
M10 X 1.0	SRM-10	PG7	SRPG-07
M12 X 1.5	SRM-12	PG9	SRPG-09
M16 X 1.5	SRM-16	PG11	SRPG-11
M20 X 1.5	SRM-20	PG16	SRPG-16
M25 X 1.5	SRM-25	PG21	SRPG-21
M32 X 1.5	SRM-32	PG29	SRPG-29
M40 X 1.5	SRM-40	PG36	SRPG-36
M50 X 1.5	SRM-50	PG48	SRPG-48

Characteristics

- Made from Tesnit high performance fibre
- Temperature Rating -40°C to 200°C
- IP68
- Metric or PG Threads.





SEALSAFE HAZARDOUS AREA CONDUIT SYSTEM

The Sealsafe conduit system is rated for use in Zone 1 hazardous (explosive gas) and Zone 21 (explosive dust) environments.

Not only does the Sealsafe system provide superior protection but is exceptionally fast and simple to install in the field, eliminating the need for pre-assembly and providing ultimate flexibility during installation. No mess, no fuss, Sealsafe is the easiest way to produce a safe connection!

Type FC

Fibre braid reinforced PVC



AS2053.4 COMPLIANT

CAT NO.*	NOMINAL SIZE (MM)	ID (MM)	LENGTH (MM)	COLOUR
FC-16	20	16	30	Orange
FC-19	25	19	30	Orange

SEALSAFE Type FC 20mm

NEW & IMPROVED FORMULA

- greater resistance to bio-fuels

Characteristics of FC Conduit

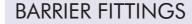
- Suitable for use in Zone 1 and Zone 21 flameproof installations when used with Sealsafe fittings
- \bullet Operating temperature of -5 to 60°C
- Tough, resilient and flexible
- Anti static PVC with 30% nitrile blend for improved chemical resistance
- Flame retardant jacket compliant with AS2053 flammability test
- Tested to AS/NZS 2053.4:1995.





All Sealsafe fittings can be easily attached to the conduit in the field, eliminating the need for pre-assembled fixed length conduits. Sealsafe fittings can be used with flexible metallic, liquidtight conduit (as detailed on page 8) or with the FC braided conduit as detailed below.

Using a simple co-extruded epoxy putty packed into a conventional style fitting makes installation at any angle a possibility.









CONDUIT SIZE (MM)	CAT NO.	THREAD SIZE	BORE
20	FHC-2002	M20 X 1.5	13.5
25	FHC-2502	M25 X 1.5	18.0

Male Barrier

CONDUIT SIZE (MM)	CAT NO.	THREAD SIZE	BORE
20	FHC-2003	M20 X 1.5	13.5
25	FHC-2503	M25 X 1.5	18.0



CONDUIT SIZE (MM)	CAT NO.	ENTRY SIZE	BORE
20	FHC-075	3/4" BSP	13.5
25	FHC-100	1" BSP	18.0

Characteristics

- Can be used in Zone 21 (DIP) environments
- Nickel plated brass for strength and durability
- IP65 protection for a liquidtight installation
- Swivelling action to facilitate installation
- Inspection hole in nut to ensure correct position after assembly.

Characteristics

- Can be used in Zone 1 Explosive Gas) environments
- \bullet Type of protection Exd IIB Zone I, DIP Zone 21
- Nickel plated brass for strength and durability
- IP65 protection for a liquidtight installation
- Multi-part fitting with the ease of installation of a union
- Co-extruded epoxy used to block flame path around conductors
- Simply insert the conduit into the gland nut and attach to the back body
- Free turning gland nut locks the front and back bodies together
 Inspection hole in nut to ensure correct position after assembly.

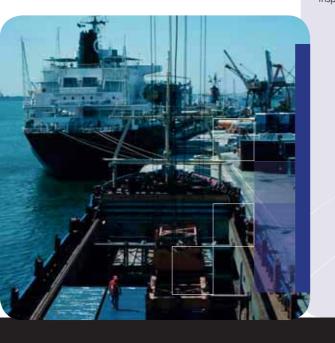


Universal Barrier

CONDUIT SIZE (MM)	CAT NO.	MALE ENTRY SIZE	FEMALE ENTRY SIZE	BORE
20	FB-20	M20 X 1.5	M20 X 1.5	13.5
25	FB-25	M25 X 1.5	M25 X 1.5	18.0

Characteristics

- Can be used in Class I (Explosive Gas) environments
- Type of protection Exd IIB Zone I, DIP Zone 21
- Nickel plated brass for strength and durability
- IP65 protection for a liquidtight installation
- Co-extruded epoxy used to block flame path around conductors
- Ease installed due to swivel action union style.





