

Selecting the right float switch

There are different methods for selecting the right float switch for a particular application. This note suggests one such method.

1. Physical arrangement and choice of float switch style.

The choice of styles that may be suitable for an application will depend on the physical arrangement of the tank, the available mounting positions and whether access is available to the inside of the tank.

Consideration should also be given to whether there is the possibility of a build up of deposits, from the liquid, on the float body. These deposits can, over a period of time, accumulate to such an extent that the float switch can fail to operate. There are particular series designed to limit the effects of this build up.

There are also choices, for some series, of mounting thread.

2. Material selection

The selection of most suitable materials, for float switch and gasket, can be made by reference to the **Chemical Compatibility chart** (www.crydom.co.uk). This gives a good indication of the suitability, of the float switch materials, in a wide range of liquids. It may be necessary, for some liquids, to obtain a sample float switch to test the compatibility.

3. Electrical

It is important to fully understand the nature of the load, to be switched by the float switch, and to make sure that the switch is capable of handling this load. The electrical ratings, shown in Crydom float switch specifications, are all for purely resistive loads. Any loads that have either inductive or capacitive components should have the appropriate contact protection measure applied, by reference to the **Circuit Hazards and Contact Protection** (www.crydom.co.uk) application note.

4. Cables

Crydom has standard, UL approved, cable types for the various float switches, which are shown on the **product data sheets**. Other cables, or connectors, can be supplied subject to special quotation and order.

5. Options

Crydom has, over the years, produced many variants of its float switches to match particular customer requirements. Please contact Technical Support for advice about any particular special requirement

- Compact design
- Reliable reed switch contacts
- Available in Nylon, Acetal, Polypropylene or PPS
- WRAS approval
- Many variants are UL recognised components File Number E171218



Compact Internal Mount RSF40

This RSF40 series is designed as a compact internally mounted device, with a wide range of options, making this ideal for size sensitive applications. Mounting of this series requires access to the inside of the tank.

Typical applications include vending machines, commercial washing machines and evaporator units.

They are manufactured in a variety of materials, with a choice of gasket materials, to suit most commonly used liquids.

The switch action may be reversed by rotating the device through 180°.

Some of these types are also available with 1/2" BSF thread.

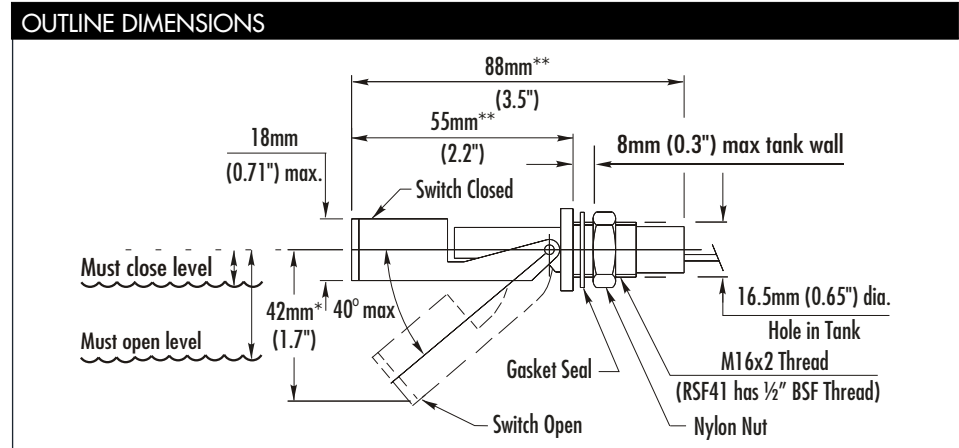
TECHNICAL SPECIFICATIONS	RSF41	RSF43	RSF44	RSF46
Material	Acetal	Nylon	Polypropylene	Polyphenylene Sulphide (PPS)
Colour	Red	Black	Opaque	Grey
Temp. Range °C	-10 / +60	-20 / +75	-20 / +100	-10 / +120*
°F	+14 / +140	-4 / +167	-4 / +212	+14 / +248*
Min. Fluid S.G.	0.875	0.85	0.85	0.85
Must Close Level (S.G.=1)	5mm	7mm	8mm	9mm
Must Open Level (S.G.=1)	18mm	20mm	20mm	24mm

*Maximum temperature requires ETFE cable to be specified.

ELECTRICAL SPECIFICATIONS	
Contact Form	N/O (N/C)
VA Rating Max.	25
Switching Voltage AC Max.	240
Switching Voltage DC Max.	120
Switching Current Max. A	0.6

All ratings are for resistive load only

Crydom no.	Material	Leadouts	Gaskets
RSF43Y100RF	Nylon	1.0m PVC 16/0.2 UL approved	Nitrile
RSF44Y100RF	Polypropylene	1.0m PVC 16/0.2 UL approved	Nitrile
RSF46Y050TG	PPS	50cms ETFE 19/0.2	Viton



* 49mm RSF46

** Add 10mm to dims, RSF46

RSF40 Series



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Compact External Mount with Compression Seal RSF70

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The RSF70 series is designed for external mounting, achieved with a high grade compression seal. This avoids the need for access to the inside of the chamber and is ideally suited to applications where space or fitting time are prime considerations.

They are manufactured in a variety of materials, with a choice of gasket materials, to suit most commonly used liquids.

The switch action may be reversed by rotating the device through 180°.

Typical applications include auxiliary tanks on vehicles and commercial dishwashers.

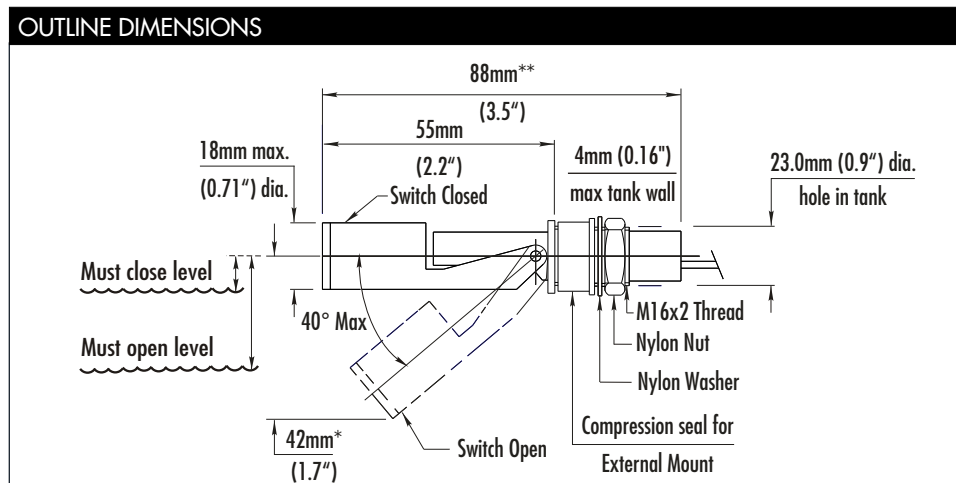
TECHNICAL SPECIFICATIONS	RSF73	RSF74	RSF76
Material	Nylon	Polypropylene	Polyphenylene Sulphide (PPS)
Colour	Black	Opaque	Grey
Temp. Range °C	-20 / +75	-20 / +100	-10 / +120*
°F	-4 / +167	-4 / +212	+14 / +248*
Min. Fluid S.G.	0.85	0.85	0.85
Must Close Level (S.G.=1)	7mm	8mm	9mm
Must Open Level (S.G.=1)	20mm	20mm	24mm

*Maximum temperature requires ETFE cable to be specified.

