

MATERIAL SAFETY DATA SHEET

Description: SAF NON FLASH Revision Number: 02

Document Number: MSDS N002



NON-FLAMMABLE ELECTRICAL SOLVENT

GENERAL

SAF-NONFLASH is a completely non-flammable product, with quick drying properties and which leaves no film behind. Furthermore, the product does not have any harsh effect on insulating materials.

FORMULATION

This product is based on a blend of various chlorinated hydrocarbons with low toxicity levels.

PRODUCT DESCRIPTION

TEST	UNIT	SPECIFICATION
Appearance		Clear colourless liquid
Density	g/cm ³	1,38 - 1,45
Flash point	°C	N/A

PROPERTIES

- * No flash point - safe to use in high fire risk areas.
- * Non-conductive - electrical strength in excess of 75 000 volts per cm.
- * Quick drying.
- * Leaves no residue.
- * Removes carbon, dirt and oil effectively.

APPLICATION

Blow equipment with air to remove lint, dust and loose particles. Spray SAF-NONFLASH onto equipment until all dirt has been removed. Allow to evaporate.

Lubricate bearings. Product can also be used in a dip-tank process.

NOTE

May be harmful to inferior quality plastics. Not recommended for electronic equipment.

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SAF-NON FLASH DRYING TIME

Application	Drying time (min)	Diameter (mm)	Temperature	Mass (g)
Liquid (non ventilated)	8.00	130.0	20.0 °C	0.30
Liquid (well ventilated)	1.54	130.0	20.0 °C	0.30
Damp cloth	1.00	N/A	20.0 °C	N/A

THE RECOMMENDATIONS CONTAINED HERE-IN ARE 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.

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Company Details

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1. Product Identification

Trade Name	SAF-NON FLASH	Product code: N002
Chemical Family	Chlorinated compounds, mixture of petroleum hydrocarbons.	
Chemical Name	Formulated chemical	
Product Use	Electrical solvent	
UN Number	1897 (based on main hazardous component)	

2. Composition

CAS No.	Hazardous Components	Approx. %	OSHA PEL
75-09-2	Methylene chloride	<20	TWA 500ppm
127-18-4	Tetrachloroethylene	<80	TWA 50 ppm
EEC classification	Harmful (Xn), SAF-NON FLASH		
R Phrases	R20/21/22, R40-51/53, SAF-NON FLASH		

3. Hazards Identification

Main hazard	Harmful (Xn)
Inhalation	Headache. Dizziness. Nausea, avoid unnecessary inhalation, work in a well ventilated area. Suitable masks must be worn when handling product. Harmful on inhalation
Skin contact	Harmful on skin contact, can be absorbed through skin, can cause redness and can result to CNS depression.
Eye contact	Irritation. Watering of eyes, Face protection unit should be utilised at all times.
Ingestion	Injury due to absorption. Treat for the ingestion of chlorinated solvents.

4. First Aid Measures

Inhalation	Move patient to fresh air, allow some water or milk, and if symptoms persist seek medical attention.
Skin contact	Remove chemical from contact with the victim's skin as soon as possible, by washing the area well with soap & running water. Apply cream.

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Ingestion	Empty the stomach to prevent further injury caused by absorption. Seek medical attention . Treat for the ingestion of chlorinated solvents.
Eye Contact	Flush eyes with water for at least 15 minutes. Irrigate eyes thoroughly while lifting eyelids and rolling eyeballs. If irritation persists, seek medical attention.

5. Fire Fighting Measures

Extinguishing media	Product is non-flammable but combustible. Use extinguishing agents suitable for surrounding fire.
Special hazard	Toxic corrosive fumes of hydrogen chloride and highly toxic (phosgene) will be liberated when burning.
Protective clothing	Approved self contained breathing apparatus (NIOSH approved) should be utilised or equivalent and full protective equipment should be worn.

6. Accidental Release Measures

Personal precaution	The product is harmful on inhalation, skin contact and fatal on ingestion. Contains confirmed carcinogenic materials.
Environmental precaution	This product is highly toxic to aquatic organisms and its marine pollutant.
Small spills	Remove excess with absorbent material, and allow vapours to evaporate (preferably outside). Ventilate the area until traces have evaporated. Rinse area with a detergent solution.
Large spills	Dyke ahead of liquid spill. Prevent the discharge of product into sewerage, and water courses. Ventilate area well. Dispose using a hazardous waste disposal company.