TECHNICAL INFORMATION & GUIDANCE

CABLE SHIELD conduits are tested to rigorous Australian and International standards to ensure performance and safety.

STANDARDS & DIRECTIVES

Standards Australia (AS) – Standards Australia is Australia's peak Standards body. It co-ordinates standardisation activities, develops internationally aligned Australian Standards and facilitates the accreditation of other Standards Development Organisations.

It should be well noted that conduit can be tested to the AS/NZS standard however there is no "certification" process. In all cases it is the performance of the entire system, conduit and fittings, that should be considered and in fact the fittings are more important in assessing the safety, integrity and performance of a system.

Underwriters Laboratory (UL) – Based in the United States, Underwriters Laboratories[®] is an independent product safety certification organization that has been testing products and writing safety standards for more than a century. There are two UL marks that are commonly found related to product certification:



UL Listing Mark— this indicates that a representative samples of products has been found to meet UL's safety requirements and is therefore considered free of reasonably foreseeable risk of fire, electric shock and related hazards.

UL Recognised Component Mark – this indicates that the product has been certified as a part of a finished product. Just because a finished product contains UL recognised parts however does not mean the final product is UL certified.

Canadian Standards Association (CSA) – has several arms one of which is involved in developing standards designed to enhance public health and safety and another one involved in product testing and certification to Canadian and international standards.



CSA Mark – a product bearing this mark is certified primarily to applicable Canadian standards. Customers can be confident that the product has been evaluated through a formal process involving examination, testing and follow-up inspection and that it complies with applicable standards for safety and performance.

National Electrical Manufacturers Association (NEMA) – in addition to roles in policy and industry data, NEMA provides a forum for the development of technical standards in the interest of industry and users.

Restriction of Hazardous Substances (RoHS) Directive – came into force in EU member states in 2006 and restricts the use of six hazardous substances in the manufacture of electrical and electronic equipment. The directive stipulates agreed levels of lead, cadmium, mercury, hexavalent chromium and the flame retardants PBB and PBDE. It is closely related to the Waste Electrical and Electronic Directive (WEEE). Other jurisdictions including China, USA and Australia have since been evaluating and implementing similar legislation.



CONDUIT IN HAZARDOUS AREAS

Australia is still in a transition stage between the old series of hazardous area standards and the new ones that are harmonised with the IEC standards. Currently there are over 10 series including more than 50 individual standards that deal with classification, equipment design and manufacture, testing, inspection & maintenance, selection, installation and safe work practises in relation to electrical equipment in hazardous areas.

All electrical equipment installed in hazardous areas must be explosion protected. The specifier must consider not only the Zone Classification but also the Temperature Classification, the Gas Group (where appropriate) and the IP rating for outdoor use and/or corrosion protection.

ANZEx Scheme - Certification of Equipment for Explosive Atmospheres (Formerly AUSEx)

In Australia and New Zealand the installation standards for electrical equipment to be installed in a hazardous area requires "Proof of Compliance." Either a Certificate of Conformity within the ANZEx scheme or an IECEx Certificate of Conformity is deemed to comply with this requirement. IECEx is the first international certification scheme and certificates issued under this scheme will be recognised in all member countries including Australia, UK, France, Germany, Canada and the USA.

IP RATING

The IP rating indicates the degree of Ingress Protection provided by enclosures for electrical equipment and is defined in Australian Standard AS60529:2004 – Degrees of protection provided by enclosures (IP Code).

The first numeral refers to the protection against the ingress of solid objects and the second refers to the protection against the ingress of water.

	PROTECTION AGAINST SOLID OBJECTS				
0	No protection				
1	Protection against objects >50mm² and against accidental access to hazardous parts by the back of the hand				
2	Protection against objects larger than 12.5mm ² and against access of fingers to hazardous parts				
3	Protection against the access of tools, wires or other solid objects other solid objects larger than 2.5mm²				
4	Protected against the access of solid foreign bodies larger than 1 mm ²				
5	Protected against the entry of dust in sufficient quantity to interfere with the operation of equipment				
6	Completely protected from the entry of dust				

	PROTECTION AGAINST WATER				
0	No protection				
1	Protected against drops of water falling vertically				
2	Protection against drops of water falling at up to 15°deg from vertical				
3	Protection against drops of water sprayed at angles at up to 60°deg from vertical				
4	Protected against spraying or splashing water from all practicable angles				
5	Protected from low pressure jets of water from all practicable angles				
6	Protected against strong jets of water from all practicable angles, equivalent to the force of heavy seas				
7	Protected against temporary immersion at a specified depth for a specified time				
8	Protected against continuous immersion at a specified depth and pressure				



CHEMICAL RESISTANCE

The information in this table is provided as a guide only.