ELECTRICAL SPECIFICATIONS	
Contact Form	N/O (N/C)
VA Rating Max.	25
Switching Voltage AC Max.	240
Switching Voltage DC Max.	120
Switching Current Max. A	0.6

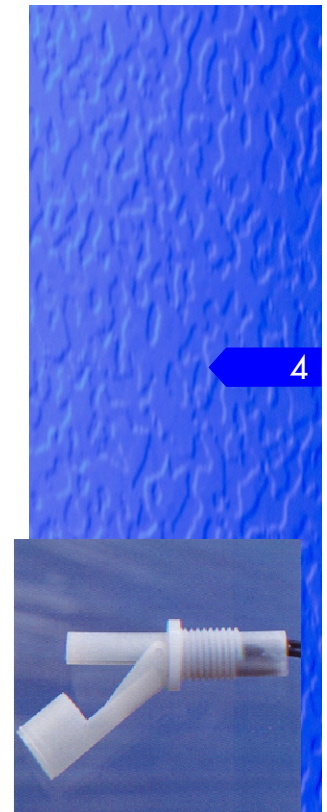
All ratings are for resistive load only

Crydom no.	Material	Leadouts	Gaskets
RSF73Y100RN	Nylon	1.0m PVC 16/0.2 UL approved	Nitrile
RSF74Y100RN	Polypropylene	1.0m PVC 16/0.2 UL approved	Nitrile
RSF76Y100RN	PPS	1.0m PVC 16/0.2 UL approved	Nitrile
RSF76Y050TV	PPS	50cms ETFE 19/0.2	Viton



* 49mm RSF76

** Add 10mm to dims. RSF76

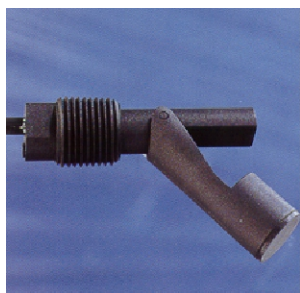


- External Mount
- Fast Fitting
- Compact size
- WRAS Approval
- Many variants are UL recognised components File Number E171218

RSF70 Series



- External mount
- Quick to install
- Available in Nylon, Polypropylene or PPS
- Ideal for tanks with inaccessible tops or bottoms
- WRAS approval
- Many variants are UL recognised components
File Number E171218



Compact External Mount with 1/2" Taper Thread RSF80

The RSF80 series is designed for external mounting, achieved with a 1/2" NPT taper thread. This avoids the need for access to the inside of the chamber and is ideally suited to applications where space or fitting time are prime considerations.

They are manufactured in a variety of materials to suit most commonly used liquids.

The switch action may be reversed by rotating the device through 180°.

Typical applications include Gear Box Sump and Diesel Tank Levels.

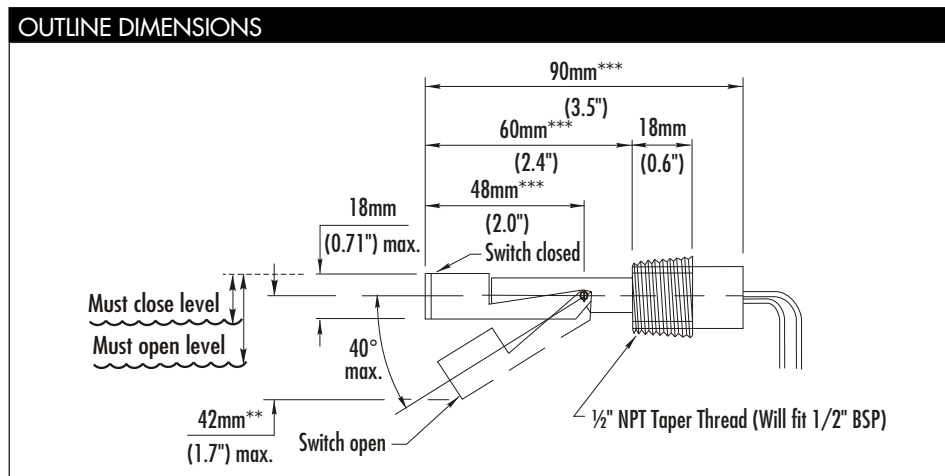
TECHNICAL SPECIFICATIONS	RSF83	RSF84	RSF86
Material	Nylon	Polypropylene	PPS
Colour	Black	Opaque	Grey
Temp. Range °C	-20 / +75	-20 / +100	-10 / +120*
°F	-4 / +167	-4 / +212	+14 / +248*
Min. Fluid S.G. 0.85	0.85	0.85	
Must close (S.G.=1)	7mm	8mm	9mm
Must open (S.G.=1)	20mm	20mm	24mm

* Maximum temperature requires ETFE cable to be specified.

ELECTRICAL SPECIFICATIONS	
Contact Form	N/O (N/C)
VA Rating Max.	25
Switching Voltage AC Max.	240
Switching Voltage DC Max.	120
Switching Current Max. A	0.6

All ratings are for resistive load only

Crydom no.	Material	Leadouts
RSF83Y100R	Nylon	1.0m PVC 16/0.2 UL approved
RSF84Y100R	Polypropylene	1.0m PVC 16/0.2 UL approved
RSF86Y100R	PPS	1.0m PVC 16/0.2 UL approved
RSF86Y050T	PPS	50cms ETFE 19/0.2



** 49mm RSF86

*** Add 10mm to dims, RSF86

RSF80 Series



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High Level Switch for Boiling Water RSF10

crydom

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The RSF10 series drop float has been designed to eliminate problems associated with limescale build up around the pivot point of a conventional float switch. It is also suitable in more viscous liquids, that might affect the pivot action of a standard float type.

The drop float actuator allows the switch housing and float pivots to be located above the surface of the liquid and provides normally closed switch contact, opening as the liquid level rises. They are manufactured in a variety of materials, with a choice of gasket materials, to suit most commonly used liquids.

Typical applications include wall kettles and hot vending machines.

