

MATERIAL SAFETY DATA SHEET



Description: SAF NON FERROUS **Revision Number:** 02

Document Number: MSDS N003

ALUMINIUM CLEANER

GENERAL

A powerful acid based product for fast and effective removal of oxidation and corrosion from aluminium surfaces.

FORMULATION

SAF-NON-FERROUS is a highly active phosphoric acid based rust remover, containing surfactants and solvent blends to promote good surface wetting and grease removal, to ensure rapid removal of surface oxide layer and weld burn marks. SAF-NON-FERROUS contains an amine inhibitor to eliminate the possibility of acid attack on the freshly prepared metal surface. SAF-NON-FERROUS is chloride free and may be used to treat aluminium, copper and stainless steel surfaces.

PRODUCT DESCRIPTION

TEST	UNIT	SPECIFICATION
Appearance		Clear colourless liquid
Acidity	cm ³ 1N KOH/cm ³	4.0 - 5.5
Density	g/cm ³	1.09 - 1.13

PROPERTIES

1. Quickly removes oxides and scale from aluminium surfaces.
2. Penetrates diesel smoke deposits.
3. Highly concentrated - dilutes up to 1:30 with water.
4. Leaves a clean, sheen type of finish.

APPLICATION

1. Dilute 1 part of SAF-NON-FERROUS with up to 30 parts water in a plastic container or sprayer.
2. Apply to surface with a soft brush, broom or sprayer.
To minimise streaking, work from bottom to top.
3. Allow a few minutes for reaction and rinse well with water as prolonged contact may cause corrosion.
4. Stubborn areas may initially require a bit of agitation.

NOTE

SAF-NON-FERROUS is not recommended on anodised or polished aluminium surfaces, or on certain aluminium alloys. Test on a small area first

Prepared by: Sabelo Dladla
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CAUTION:

Avoid contact with eyes and skin. Wash contaminated areas well with clean water.

THE RECOMMENDATIONS CONTAINED HERE-IN IS BASED ON LABORATORY TESTS AND INFIELD USE EXPERIENCE, AND ARE TO THE BEST OF OUR KNOWLEDGE ACCURATE. SINCE TERMS AND CONDITIONS OF ACTUAL USE ARE BEYOND OUR CONTROL, ALL RECOMMENDATIONS ARE MADE WITHOUT WARRANTY, EXPRESS OR IMPLIED.

CONTROLLED DOCUMENT

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Company Details

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1. Product Identification

Trade Name	SAF-NON FERROUS	Product code: N003
Chemical Family	Acids, Non-ionic surfactants, Glycol Ethers	
Chemical Name	Formulated chemical	
Product Use	Aluminium Cleaner	
UN number	1805 (based on hazardous component with high percentage ratio)	

2. Composition

CAS No.	Hazardous Components	Approx	OSHA PEL
7664-38-2	Phosphoric acid 80%	<35%	TWA 1 mg/m ³ ; STEL 3 mg/m ³
7664-39-3	Hydrofluoric Acid	< 2 %	TWA 3ppm; STEL 6ppm ACGIH TLV: CL 3ppm
EEC classification	Corrosive (C), SAF – NON FERROUS		
R Phrases	R23/25 R35 R51, SAF – NON FERROUS		

3. Hazards Identification

Main hazard	Corrosive (8)
Fire	Non-flammable
Inhalation	Irritation of mucous membranes and respiratory tract.
Skin contact	Tingling, burning, redness, avoid skin contact at all times.
Eye contact	Burning may result in permanent serious damage to vision.
Ingestion	Nausea, vomiting, burning of throat, stomach.

4. First Aid Measures

Inhalation	Move to fresh air; seek medical attention should symptoms persist. Appropriate masks must be worn when handling this product.
Skin contact	Immediately remove contaminated clothing and drench affected area with running water for 20 minutes. Consult doctor even if no symptoms of being burned.
Eye contact	Immediately wash eyes with plenty of running water for 20 minutes – hold eyelids open while washing. Consult a doctor immediately.
Ingestion	Rinse mouth well and give plenty of water to drink. Consult a doctor immediately and produce this document.

5. Fire Fighting Measures

Extinguishing media	Product non-flammable. Use extinguishing agents suitable for surrounding fire.
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Special hazard	Product will generate heat in contact with water.
Protective clothing	Approved self contained breathing apparatus should be utilised or equivalent equipment.

6. Accidental Release Measures

Personal precautions	Neutralise the product before disposal. The product will etch unsealed concrete. On uncoated metal surfaces, flush off with water to prevent rusting.
Environmental precautions	As per good environmental management practices, prevent contamination of watercourses or ground with large quantities of undiluted product
Small spills	Neutralise with SAF – EA NUETRALISER and flush residue with plenty of water.
Large spills	Dyke ahead of liquid spill. Prevent the discharge of large amounts of concentrated product into sewerage, and watercourses. Neutralise with SAF – EA NUETRALISER and dispose small quantities to effluent with plenty water.