Testing should be done for individual situations with the relevant conduit system.

Results shown are for chemicals at room temperature.

R = Resistant, LR = Limited Resistance, NR = Non-resistant, ND = No data

CHEMICAL	PVC	TPR	PA6	GAL STEEL
Acetic Acid 40%	LR	LR	NR	NR
Acetic Acid 10%	R	R	LR	NR
Acetone	NR	R	R	R
Aluminium Chloride	R	R	LR	NR
Ammonium Chloride	R	R	R	NR
Benzaldehyde	NR	R	LR	R
Benzene	NR	R	R	R
Bromine	NR	NR	NR	ND
Butyl Alcohol	R	R	R	ND
Calcium Chloride 20%	R	R	NR	LR
Carbon Tetrachloride	NR	NR	R	R
Chlorine (water solution) < 5%	LR	LR	NR	NR
Chloroform	NR	NR	NR	R
Citric Acid	R	R	R	R
Copper Sulphate	R	R	LR	R
Cresol	NR	NR	NR	R
Dimethyl Formamide	NR	NR	R	ND
Diesel Oils	LR	LR	R	R
Diethylene Glycol	LR	LR	R	R
Ethanol	LR	R	R	R
Ether	NR	NR	R	R
Ethyl Acetate	NR	R	R	ND
Ethylene Glycol	R	R	R	NR
Ferrous Chloride	R	R	LR	NR
Formic Acid 10%	R	R	NR	ND
Freon 32	LR	LR	R	NR
Hydrochloric Acid 40%	LR	R	NR	NR
Hydrochloric Acid 10%	R	R	NR	NR
Hydrogen Peroxide 10%	R	R	LR	NR
Kerosene	LR	NR	R	R
Lactic Acid	R	R	LR	NR
Lubricating Oils, Greases & Soaps	R	R	R	R
Magnesium Chloride	R	R	R	NR