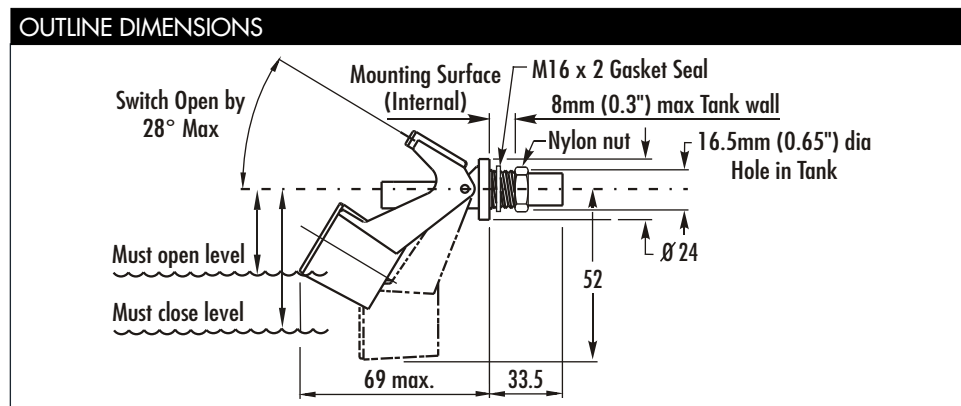
TECHNICAL SPECIFICATIONS	RSF14	RSF16
Material	Polypropylene	Polyphenylene Sulphide (PPS)
Colour	Opaque	Grey
Temp. Range °C	-20/+100	-10/+120*
°F	-4/+212	+14/+248*
Min. Fluid S.G.	0.75	0.75
Must Close Level (S.G.=1)	39mm	33mm
Must Open Level (S.G.=1)	24mm	22mm

*Maximum temperature requires ETFE cable to be specified.

ELECTRICAL SPECIFICATIONS	
Contact Form	N/C
VA Rating Max	25
Switching Voltage AC Max	240
Switching Voltage DC Max	120
Switching Current Max. A	0.6

All ratings are for resistive load only

Crydom no.	Material	Leadouts	Gaskets
RSF14Y100RF	Polypropylene	1.0m PVC 16/0.2 UL approved	Nitrile
RSF16Y100RF	PPS	1.0m PVC 16/0.2 UL approved	Nitrile
RSF16Y050TG	PPS	50cms ETFE 19/0.2	Viton



- Pivot Clear of Liquid
- Compact design
- Available in Polypropylene or PPS
- Many variants are UL recognised components
File No. E171218
- WRAS approval

RSF10 Drop Float



- Low level switch position
- Hot/boiling water
- High buoyancy float
- WRAS approved for use in hot and cold water
- Many variants are UL recognised components.
File number E171218



Low Level Switch for Boiling Water RSF20

The RSF20 is designed to eliminate the problems associated with limescale build up around the pivot point on a conventional float switch.

This particular series is primarily for applications where a low level condition has to be monitored, in a system where the liquid is usually maintained at a high level, or where a wider differential is required between the opening and closing levels.

The extended drop float actuator allows the switch housing and float pivots to be located above the surface of the liquid, while the excess buoyancy of the float chamber itself ensures that it remains buoyant, even when scale builds up on the float chamber. Typical applications include wall kettles and hot vending machines.

The switch action is closed when the level is low (float down), and opens as the liquid level rises.

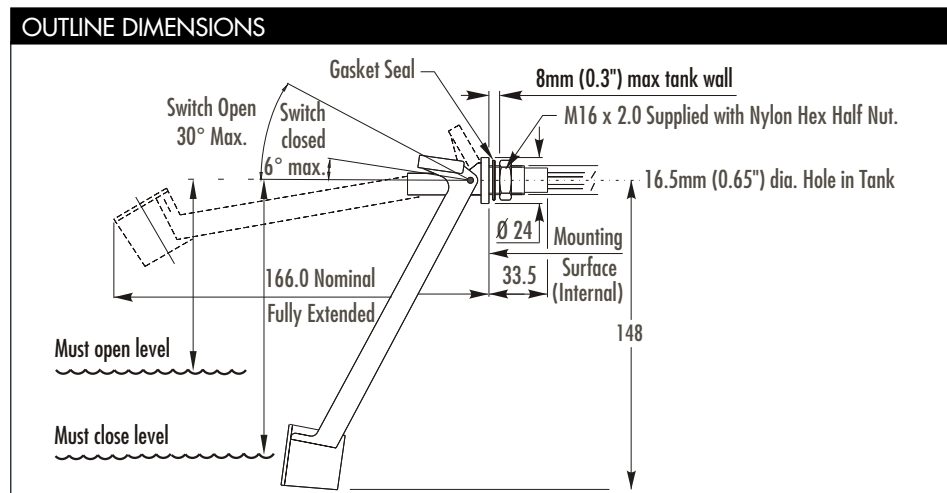
TECHNICAL SPECIFICATIONS	RSF26
Material	Polyphenylene Sulphide (PPS)
Colour	Grey
Temp. Range °C	-10/ +120*
°F	+14 / +248*
Min. Fluid S.G.	0.75
Must Close Level (S.G.=1)	140mm
Must Open Level (S.G.=1)	110mm

* Maximum temperature requires ETFE cable to be specified.

ELECTRICAL SPECIFICATIONS	
Contact Form	N/C
VA Rating Max.	25
Switching Voltage AC Max.	240
Switching Voltage DC Max.	120
Switching Current Max. A	0.6

All ratings are for resistive load only

Crydom no.	Material	Leadouts	Gaskets
RSF24Y100RF	Polypropylene	1.0m PVC 16/0.2 UL approved	Nitrile
RSF26Y100RF	PPS	1.0m PVC 16/0.2 UL approved	Nitrile
RSF26Y050TG	PPS	50cms ETFE 19/0.2	Viton



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**RSF20 Extended
Drop Float**



100 Watt Float Switch RSF30

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The RSF30 series is a range of higher power side entry, internally mounted devices. These may be used for directly switching some small loads of less than 100VA. Mounting of this series requires access to the inside of the tank. They are manufactured in Nylon or Polypropylene, with a choice of gasket materials, to suit most commonly used liquids.

The switch action may be reversed by rotating the device through 180°.

