

# MATERIAL SAFETY DATA SHEET

Description: SAF STAINLESS Revision Number: 01

Document Number: MSDS S006



## Company Details

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## 1. Product Identification

Trade Name	Citric acid solution	Product Code: S006
Chemical Family	Organic acid	
Chemical Name	2-hydroxy-1,2,3 propanetricarboxylic acid, aqueous	
Product Use	Water softener	

## 2. Composition

CAS No.	Hazardous Components	Approximate %	Limit
7666-39-3	Hydrofluoric acid	<30	TWA 3 ppm, STEL 6 ppm (F)
7697-37-2	Nitric acid	<10	TWA 2 ppm, STEL 4 ppm
7664-38-2	Phosphoric acid	<10	TWA 1 mg/m <sup>3</sup>

## 3. Hazards Identification

Main hazard	Highly Corrosive
Fire	Non flammable
Inhalation	Irritation to mucous membranes
Skin contact	Highly corrosive to all tissues. Gloves must be worn at all times.
Eye contact	Burning, watering, redness. Serious damage to eyes may result.
Ingestion	Burning of throat, mouth, pain in swallowing, nausea and vomiting.

## 4. First Aid Measures

Inhalation	Remove patient to fresh air.
Skin contact	Rinse affected area with water plenty of running water. Avoid skin contact at all times. <b>NEVER HANDLE WITHOUT ACID RESISTANT GLOVES. Calcium gluconate should be used on the affected area.</b>
Eye contact	Flush with running water for at least 15 min, irrigate eyes thoroughly while lifting eyelids and rolling eyeballs. <b>Seek medical attention immediately.</b>
Ingestion	Rinse mouth with water, allow patient as much water as possible. Seek medical attention immediately.

## 5. Fire Fighting Measures

Product is non flammable. Extinguish media if fire in surrounding area: carbon dioxide, dry powder, foam, or water.	
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.
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Prepared by: Sabelo Dladla

Reviewed by: Doug Cutter

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Environmental precautions	As per good environmental management practices, prevent contamination of watercourses or ground with large quantities of undiluted product
Small spills	Neutralise and flush residue with water.
Large spills	Dyke ahead of liquid spill for later disposal. Prevent the discharge of large quantities of concentrated product into sewerage and watercourses.

## 7. Handling & Storage

Handling	Avoid contact with any tissue at all times.
Storage	Store in a cool dry place. Keep container closed. Keep away from strong alkalis.

## 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) Combination Cartridge Type: ABEK1 – 3M6059
4) Pre – filter N95 – 3M5N11, Retainer (3M501)
Note as soon as one experiences <b>difficulty in breathing</b> when wearing a mask, a NEW cartridge (same as the replaced one) and <b>pre-filter</b> is required. ADEQUATE VENTILATION IS HIGHLY RECOMMENDED AT ALL TIMES EVEN WHEN USING THE ABOVE RESPIRATORY KIT.
B) NEOPRENE gloves (such as Technic 420 supplier – MSA) must be used when handling SAF – STAINLESS.
C) Safety shoes and overalls are recommended when handling this product.

## 9. Physical and Chemical Properties

Appearance	Clear colourless liquid
pH	4.3 – 5.2 cm <sup>3</sup> IN KOH/cm <sup>3</sup>
Specific gravity	1.09 – 1.13 g/cm <sup>3</sup>

## 10. Stability and Reactivity

Stability	Stable under normal conditions.
Incompatible	Strong alkalis, like sodium hydroxide and others.
Hazardous decomposition products	None Known. When burning toxic fumes may be liberated.

## 11. Toxicological Information (Based on HF)

Toxicity	Acute oral : LD50 : 1530 mg/kg, rat
	Acute dermal : LD50: 2740 mg/kg, rabbit
Carcinogenicity	No evidence of carcinogenic properties.
Mutagenicity	No evidence of mutagenic effects.
Teratogenicity	No evidence of teratogenic effects.

## 12. Ecological Information (based on acidity of product)

Acute toxicity – fish	Acidification of water is fatal to aquatic organisms.
Acute toxicity - daphnia	Acidification of water is fatal to aquatic organisms.

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Acute toxicity – algae	Acidification of water is fatal to plants.
Biodegradability	Expected to be harmless after neutralisation.

### 13. Disposal Considerations

Dilute product 1000 times when disposing small quantities and run to waste. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options. For small quantities neutralise with soda ash first.
Permissible under applicable rules, regulations, and/or laws governing your location.

### 14. Transport Information

UN No:	1790
Substance identity no	S006
ADR/RID class	Class 8: Corrosive liquid
IMDG – packaging group	II
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

EC Classification	Corrosive {C}, highly corrosive, <b>avoid contact with any tissue at all times.</b>
EC Risk phrases	R35/36/37/38, R41
EC Safety phrases	S26, S36/37/39, S45/46

### 16. Other Information

References: SABS 0265: 1999, SABS 0228: 1995, SABS ISO 11014-1: 1994, M.S.D.S. (Suppliers of raw's)
Issued by: Sabelo Dladla
<b>EMERGENCY NUMBERS: 011 406 4000 / 082 412 2298</b>

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.

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### APPENDIX A

Revision Date (dd/mm/yy)	Issued By	Revision History		Revision No.
		Description	DCN No.	
06/04/2011	Technical Manager	New Issue	MSDS S006	00
30/03/2015	Operations Director	Review	MSDS S006	01

CONTROLLED DOCUMENT

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