

MATERIAL SAFETY DATA SHEET

Description: SAF FREEZE

Revision Number: 03

Document Number: MSDS F006



ANTI-FREEZE/ANTI-CORROSION COOLANT ADDITIVE

GENERAL

SAF-FREEZE is a liquid additive for use in all car and truck radiators to prevent freezing of the coolant fluid.

FORMULATION

SAF-FREEZE contains anti-freeze, corrosion inhibitors and anti-oxidants.

PRODUCT DESCRIPTION

TEST	UNIT	SPECIFICATION
Appearance		Clear fluorescent yellow liquid
Density	g/cm ³	1,11 - 1,14
Flashpoint	°C	110 minimum

PROPERTIES

- * Prevents corrosion in cooling systems - prolongs radiator life.
- * Safe to use in all car and truck radiators.
- * Prevents freezing of the coolant liquid.
- * Safe to use on rubber - will not attack rubber.
- * Complies with specification - SABS 1251.

APPLICATION

Drain cooling system and flush with water. Refill system with clean water adding an amount of SAF-FREEZE to get the required level of protection as shown in the table below. Drain and flush system at least after 6 months.

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FREEZING POINT

- * Up to - 15 °C
- * Up to - 10 °C
- * Up to - 5 °C

DILUTION

- Use 1 part SAF-FREEZE to 3 parts water
- Use 1 part SAF-FREEZE to 4 parts water
- Use 1 part SAF-FREEZE to 5 parts water

AVERAGE RADIATOR CAPACITIES

- * Small car - 4 litres
- * Medium car - 6 - 8 litres
- * Large car - 12 litres

CAUTION

Harmful if swallowed. Keep out of reach of children. Wash hands after use. If swallowed allow patient as much water as possible and call for medical assistance. Treat for glycol contamination. In case of eye contact, flush copiously with water and obtain medical attention.

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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Postal Address	PO BOX 1754, Alberton 1450	e-mail:	technical@safic.co.za

1. Product Identification

Trade Name	SAF - FREEZE	Product Code: F006
Chemical Family	Ethylene glycol	
Chemical Name	Formulated chemical	
Product Use	Prevent freezing in motor vehicles	
UN Number	3082 (Miscellaneous substances)	

2. Composition

CAS No.	Hazardous Components	Approximate %	OSHA PEL
107-21-1	Ethylene glycol	<95	CL 50ppm
EEC classification	Irritant (Xi), SAF- FREEZE		
R Phrases	R36/38, SAF-FREEZE		

3. Hazards Identification

Main hazard	Irritant
Inhalation	Irritant to nose, headache
Skin contact	Irritant
Eye contact	Irritant and burning
Ingestion	Nausea, vomiting

4. First Aid Measures

Inhalation	Remove to fresh air
Skin contact	Remove contaminated clothing, wash well with water for at least 10 min.
Eye contact	Flush eyes with running water with eyelids opened for at least 15 min. Seek medical attention.
Ingestion	Rinse mouth with water, and allow patient as much water as possible. Seek immediate medical attention.

5. Fire Fighting Measures

Product is non flammable, use suitable extinguishing media to surrounding area.	
Special hazards	None known
Protective clothing	Approved self contained breathing apparatus should be utilized or equivalent.

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6. Accidental Release Measures

Personal precaution	Avoid eye contact, ensure adequate ventilation.
Environmental precautions	Avoid discharging large quantities to storm water drains.
Small spills	Remove excess with absorbent material and flush with water.
Large spills	Dyke far ahead of liquid spill for later disposal. Prevent entry into waterways, sewers since the product is harmful to aquatic environment.

7. Handling & Storage

Handling	Normal handling procedure for detergents.
Storage	Keep in a cool dry place. Keep containers sealed.

8. Exposure Controls/Personal Protection

Workers should have access to an eye wash fountain.
If the specific application may result in splashing, safety goggles (VNC11 – supplier – MSA) should be supplied.
If prolonged or frequent contact is expected, NEOPRENE gloves (Technic 420 – supplier – MSA) should be utilised
Handle in a well ventilated area, or 6300 respiratory/6059 cartridge (3M – supplier) should be utilised if ventilation is not adequate.

9. Physical and Chemical Properties

Appearance	Clear fluorescent yellow liquid
pH	6,6 – 8,5
Density	1,11 – 1,14
Solubility (water)	100%

10. Stability and Reactivity

Stability	Stable under normal conditions
Conditions to avoid	Strong oxidants and acids
Hazardous decomposition products	None Known

11. Toxicological Information (based on MEG)

Acute toxicity – oral	LD 50 : 4700 mg/kg
Acute toxicity - dermal	LD 50 : 5010 mg/kg
Carcinogenicity	No evidence of carcinogenic properties

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Mutagenicity	No evidence of mutagenic effects
Teratogenicity	Experimental teratogen

12. Ecological Information (based on MEG)

Acute toxicity – fish	LC 50 ; 51000 mg/l
Acute toxicity - daphnia	LC 50 : (46300- 51100) mg/l
Acute toxicity – algae	EC 50 :(9500-13000) mg/l
Biodegradability	89,1% after 20 days (based on ethylene glycol)

13. Disposal Considerations

Contain and dispose as per local government agreed method. Do not allow large amounts of product into drains, watercourses, and sewerage.	
Dilute product 1000 times and run to waste with plenty of water for small amounts.	
Disposal of packaging	Recycle or wash thoroughly to be re-used.

14. Transport Information

UN Number	3082
Substance identity no	F006
ADR/RID class	Class 9: Irritant liquid
IMDG – packaging group	III
Marine Pollutant	No
IMO/IMDG Classification	IMDG Class 9 Irritant liquid
IATA Classification	Class 9 Irritant liquid

15. Regulatory Information

EC Classification	Irritant (Xi)
EC Risk phrases	R36/37
EC Safety phrases	S2/24/25

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 regarding the precautionary handling, 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 and/or its composition.

APPENDIX A

Revision Date (dd/mm/yy)	Issued By	Revision History		Revision No.
		Description	DCN No.	
18/02/2011	Technical Manager	New Issue	MSDS F006	00
16/04/2012	Technical Manager	Updated properties section on page 1. SANS 1251:2005 approved formula now being used.	MSDS F006	01
20/05/2013	Technical Manager	Document review and change of Company logo.	MSDS F006	02
21/02/2017	Operations Director	Document review	MSDS F006	03

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