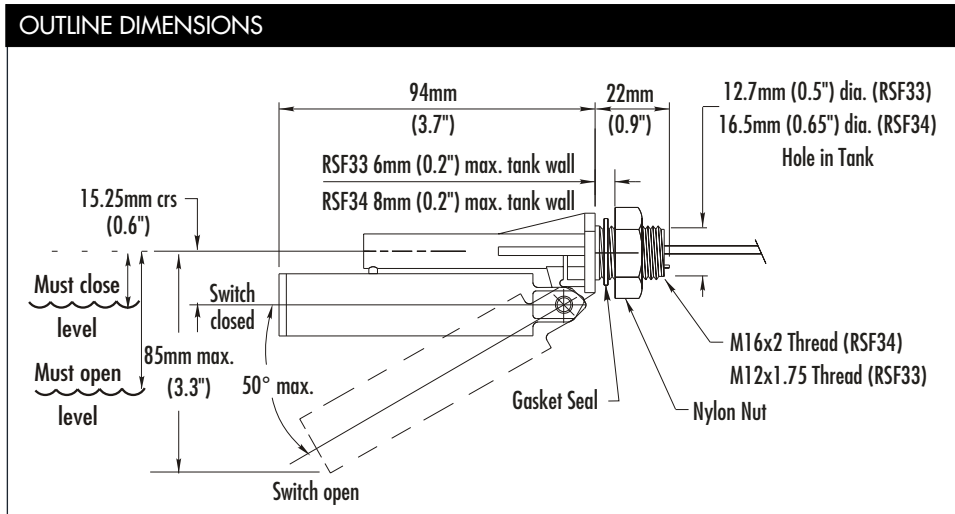
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TECHNICAL SPECIFICATIONS	RSF 33	RSF34
Material	Nylon	Polypropylene
Colour	Black	Opaque
Temp. Range °C	-20/+75	-20/+100
°F	-4/+167	-4/+212
Min. Fluid S.G.	0.8	0.8
Must Close Level (S.G.=1)	20mm	23mm
Must Open Level (S.G.=1)	47mm	52mm

ELECTRICAL SPECIFICATIONS	
Contact Form	N/O (N/C)
VA Rating Max	100
Switching Voltage AC Max	240
Switching Voltage DC Max	120
Switching Current Max. A	5

All ratings are for resistive load only.

Crydom no.	Material	Leadouts	Gaskets
RSF33W100RC	Nylon	1.0m PVC 16/0.2 UL approved	Nitrile
RSF34W100RF	Polypropylene	1.0m PVC 16/0.2 UL approved	Nitrile



- 100W contacts
- Rugged design
- Reliable reed switch contacts
- WRAS approval
- Many variants are UL recognised components
File number E171218

RSF30 Series



Miniature Single Switch RSF50

- Compact design
- User configurable N/O or N/C operation
- Reliable reed switch contacts
- Available in PVC, PPS, Polypropylene and Nylon
- WRAS approved
- Many variants are UL recognised components
File Number E171218

The RSF50 series are compact vertically mounted devices with a single switch point. Mounting is in the top or bottom of the tank from the inside, so requires access to the inside of the tank.

Typical applications include printing systems and chemical dosing equipment.

They are manufactured in a variety of materials, with a choice of gasket materials, to suit most commonly used liquids.

The switch action may be reversed by removing the float, inverting it and then refitting it to the stem.

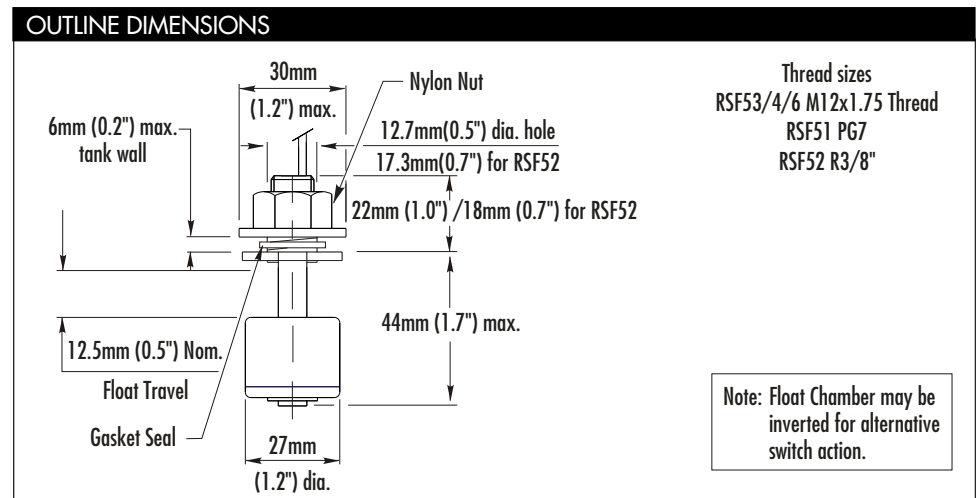
All types, except those in PVC, are also available with 1/8" NPT tapered thread.

TECHNICAL SPECIFICATIONS	RSF51/52	RSF53	RSF54	RSF56
Material	PVC	Nylon	Polypropylene	Polyphenylene Sulphide (PPS)
Colour	Light Grey	Black	Opaque	Grey
Temp. Range °C	-20 / +60	-20 / +75	-20 / +100	-10 / +120*
°F	-4 / +140	-4 / +167	-4 / +212	+14 / +248*
Min, Fluid S.G.	0.8	0.7	0.6	0.8

*Maximum temperature requires ETFE cable to be specified.

ELECTRICAL SPECIFICATIONS	(RSF51/52)	(RSF53/54/56)
Contact Form	N/O (N/C)	N/O (N/C)
VA Rating Max.	10	25
Switching Voltage AC Max.	125	240
Switching Voltage DC Max.	150	120
Switching Current Max. A	0.5	0.6

Crydom no.	Material	Leadouts	Gaskets
RSF51Z100J	PVC	1.0m PVC 7/0.2 sheathed cable	-
RSF52Z100J	PVC	1.0m PVC 7/0.2 sheathed cable	-
RSF53Y100RC	Nylon	1.0m PVC 16/0.2 UL approved	Nitrile
RSF54Y100RC	Polypropylene	1.0m PVC 16/0.2 UL approved	Nitrile
RSF56Y100RC	PPS	1.0m PVC 16/0.2 UL approved	Nitrile
RSF56Y050TB	PPS	50cms ETFE 19/0.2	Viton



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RSF50 Series



Dual Switch Point RSF66

crydom™

The RSF66 floatswitch series has been specifically designed to offer the user a deep penetration float with a number of switching options to cater for a variety of system requirements. Manufactured from high grade Polyphenylene Sulphide (PPS) the RSF66 is compatible with most liquids and chemicals offering switching capabilities up to 240V AC.