CHEMICAL PVC TPR PA6 GAL STEEL Magnesium Sulphate R R R R ND Methanol NR R LR R Methyl Acetate NR NR NR R ND Methyl Bromide NR NR NR R <th></th> <th>I</th> <th></th> <th></th> <th></th>		I			
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Methyl Ethyl Ketone NR R R R Mineral Oil R NR NR R Nitric Acid 10% R R NR NR Nitric Acid 35% LR NR NR NR Nitric Acid 70% NR NR NR NR Oxalic Acid 10% R R LR NR NR Ozone LR LR NR NR NR Petroleum R R R R R R Phenol LR R NR NR NR ND ND Phosphoric Acid 10% R R NR ND ND Phosphoric Acid 85% R R R NR ND ND <td>Methyl Acetate</td> <td>NR</td> <td>NR</td> <td>R</td> <td>ND</td>	Methyl Acetate	NR	NR	R	ND
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Nitric Acid 10% R R NR NR Nitric Acid 35% LR NR NR NR Nitric Acid 70% NR NR NR NR NR NR NR NR NR Ozone LR LR NR NR Petroleum R R R R R Phenol LR R NR NR R Phosphoric Acid 10% R R NR ND	Methyl Ethyl Ketone	NR	R	R	R
Nitric Acid 35% LR NR NR NR Nitric Acid 70% NR NR NR NR Oxalic Acid 10% R R LR LR NR Ozone LR LR NR NR NR Petroleum R R R R R R Phenol LR R NR NR R R R R R R R R R R R R ND ND Phosphoric Acid 85% R R R NR ND ND Phosphoric Acid 85% R R R NR ND ND Potassium Hydroxide R R R R NR	Mineral Oil	R	NR	R	R
Nitric Acid 70% NR NR NR NR NR Oxalic Acid 10% R R R LR NR Ozone LR LR NR NR Petroleum R R R R R Phenol LR R NR NR Phosphoric Acid 10% R R R NR Phosphoric Acid 10% R R R NR Phosphoric Acid 85% R R NR Potassium Hydroxide R R R LR Silver Nitrate R R R NR Sodium Chloride R R R NR Sodium Hydroxide 10% R R R NR Sulphur Dioxide <5% NR R NR Sulphur Dioxide (Liquid) NR R NR Sulphur Dioxide (Liquid) NR R R NR Sulphur Acid 50% R R R NR Toluene NR NR Trichlorethane NR NR Trichlorethylene NR NR Vegetable Oils & juices R R R R NR NR NR NR NR R R R NR N	Nitric Acid 10%	R	R	NR	NR
Oxalic Acid 10% R R R LR NR Ozone LR LR NR NR Petroleum R R R R R Phenol LR R NR R Phosphoric Acid 10% R R R NR ND Phosphoric Acid 85% R R NR ND Potassium Hydroxide R R R LR ND Seawater R R R NR Silver Nitrate R R R R NR Sodium Chloride R R R R NR Sodium Hydroxide 10% R R R NR Sulphur Dioxide <5% NR R NR Sulphur Dioxide (Liquid) NR R NR Sulphuric Acid 50% R R R NR Toluene NR NR R R Transformer Oil R R R R R Trichlorethylene NR NR R R VR Vegetable Oils & juices R R R R	Nitric Acid 35%	LR	NR	NR	NR
Ozone LR LR NR NR Petroleum R R R R R Phenol LR R NR R Phosphoric Acid 10% R R R NR Phosphoric Acid 85% R R NR Potassium Hydroxide R R LR Silver Nitrate R R R NR Sodium Chloride R R R NR Sodium Hydroxide 10% R R R NR Sodium Hydroxide 10% R R R NR Sulphur Dioxide <5% NR R NR Sulphur Dioxide (Liquid) NR R NR Sulphuric Acid 50% R R R NR Toluene NR NR R R Trichlorethane NR NR R NR Turpentine LR NR R R Vegetable Oils & juices R R R R Water R R R R R R R R R R R R R R NR NR	Nitric Acid 70%	NR	NR	NR	NR
Petroleum R R R R R Phenol LR R NR R Phosphoric Acid 10% R R R NR ND Phosphoric Acid 85% R R NR ND Potassium Hydroxide R R R LR ND Seawater R R R R NR Silver Nitrate R R R R NR Sodium Chloride R R R R NR Sodium Hydroxide 10% R R R NR Sulphur Dioxide <5% NR R NR Sulphur Dioxide (Liquid) NR R NR Sulphur Dioxide (Liquid) NR R R NR Sulphuric Acid 50% R R NR NR Toluene NR NR R R Trichlorethane NR NR R NR Trichlorethylene NR NR R R Vegetable Oils & juices R R R R	Oxalic Acid 10%	R	R	LR	NR
Phenol LR R NR R Phosphoric Acid 10% R R R NR ND Phosphoric Acid 85% R R R NR ND Potassium Hydroxide R R R LR ND Seawater R R R R NR Silver Nitrate R R R R NR Sodium Chloride R R R R NR Sodium Hydroxide 10% R R R R NR Sulphur Dioxide <5% NR R NR NR Sulphur Dioxide (Liquid) NR R NR NR Sulphuric Acid 50% R R R NR Toluene NR NR NR NR Transformer Oil R R R R R Trichlorethane NR NR R NR Turpentine LR NR R R VNR Water R R R	Ozone	LR	LR	NR	NR
Phosphoric Acid 10% R R NR ND Phosphoric Acid 85% R R NR NR ND Potassium Hydroxide R R R LR ND Seawater R R R R NR Silver Nitrate R R R R NR Sodium Chloride R R R R NR Sodium Hydroxide 10% R R R R NR Sulphur Dioxide <5% NR R NR NR Sulphur Dioxide (Liquid) NR R NR NR Sulphuric Acid 50% R R R NR NR Sulphuric Acid 50% R R R NR NR Toluene NR NR NR R R Transformer Oil R R R R R Trichlorethane NR NR R NR Turpentine LR NR R R Vegetable Oils & juices R R R R	Petroleum	R	R	R	R