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7. Handling & Storage

Handling	Normal handling procedure for chlorinated solvent based product to minimise personal exposure.
Storage	Store in a cool dry area away from any source of heat. Keep containers sealed.

8. Exposure Controls/Personal Protection

Workers should have access to an eye wash fountain.

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) Safety goggles (VNC11-supplier-MSA) can be used instead of the full face mask.
- 4) Combination Cartridge Type: ABEK1 – 3M6059
- 5) Pre – filter N95 – 3M5N11
- 6) Retainer – 3M501
- 7) 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) This product MUST ALWAYS BE HANDLED WITH NITRILE GLOVES (Ultranitril 492 – supplier – MSA)

C) Safety shoes and overalls are recommended when handling SAF- NONFLASH

9. Physical and Chemical Properties

Appearance	Clear colourless liquid
pH	1.38 – 1.45 g/cm ³
Specific gravity	Nil % m/m

10. Stability and Reactivity

Stability	Stable under normal conditions, keep away from excessive heat.
Incompatible	Keep away from strong acids, strong oxidizers, strong alkali and finely divided metals.
Hazardous decomposition products	Toxic corrosive fumes of hydrogen chloride and highly toxic phosgene will be liberated when burning; other carbon oxides will be released.

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11. Toxicological Information

Toxicity	<p><u>Methylene chloride</u>; Confirmed carcinogen with experimental carcinogenic and tumorigenic data. Human mutation data reported. Moderately toxic by inhalation.</p> <p><u>Tetrachloroethylene</u>; Confirmed carcinogen with experimental carcinogenic, neoplastigenic, and teratogenic data. Moderately toxic to humans by inhalation with the following effects: local anaesthesia, hallucinations, distorted perceptions, coma and pulmonary changes.</p> <p>Acute oral : LD50 = 2629 mg/kg, rat</p> <p>Inhalation : LD50 : 34 mg/l, rat</p>
Skin & eye contact	<p>Harmful.</p> <p><u>Tetrachloroethylene</u>; Can cause dermatitis, particularly after repeated or prolonged contact with the skin and can be absorbed through skin which results to CNS depression.</p>
Carcinogenicity	Confirmed carcinogen. (<u>Tetrachloroethylene & Methylene chloride</u>)
Mutagenicity	Human mutation data reported.
Teratogenicity	Experimental reproductive effects.

12. Ecological Information (based on tetrachloroethylene)

Aquatic toxicity – rainbow trout	96 hr bioassay LC50 : 10 – 100 mg/l
Aquatic toxicity – daphnia	LC50 : 3.3 – 18,0 mg/l
Aquatic toxicity – algae	The product can be harmful to aquatic environment, plants and organisms even at small quantities for along period of time.
Mobility	The product may leach to underground water.
Biodegradability	The product is not expected to biodegrade.
Bioaccumulation	There's a possibility of bioaccumulation

13. Disposal Considerations

Disposal methods	Strictly dispose as a per local agreed government method.
Disposal of packaging	Drum recyclers or collectors should be contacted.

14. Transport Information

UN Number	1897
Substance identity no	N002
ADR/RID class	6.1 Harmful liquid (Xn)
IMDG – Packaging group	III
Marine Pollutant	Yes
IMO/IMDG Classification	6.1 Harmful liquid (Xn)
IATA Classification	6.1 Harmful liquid (Xn)

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15. Regulatory Information

EEC-hazard classification	Harmful (Xn)
Risk phrases	R20/21/22, R40-51/53
Safety phrases	S23, S36/37-61

16. Other Information

References: SABS 0265: 1999, SABS 0228: 1995, SABS ISO 11014-1: 1994, M.S.D.S. (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 sheet.

APPENDIX A

Revision Date (dd/mm/yy)	Issued By	Revision History		Revision No.
		Description	DCN No.	
03/03/2011	Technical Manager	New Issue	MSDS N002	00
29/01/2013	Technical Manager	Correction of Section 3	MSDS N002	01
14/02/2017	Operations Director	Document review	MSDS N002	02

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