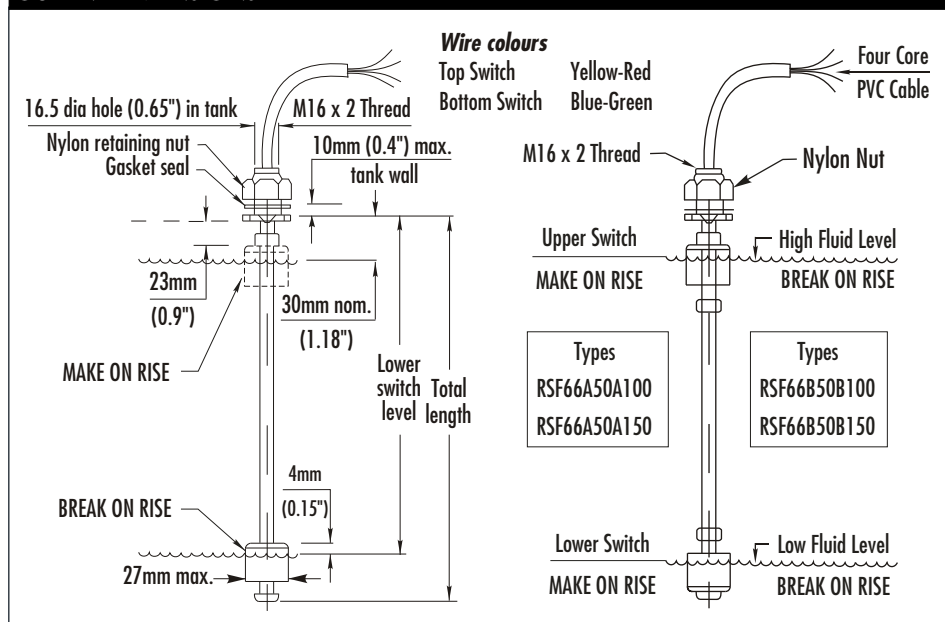
The two float range provide Make/Make, or Break/Break, switch action with a choice of 50 or 100mm separations. This type is particularly suitable for controlling filling or emptying of tanks via electromechanical relays.

TECHNICAL SPECIFICATIONS (Common to both Single and Double Float versions)

MECHANICAL		ELECTRICAL	
Material	PPS	Switching Power VA Max.	25
Colour	Grey	Switching Voltage AC Max.	240
Temp. Range °C	-10 / +85	Switching Voltage DC Max.	120
°F	+14 / +185	Switching Current Max. A	0.6
Min. Fluid S.G.	0.8	All ratings are for resistive load only	

Single Float Version Crydom no.	Upper Switch Level	Lower Switch Level	Total length	Gasket	
RSF66A25B75	30mm	75mm	102mm	Nitrile	
RSF66A25B100	30mm	100mm	127mm	Nitrile	
RSF66A25B125	30mm	125mm	152mm	Nitrile	
RSF66A25B150	30mm	150mm	177mm	Nitrile	
RSF66A25B175	30mm	175mm	202mm	Nitrile	
Two Float version					
RSF66A50A100	For Filling	50mm	100mm	134mm	Nitrile
RSF66A50A150		50mm	150mm	184mm	Nitrile
RSF66B50B100	For Emptying	50mm	100mm	127mm	Nitrile
RSF66B50B150		50mm	150mm	177mm	Nitrile

OUTLINE DIMENSIONS



High & low level Switch

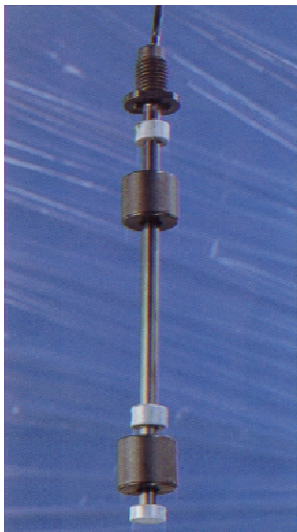
- Simple to mount and use
- PPS material
- WRAS approved
- Many variants are UL recognised component File Number E17121

RSF66 Series



Custom Vertical Switch RSF60

- Factory configurable to customer requirements
- 1, 2 or 3 switch options
- Long reach
- PPS Stem material
- WRAS approved
- Many variants are UL recognised components
File Number E171218
- Extension Tubes available



The RSF60 series is designed to offer a vertical float switch with factory configurable options of one, two or three switch positions, in one unit. Floats are manufactured in Polypropylene or Polyphenylene Sulphide (PPS), which are compatible with a wide range of liquids (refer to factory for specific chemical suitability).

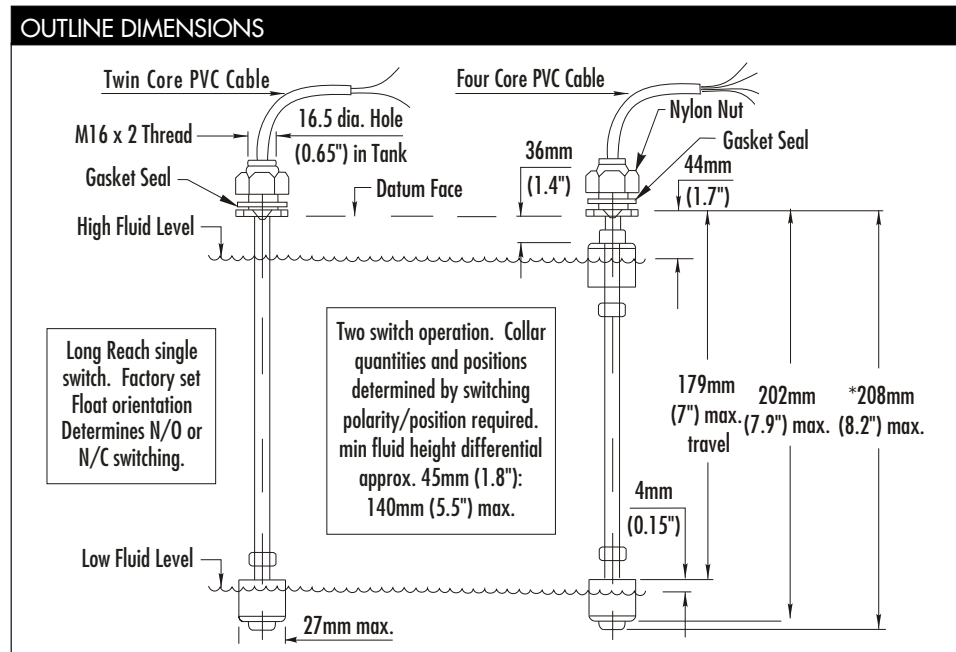
Units can be factory assembled on to PVC extension tubes, which may be joined to further extension tubes, by the user, to achieve lengths of 1.5 metres. Please contact Crydom for information.

TECHNICAL SPECIFICATIONS		RSF64	RSF66
Material	Float	PP	PPS
	Stem	PPS	PPS
Float colour		Opaque	Grey
Temp. Range °C		-20/+85	-10 / +120*
	°F	-4/+185	+14 / +248*
Min. Fluid S.G.		0.60	0.8

*Maximum temperature requires ETFE cable to be specified.

ELECTRICAL SPECIFICATIONS	
Contact Form	N/O or N/C
VA Rating Max.	25
Switching Voltage AC Max.	240
Switching Voltage DC Max.	120
Switching Current Max. A	0.6

All ratings are for resistive load only



* For longer reach, extension tubes are available. Please contact the Sales Office for details.