Phosphoric Acid 85% R R R NR ND Potassium Hydroxide R R R LR ND Seawater R R R R NR Silver Nitrate R R R R NR Sodium Chloride R R R R NR Sodium Hydroxide 10% R R R NR Sulphur Dioxide <5% NR R NR Sulphur Dioxide (Liquid) NR R NR Sulphur Dioxide (Liquid) NR R NR Sulphuric Acid 50% R R NR Toluene NR NR NR Trichlorethane NR NR R R Trichlorethylene NR NR R NR Vegetable Oils & juices R R R R	Phenol	LR	R	NR	R
Potassium Hydroxide R R R LR ND Seawater R R R R NR Silver Nitrate R R R R NR Sodium Chloride R R R R NR Sodium Hydroxide 10% R R R NR Sulphur Dioxide <5% NR R NR Sulphur Dioxide (Liquid) NR R NR Sulphuric Acid 50% R R NR NR Sulphuric Acid 98% NR NR NR Toluene NR NR NR R Transformer Oil R R R R Trichlorethane NR NR R NR Turpentine LR NR R Vegetable Oils & juices R R R	Phosphoric Acid 10%	R	R	NR	ND
Seawater R R R R NR Silver Nitrate R R R R NR NR Sodium Chloride R R R R NR NR Sodium Hydroxide 10% R R R NR NR Sulphur Dioxide <5%	Phosphoric Acid 85%	R	R	NR	ND
Silver Nitrate R R R NR Sodium Chloride R R R R NR Sodium Hydroxide 10% R R R NR Sulphur Dioxide <5% NR R NR Sulphur Dioxide (Liquid) NR R NR Sulphuric Acid 50% R R NR Sulphuric Acid 98% NR NR Toluene NR NR NR Transformer Oil R R R R Trichlorethane NR NR Trichlorethylene NR NR Turpentine LR NR R Vegetable Oils & juices R R R	Potassium Hydroxide	R	R	LR	ND
Sodium Chloride R R R R R NR	Seawater	R	R	R	NR
Sodium Hydroxide 10% R R R NR Sulphur Dioxide <5% NR R NR NR Sulphur Dioxide (Liquid) NR R NR NR Sulphur Dioxide (Liquid) NR R NR NR Sulphuric Acid 50% R R NR NR Sulphuric Acid 98% NR NR NR NR Toluene NR NR R R Transformer Oil R R R R R Trichlorethane NR NR R NR Trichlorethylene NR NR R NR Turpentine LR NR R Vegetable Oils & juices R R R R	Silver Nitrate	R	R	R	NR
Sulphur Dioxide <5% NR R NR NR Sulphur Dioxide (Liquid) NR R NR NR Sulphuric Acid 50% R R NR NR NR Sulphuric Acid 98% NR NR NR NR Toluene NR NR R R Transformer Oil R R R R Trichlorethane NR NR R NR Trichlorethylene NR NR R R Turpentine LR NR R Vegetable Oils & juices R R R NR NR	Sodium Chloride	R	R	R	NR
Sulphur Dioxide (Liquid) NR R NR NR Sulphuric Acid 50% R R R NR NR Sulphuric Acid 98% NR NR NR NR Toluene NR NR R R Transformer Oil R R R R Trichlorethane NR NR R NR Trichlorethylene NR NR R NR Turpentine LR NR R R Vegetable Oils & juices R R R R Water R R R NR	Sodium Hydroxide 10%	R	R	R	NR
Sulphuric Acid 50% R R NR NR NR Sulphuric Acid 98% NR NR NR NR Toluene NR NR R R Transformer Oil R R R R Trichlorethane NR NR R NR Trichlorethylene NR NR R NR Turpentine LR NR R Vegetable Oils & juices R R R Water R NR	Sulphur Dioxide <5%	NR	R	NR	NR
Sulphuric Acid 98% NR NR NR NR Toluene NR NR R R Transformer Oil R R R R Trichlorethane NR NR R NR Trichlorethylene NR NR R NR Turpentine LR NR R R Vegetable Oils & juices R R R R Water R R R R NR	Sulphur Dioxide (Liquid)	NR	R	NR	NR
Toluene NR NR R R Transformer Oil R R R R Trichlorethane NR NR R NR Trichlorethylene NR NR R NR Turpentine LR NR R R Vegetable Oils & juices R R R R Water R R R NR	Sulphuric Acid 50%	R	R	NR	NR
Transformer Oil R R R R R Trichlorethane NR NR R NR Trichlorethylene NR NR R NR Turpentine LR NR R R Vegetable Oils & juices R R R Water R NR	Sulphuric Acid 98%	NR	NR	NR	NR
Trichlorethane NR NR R NR Trichlorethylene NR NR R NR Turpentine LR NR R Vegetable Oils & juices R R R Water R NR	Toluene	NR	NR	R	R
Trichlorethylene NR NR R NR Turpentine LR NR R R Vegetable Oils & juices R R R Water R NR	Transformer Oil	R	R	R	R
Turpentine LR NR R R Vegetable Oils & juices R R R R Water R NR	Trichlorethane	NR	NR	R	NR
Vegetable Oils & juices R R R R Water R R R NR	Trichlorethylene	NR	NR	R	NR
Water R R NR	Turpentine	LR	NR	R	R
	Vegetable Oils & juices	R	R	R	R
Zinc Chloride 10% R R NR NR	Water	R	R	R	NR
	Zinc Chloride 10%	R	R	NR	NR





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