

Safedescale

Rust and scale remover

Description

Safedescale is a unique formulation based on an organic salt that replaces hydrochloric and many other acids in the removal of scale and rust in many industrial applications. Safedescale performs like a strong acid but is non-corrosive to skin and most metals. In terms of speed of removal of lime scale, Safedescale out-performs all commercial acids and similar competitive products, other than 33% hydrochloric acid. 1 litre of Safedescale dissolves 300 grams of calcium carbonate scale.

Applications

Safedescale may be used in preparation of metal parts for plating, phosphating etc. Safedescale is extremely efficient in the removal of a wide range of general scales including milk stone, beer stone, tartrate & scale in processing equipment, pipework, cooling towers, heat exchangers etc. Safedescale may be used to replace hydrochloric acid, but must be used with caution on stainless steel due to the presence of chlorides. Chlorides may cause pitting corrosion in stainless steel, leading to stress-cracking. Circacid S is recommended for descaling of stainless steel heat-exchangers and pipework.

User Benefits

- Fast & efficient descaling action.
- Suitable for use in the removal of rust and a wide range of scales
- Replaces acids in many applications.
- Out-performs all other “acid replacement” products.
- Odourless and non-fuming.
- In use solutions of less than 50% are Not Classified as Hazardous according to the criteria of Worksafe Australia.

Chemical and Physical Characteristics

Form	:	Liquid
Chemical Base	:	Organic salt
Colour	:	Blue
Odour	:	Slight

Method of Use

These recommendations are based on field experience and variations may be required for specific applications.

General Acid Pickling and Cleaning.

Concentration:	2 - 20% v/v**
Temperature:	Ambient to 50 deg.C. (normally used at ambient)
Contact time:	Depends on soil loading.

**Safedescale may be used at concentrations of up to 100% in specific applications.

Safedescale contains no toxic materials, however it is good practice to ensure that residues are well rinsed from any food or animal contact surfaces before use.

Solution Control

The concentration of a Safedescale solution can be determined as follows:

1. Take a 10ml sample.
2. Add approx 50ml water and a few drops of Bromophenol Blue indicator.
3. Titrate with 1.0N sodium hydroxide (NaOH) until blue.
4. Calculate mls of 1.0N sodium hydroxide x 1.41 = % v/v Safedescale.

Effect on Base Materials

Safedescale and its solutions are safe to use on most plastics and good quality paint schemes.

They will have little effect on steel, stainless steel, copper, brass and bronze. Safedescale and its solutions only slightly affect aluminium at ambient temperatures.

Safedescale and its solutions will rapidly attack magnesium and zinc.

The figures below show the relative attack on various metals compared with hydrochloric acid when 7.5 x 2.5 cm panels are immersed in solutions at an equivalent concentration of 5% W/V as hydrochloric acid.

	Hydrochloric Acid Weight Loss (mg)	Safedescale Weight Loss (mg)	Relative Attack Compared with Hydrochloric Acid
Mild Steel	964.9	4.3	0.4%
Copper	7.8	4.4	56.4%
Brass 70/30	3.1	0.8	25.8%
Bronze 90/10	30.1	3.2	10.6%
Aluminium	1371.4	19.3	1.4%
Stainless Steel 304	44.2	9.6	21.7%

Packaging

Available in 1000, 200 and 25 Litre Containers.

Safety, Transport and Storage Information

Please refer to the Safety Data Sheet.

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