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RSF60 Series



Variable insertion depth Float Switches RSF64EXS/EXT

crydom™

A vertical float switch, with either normally open or normally closed (when the float is down) switching action, permanently coupled to a 300mm PVC tube. This provides a float switch, whose overall depth can be varied between 150mm and 450mm, by adjusting its position in a sliding clamp.

Further 306mm PVC extension tubes may be added, up to a maximum of three, to provide insertion depths up to 1350mm.

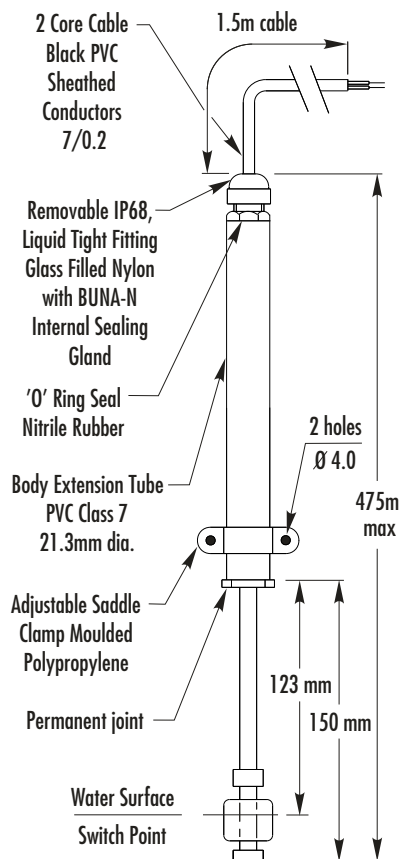
TECHNICAL SPECIFICATIONS

Operating Temperature	°C	0 / +75
Minimum S.G. of Fluid		0.60
Float material		Polypropylene
Stem material		Polyphenylene Sulphide
Tube material		PVC Class 7
Cable length	Metres	1.5
Maximum Switching Voltage	V ac/dc	250
Maximum Switching Current	A	0.5
Maximum Switching Power	W/VA	25
Electrical life	Ops	5×10^6

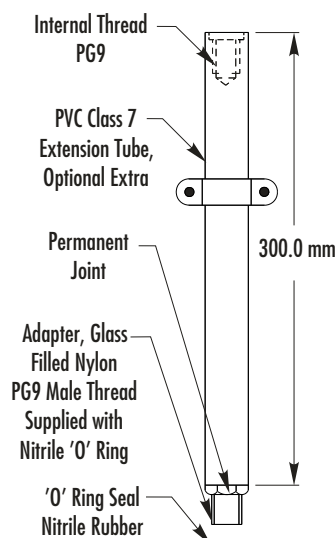
All ratings are for resistive load only

	RSF64EXS	RSF64BEXS	RSF64EXT
Switching			
Action	N/O	N/C	Tube only
Switching depth	123 - 423mm	123 - 423mm	Add 306mm per

Other configurations can be assembled by Crydom, using combinations of any of the RSF60 series float switches and a PVC extension tube. Contact Crydom Sales for advice on particular requirements.



Switch Assembly



Extension Assembly



- Insertion Depth 150mm - 1350mm
- Easy to install
- Adjustable Level

RSF64EXS & RSF64EXT Series

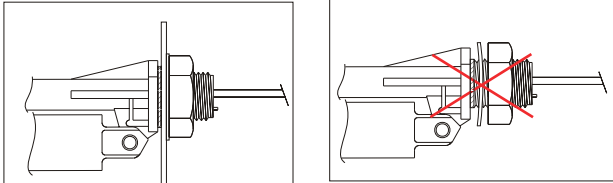


application notes

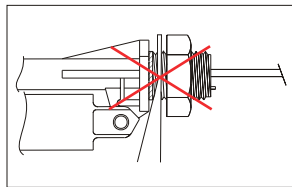
General

Container wall thickness and ease of access must be determined in order to select the fitting type required.

The tank wall should be flat, as concave or convex walls can cause ineffective sealing of the float switch into the tank wall.



Please note that fixing nuts should not be overtightened, as this may damage the product. Maximum wall thickness should not be exceeded or leaking may occur.



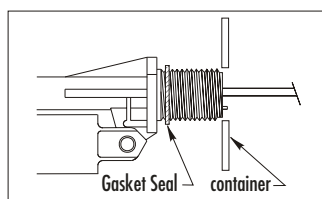
Drill the correct size hole in the tank wall, observing the appropriate safety requirements.

Remove any swarf and ensure that both faces of the hole are smooth, to avoid damage to the sealing washer/gasket.

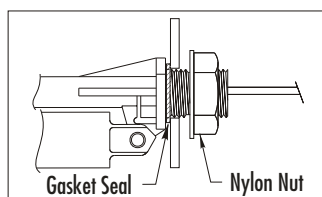
Internal fitting types, RSF10, RSF20, RSF30, RSF40, RSF50, RSF60 series.

Fit the sealing washer/gasket to the float switch thread.

Feed the connecting lead through the hole in the container, from the inside. Take care to ensure that the sealing washer/gasket is not damaged and that it is correctly positioned against the inside face of the tank wall and the collar of the float switch.



Feed the fixing nut over the connecting leads and position on the float switch thread, ready for tightening.

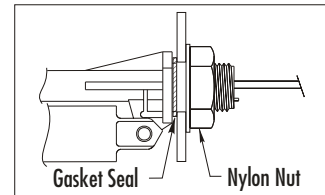


Hold the float switch firmly, ensuring that the orientation of the float is correct and that the sealing washer/gasket is not impaired, and tighten the fixing nut, until finger tight.

Hold the float switch firmly, ensuring that the orientation of the float is correct and that the sealing washer/gasket is not impaired, and tighten the fixing nut, until finger tight.

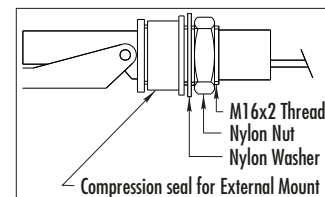
Carefully tighten the fixing nut to the appropriate torque of 3.0lbs/ft. (4.0Nm) maximum.

Check the seal and orientation, before connecting the float switch to the required electrical circuit.



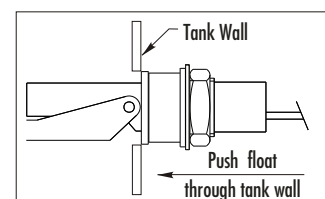
External fitting RSF70 series.

Feed the compression seal/grommet, friction relief washer and fixing nut over the connecting leads and position on the float switch thread, ready for tightening.



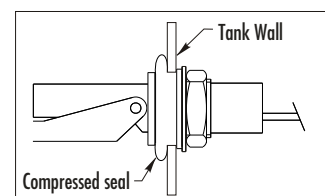
Turn the fixing nut only until the compression seal/grommet starts to deform.