7. Handling & Storage

Storage	Store in a cool dry area. Keep containers sealed.
Handling	Handle product with care – wear protective clothing and equipment at all times.

8. Exposure Controls/Personal Protection

Workers should have access to an eye wash fountain and safety shower.
HANDLE PRODUCT WITH CARE AT ALL TIMES.
A) The below RESPIRATORY KIT is manufactured by 3M and is suitable for use on this product
1) Full Face Respirators – 3M6800 – where product splashing is possible
2) Half mask – 3M6300 – where product splashing is unlikely
3) Combination Cartridge Type: ABEK1 – 3M6059
4) Pre – filter N95 – 3M5N11
5) Retainer – 3M501
6) Note as soon as one experiences difficulty in breathing when wearing a mask, a NEW cartridge (same as the replaced one) and pre-filter is required. ADEQUATE VENTILATION IS HIGHLY RECOMMENDED AT ALL TIMES EVEN WHEN USING THE ABOVE RESPIRATORY KIT.
B) NEOPRENE gloves (Technic 420 supplier – MSA) must be worn when handling SAF – NON FERROUS.
C) Safety shoes and overalls are recommended when handling this product.

9. Physical and Chemical Properties

Appearance	Clear colourless liquid
Acidity	4.0 – 5.5 cm ³ KOH/cm ³
Density	1.09 – 1.13
Solubility (water)	100 %

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10. Stability and Reactivity

Stability	Stable under normal conditions
Incompatible material	Reacts with alkalis to release toxic corrosive fumes and may etch glass, concrete and cast iron
Hazardous decomposition products	When heated the product decomposes to toxic corrosive fumes. Suitable respiratory system should be used when extinguishing fire.

11. Toxicological Information

Toxicity	Inhalation (rat) LD50: 1530 mg/kg, unr-man LDLo:220 mg/kg
Skin & eye contact	Corrosive to all tissues
Chronic toxicity	Contains hydrofluoric acid which attacks calcium aggressively, avoids skin contact with the product.
Carcinogenicity	No evidence of carcinogenic properties
Mutagenicity	No evidence of mutagenic effects.
Teratogenicity	No evidence of teratogenic effects
Reproductive hazard	Not expected to impair fertility

12. Ecological Information (based on phosphoric acid)

Aquatic toxicity – rainbow trout	Acidification may be fatal to aquatic organisms.
Aquatic toxicity - daphnia	Acidification may be fatal to aquatic organisms.
Aquatic toxicity - algae	Acidification may be fatal to plants and other living organisms.
Biodegradability	Not expected to biodegrade, but when neutralised salt and water is formed which is harmless to the environment.
Bio accumulation	There's a no possibility of bio accumulation but can lower the pH which can be fatal to aquatic organisms.

13. Disposal Considerations

Disposal method	Neutralise the product before disposing of it using SAF – EA NEUTRALISER for small quantities. Prevent discharge of large quantities to sewerages & waterways
First neutralise the product with SAF – EA NEUTRALISER before containing, flush area with water. Dispose as per agreed local government method for large quantities.	
Disposal of packaging	Recycle or provide to drum collectors or recovers.

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14. Transport Information

UN No:	1805
Substance identity no	N003
ADR/RID class	Class 8: Corrosive liquid
IMDG – packaging group	III
IMDG Code	8194
Marine Pollutant	No, but toxic to aquatic organisms.
IMO/IMDG Classification	Class 8: Corrosive liquid
IATA Classification	Class 8: Corrosive liquid

15. Regulatory Information

EEC- hazard Classification	Corrosive (C)
Risk phrases	R23/25 R35 R51
Safety phrases	S3/7/9 S26 S36/37/39 S45

16. Other Information

References: SABS 0265:1999, SABS 0228: 1995, ISO 11014-1:1994, MSDS (Suppliers of raw's)
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The information in this MSDS is based on current knowledge and experience at the date of publication. This MSDS summarises our best knowledge of the health and safety hazard information of the product and is intended only as a guide to the appropriate precautionary handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification of the product. The data relates only to the specific product designated, and does not relate to use of the product in combination with any other material or use of the product in any process. The data is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability for fitness for a particular purpose is made with respect to the product, its composition, its safety or the information contained in this MSDS.

APPENDIX A

Revision Date (dd/mm/yy)	Issued By	Revision History		Revision No.
		Description	DCN No.	
18/02/2011	Technical Manager	New Issue	MSDS N003	00
20/05/2013	Technical Manager	Document review and change of Company logo.	MSDS N003	01
06/10/2016	Systems and Food & Beverage Specialist	Document review	MSDS N003	02

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