Hold the float switch assembly by the cable entry end and insert the assembly into the hole in the tank wall until the compression seal/grommet meets the face of the tank wall. Ensure orientation of the float switch is correct, by reference to the indicator at the cable entry.



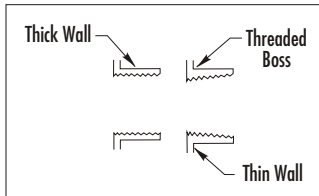
Hold the float switch assembly by the cable entry end, using the flats provided, and carefully tighten the fixing nut to a maximum torque of 2.0 lbs/ft. (2.67Nm).

Check the seal and orientation, before connecting the float switch to the required electrical circuit.

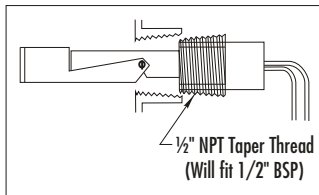


External fitting type RSF80 series.

This type has a $\frac{1}{2}$ " NPT taper thread, which can be screwed directly into a $\frac{1}{2}$ " BSP female thread, to provide a "jam" fit, or into a $\frac{1}{2}$ " NPT taper female thread. The tank wall, or tank wall and threaded boss, should have a minimum threaded length of 7mm and a maximum length, from the outer thread to the inner face of the tank wall, of 17mm.

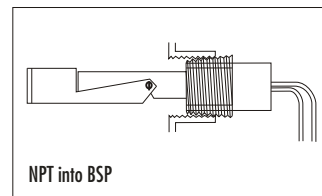
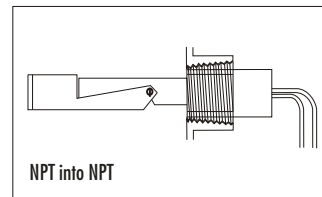


Drill a hole in tank wall of the correct size for cutting the required thread form, or drill a hole and fit a threaded boss on or in the wall of the tank.



Apply a compatible sealing compound, or tape, to the thread, from the outside of the tank, and rotate the assembly until it is finger tight in the thread.

Tighten the assembly into the thread, using a spanner on the flats provided, until a good seal is made and the orientation of the assembly is correct (marker on cable end), ensuring the torque is limited to less than 5.0 lbs/ft. (6.75 Nm).



Installation instructions for Crydom float switches

General

Container wall thickness and ease of access must be determined in order to select the fitting type required.

The tank wall should be flat, as concave or convex walls can cause ineffective sealing of the float switch into the tank wall.

Please note that fixing nuts should not be overtightened, as this may damage the product. Maximum wall thickness should not be exceeded or leaking may occur. Drill the correct size hole in the tank wall, observing the appropriate safety requirements.

Remove any swarf and ensure that both faces of the hole are smooth, to avoid damage to the sealing washer/gasket.

Internal fitting types, RSF10, RSF20, RSF30, RSF40, RSF50, RSF60 series

Fit the sealing washer/gasket to the float switch thread.

Feed the connecting lead through the hole in the container, from the inside. Take care to ensure that the sealing washer/gasket is not damaged and that it is correctly positioned against the inside face of the tank wall and the collar of the float switch.

Feed the fixing nut over the connecting leads and position on the float switch thread, ready for tightening.

Hold the float switch firmly, ensuring that the orientation of the float is correct and that the sealing washer/gasket is not impaired, and tighten the fixing nut, until finger tight.

Carefully tighten the fixing nut to the appropriate torque of 3.0lbs/ft. (4.0Nm) maximum.

Check the seal and orientation, before connecting the float switch to the required electrical circuit.

External fitting RSF70 series

Feed the compression seal/grommet, friction relief washer and fixing nut over the connecting leads and position on the float switch thread, ready for tightening. Turn the fixing nut only until the compression seal/grommet starts to deform.

Hold the float switch assembly by the cable entry end and insert the assembly into the hole in the tank wall until the compression seal/grommet meets the face of the tank wall. Ensure orientation of the float switch is correct, by reference to the indicator at the cable entry.

Hold the float switch assembly by the cable entry end, using the flats provided, and carefully tighten the fixing nut to a maximum torque of 2.0 lbs/ft. (2.67Nm).

Check the seal and orientation, before connecting the float switch to the required electrical circuit.

External fitting type RSF80

This type has a 1/2" NPT taper thread, which can be screwed directly into a 1/2" BSP female thread, to provide a "jam" fit, or into a 1/2" NPT taper female thread.

The tank wall, or tank wall and threaded boss, should have a minimum threaded length of 7mm and a maximum length, from the outer thread to the inner face of the tank wall, of 17mm.

Drill a hole in tank wall of the correct size for cutting the required thread form, or drill a hole and fit a threaded boss on or in the wall of the tank.

Apply a sealing compound, or tape, to the thread of the float switch.

Insert the float switch into the thread, from the outside of the tank, and rotate the assembly until it is finger tight in the thread.

Tighten the assembly into the thread, using a spanner on the flats provided, until a good seal is made and the orientation of the assembly is correct (marker on cable entry end), ensuring the torque is limited to less than 5.0 lbs/ft. (6.75 Nm)

Classification	Chemical	PVC	Nylon	Polypropylene	Polysulfone*	PPS	Viton	Nitrile	Silicone		
Organic Chemicals	Acetaldehyde	E5	C3	C4	-	A1	E5	E5	C3		
Acids - Organic	Acetic Acid, concentrated (glacial)	E5	E5	A2	B4	A1	D4	D5	B5		
Acids - Organic	Acetic Acid, dilute	A2	E5	A1	B3	A1	D4	C5	B3		
Organic Chemicals	Acetone (Dimethyl Ketone)	E5	A2	A1	D5	A1	D4	E5	C4		
Alkalis	Ammonia, Aqueous, dilute	A2	C5	A1	A2	B2	B2	D5	B2		
Alkalis	Ammonium Hydroxide, concentrated	B2	E5	A1	A2	D5	C3	E5	B2		
Organic Chemicals	Amyl Acetate	E5	B3	C4	-	A1	E5	E5	B2		
Organic Chemicals	Aniline	E5	D5	A2	-	A1	B4	E5	B2		
Foodstuffs	Beer	A2	A1	A1	-	-	A1	A1	A1		
Organic Chemicals	Benzene	E5	B2	C4	D5	A1	D4	E5	E5		
Misc	Bleach	D4	C4	B3	B3	A1	E5	C5	B3		
Alcohols	Butanol (Butyl Alcohol)	C5	C3	A1	B3	A1	-	A-	D5		
Inorganic Chemicals	Calcium Hypochlorite	D5	E5	B3	B3	B2	E5	E5	B3		
Organic Chemicals	Cellosolve (2-Ethoxy Ethanol)	E5	-	-	B3	A1	-	C-	-		
Organic Chemicals	Chloroform	E5	C5	D5	E5	D5	D5	E5	E5		
Acids - Organic	Citric Acid	A2	C5	A1	A2	A1	A1	A1	A1		
Inorganic Chemicals	Copper Nitrate	A2	A1	A1	-	A1	A1	A2	A1		
Inorganic Chemicals	Copper Sulphate	A2	A1	A1	-	A1	A1	A2	A1		
Organic Chemicals	Cyclohexane	E5	A2	E5	B3	A1	D5	A1	E5		
Misc	Detergents	B2	B3	A1	B2	A1	B2	A1	A1		
Fuels / Oils	Diesel	-	A2	C5	B2	A1	B2	A1	D5		
Organic Chemicals	Dimethyl Phthalate	E5	-	-	-	D5	-	E5	-		
Fuels / Oils	Engine Oil	-	A2	A2	B3	A1	D5	B2	B3		
Alcohols	Ethanol (Ethyl Alcohol)	B4	C3	A1	B3	A1	B2	A-	C4		
Organic Chemicals	Ethyl Acetate	E5	A1	B2	E5	A1	E5	E5	E5		
Organic Chemicals	Ethylene Glycol (Antifreeze)	A2	B3	A1	B3	A1	B3	A1	A1		
Inorganic Chemicals	Ferric Chloride	A2	D5	A1	-	A1	A1	A1	A1		
Organic Chemicals	Formaldehyde (Formalin)	B4	B3	A1	D5	A1	B3	C5	A1		
Acids - Organic	Formic Acid (Methanoic Acid)	C3	E5	A1	B3	A1	E5	C5	B5		
Foodstuffs	Fruit Juice	A2	A1	A1	-	A1	A1	A1	A1		
Organic Chemicals	Glycerol (Glycerin)	A2	B4	A1	B3	A1	A1	A1	A1		
Fuels / Oils	Hydraulic Fluid	-	-	-	B-	A1	B-	A-	-		
Acids - Inorganic	Hydrochloric Acid, concentrated	A2	E5	B4	A1	C4	B2	C5	E5		
Acids - Inorganic	Hydrochloric Acid, dilute	B2	C5	B2	A1	B3	A1	B4	C5		
Acids - Inorganic	Hydrofluoric Acid	E5	E5	E5	D5	E5	B2	E5	E5		
Inorganic Chemicals	Hydrogen Peroxide, Concentrated	A2	E5	A5	B4	E5	B4	E5	B2		
Inorganic Chemicals	Hydrogen Peroxide, dilute	A2	E5	A2	B4	E5	B3	D5	A1		
Fuels / Oils	Kerosene (Aviation Fuel)	C4	A2	C4	C5	A1	A1	A-	-		
Acids - Organic	Lactic Acid	C4	B3	A1	B3	A1	C5	B4	A1		
Fuels / Oils	Lubricating Oil	-	A2	A2	B2	A1	-	B2	D5		
Alcohols	Methanol (Methyl Alcohol)	C4	C4	A1	C4	A1	C4	A1	B3		
Organic Chemicals	Methyl Ethyl Ketone (MEK)	E5	B3	B4	D5	D5	E5	E5	E5		
Organic Chemicals	Methylene Chloride	E5	D5	D5	E5	D5	E5	E5	E5		

Classification	Chemical	PVC	Nylon	Polypropylene	Polysulfone*	PPS	Viton	Nitrile	Silicone		
Fuels / Oils	Mineral Oil / Fuel Oil	B4	A2	A2	B3	A1	A2	A2	B3		
Acids - Inorganic	Nitric Acid, concentrated	C5	E5	C5	E5	E5	D5	E5	E5		
Acids - Inorganic	Nitric Acid, dilute	B5	E5	A1	C5	C4	C5	D5	D4		
Organic Chemicals	Nitrobenzene	E5	D5	A1	-	A1	A1	E5	E5		
Organic Chemicals	Nitromethane	-	A2	-	-	A1	-	E5	-		
Foodstuffs	Olive Oil	A2	B2	A1	-	-	C4	A2	A2		
Organic Chemicals	Perchloroethylene	-	-	-	E5	A1	B3	D-	-		
Fuels / Oils	Petrol (Gasoline)	B4	A2	C4	B3	A1	B2	A2	D5		
Acids - Inorganic	Phosphoric Acid, concentrated	A2	E5	A1	B2	A1	B3	D5	C4		
Acids - Inorganic	Phosphoric Acid, dilute	A2	E5	A1	A2	A1	B2	C4	B2		
Inorganic Chemicals	Potassium Chloride	A2	B3	A1	-	A1	A1	A1	A1		
Inorganic Chemicals	Potassium Cyanide	A2	-	A1	-	A1	-	A-	-		
Inorganic Chemicals	Potassium Nitrate	A2	A2	A1	A1	A1	A1	A1	A1		
Alcohols	Propanol (IPA)	-	-	A1	B3	A1	C5	B-	D5		
Inorganic Chemicals	Silver Nitrate	A2	A2	A2	-	A1	A1	B2	A1		
Misc	Soaps	A2	B3	A1	B2	A1	-	A1	-		
Inorganic Chemicals	Sodium Bicarbonate	A2	B3	A1	-	A1	A1	A1	A1		
Inorganic Chemicals	Sodium Chloride	A2	B3	A1	-	A1	A1	A1	A1		
Inorganic Chemicals	Sodium Cyanide	A2	-	A1	-	A1	-	A-	-		
Alkalis	Sodium Hydroxide, concentrated	A2	E5	A1	B3	C4	D5	C4	C4		
Alkalis	Sodium Hydroxide, dilute	A2	C5	A1	A1	A1	D5	B3	B3		
Inorganic Chemicals	Sodium Nitrate	A2	B3	A1	-	A1	A1	A1	A1		
Acids - Inorganic	Sulphuric Acid, concentrated	E5	E5	D5	D4	D5	A2	E5	E5		
Acids - Inorganic	Sulphuric Acid, dilute	B3	E5	A2	C3	A1	A2	D5	C5		
Organic Chemicals	Toluene	E5	A2	D4	D5	A1	E5	E5	E5		
Organic Chemicals	Trichloroethylene	E5	A3	D4	E5	-	D5	D5	E5		
Misc	Turpentine	-	-	D4	B3	A1	D5	A-	E5		
Misc	Urine	A2	B3	A1	-	A1	A1	A-	A1		
Foodstuffs	Vegetable Oil	B2	A2	A1	-	A1	B2	A2	A2		
Misc	Water	A2	B3	A1	B2	A1	A2	A1	A1		
Foodstuffs	Whiskey	-	-	A1	-	-	-	A-	-		
Foodstuffs	Wine	-	-	A1	-	-	-	A-	-		
Organic Chemicals	Xylene	E5	A2	D4	D5	A1	E5	E5	E5		