

## MATERIAL SAFETY DATA SHEET

**Description:** SAF -EA DELTA  
FORCE SCC1  
**Revision Number:** 01  
**Document Number:** MSDS C031



### THE OPTIMAL, NON TOXIC, ENVIRONMENTAL SOLUTION FOR ENCAPSULATION OF POLLUTANTS



SAF -EA DELTA FORCE SCC1 was developed for encapsulation of pollutants such as oil, diesel, petrol, grease, fats and heavy metals. Coating the polluted material with an unbreakable glass-like shell effectively locks the pollutant to the soil particles and no known chemical or extraction is able to dissolve and release the pollutant. SAF -EA DELTA FORCE SCC1 is prepared from natural mineral silicates, it is totally inert and is safe to use in any environmentally sensitive areas.

#### **SOIL REMEDIATION / HEAVY METAL ENCAPSULATION:**

Dilution can vary from 1:1 up to 1:3 depending on contamination and soil type. SAF -EA DELTA FORCE SCC1 can be sprayed directly on the surface and will penetrate into the soil matrix during the hardening process, where the pollutant in the top layers will be encapsulated. For pollutants up to 1 meter, loosen the soil to a depth of 500 mm and then spray SAF -EA DELTA FORCE SCC1 on to the surface. For deeper situated pollutants (up to 3 meters) SAF -EA DELTA FORCE SCC1 can be pumped directly through perforated pipes to the pollutant where the hardening will take place. The amount of SAF -EA DELTA FORCE SCC1 and the method of treatment depend on the geological conditions of the area to be treated. (Depending on the level of contamination, a second application may be necessary)

#### **ROADS:**

Use undiluted SAF -EA DELTA FORCE SCC1 for recent spills and at a 1:1 dilution rate for old spills. Spray product onto the contaminated surface, agitate if necessary and leave until dry. Road can now be re-opened.

#### **APPLICATION**

##### **CONCRETE, BRICKS and TILE STAINS:**

Pour a 1:3 dilution of SAF -EA DELTA FORCE SCC1 onto contaminated area, agitate and spread with a stiff yard broom. Leave for 15 minutes then add water whilst scrubbing. Rinse thoroughly. (More than one application might be necessary depending on the level of contamination)

<b>Prepared by:</b> Sabelo Dladla	<b>Approved by:</b> Doug Cutter
<b>Reviewed by:</b> Zanele Mthimunye	<b>Revision Date:</b> 20 May 2013
<b>Status:</b> Issued	<b>Issue Date:</b> 20 May 2013

It is the responsibility of the user to verify that this copy is the latest version.

## MATERIAL SAFETY DATA SHEET

**Description:** SAF –EA DELTA      **Revision Number:** 01  
FORCE SCC1  
**Document Number:** MSDS C031



### **NOTE**

SAF -EA DELTA FORCE SCC1 will etch glass  
Surfaces must be rinsed well to if a white residue is unacceptable.  
It is recommended that pre- and post-analysis be done to determine contamination levels and that rehabilitation be done via SAFIC and/or SAFIC approved contractors.

**THE RECOMMENDATIONS CONTAINED HERE-IN IS BASED ON LABORATORY TEST AND IN-FIELD 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

<b>Prepared by:</b> Sabelo Dladla	<b>Approved by:</b> Doug Cutter
<b>Reviewed by:</b> Zanele Mthimunye	<b>Revision Date:</b> 20 May 2013
<b>Status:</b> Issued	<b>Issue Date:</b> 20 May 2013

It is the responsibility of the user to verify that this copy is the latest version.

## MATERIAL SAFETY DATA SHEET

**Description:** SAF –EA DELTA      **Revision Number:** 01  
FORCE SCC1  
**Document Number:** MSDS C031



### Company Details

Name	S.A.F.I.C (PTY) LTD	Tel:	+27 11 406 4000
Address	32 Steele Street, Steeledale	Fax:	+27 11 406 4252
Postal Address	PO BOX 1754, Alberton North, 1450	e-mail:	<a href="mailto:technical@safic.co.za">technical@safic.co.za</a>

### 1. Product Identification

Trade Name	SAF -EA DELTA FORCE SCC1	Product code:	C031
Chemical Family	Sodium silicate in an aqueous solution and additives		
Chemical Name	Formulated chemical		
Product Use	Encapsulation of hydrocarbons and heavy metals		

### 2. Composition

CAS No.	Hazardous Components	Approximate %	Limit
6834-92-0	Sodium silicate	< 30	Skn-hmn 250 mg/24H SEV
EEC classification	Irritant (Xi), SAF- EA DELTA FORCE SCC1		
R Phrases	R36/38, SAF-EA DELTA FORCE SCC1		

### 3. Hazards Identification

Main hazard	Irritant
Fire	Non-flammable.
Inhalation	No hazard
Skin contact	Prolonged or frequent contact may lead to defatting of skin.
Eye contact	Symptoms: severe irritation of eye, burning
Ingestion	Symptom: nausea, burning of throat.

### 4. First Aid Measures

Inhalation	No effect: If in doubt remove to fresh air.
Skin contact	Remove contaminated clothing and wash contact areas well with soap and water.
Eye contact	Flush eyes with water for at least 15 minutes. Irrigate eyes thoroughly while lifting eyelids and rolling eyeballs. Seek medical attention, if irritation persists.
Ingestion	Drink plenty of water. Do not induce vomiting. If rapid recovery does not occur obtain medical attention.

### 5. Fire Fighting Measures

Extinguishing media	Product non-flammable. Use extinguishing agents suitable for surrounding fire.
Special hazards	None known
Protective clothing	Approved self contained breathing apparatus should be utilised or equivalent.

<b>Prepared by:</b> Sabelo Dladla	<b>Approved by:</b> Doug Cutter
<b>Reviewed by:</b> Zanele Mthimunye	<b>Revision Date:</b> 20 May 2013
<b>Status:</b> Issued	<b>Issue Date:</b> 20 May 2013

It is the responsibility of the user to verify that this copy is the latest version.

## MATERIAL SAFETY DATA SHEET

**Description:** SAF –EA DELTA      **Revision Number:** 01  
**FORCE SCC1**  
**Document Number:** MSDS C031



### 6. Accidental Release Measures

Person related safety precautions	Use alkali resistant gloves in case of spillage
Measures for environmental protection	Not applicable – the product was developed for the treatment of soil contaminated with various kinds of organic or inorganic pollutants. Do not allow large spillages to enter drains and watercourses
Measures for cleaning / collecting	Sand or other porous material can remove accidental spillage in large quantities. Product becomes inert once dry. See section 13

### 7. Handling & Storage

Handling	Avoid skin and eye contact. Product will etch glass.
Storage	Store in a cool (not freezing) dry area. Keep containers sealed.

### 8. Exposure Controls/Personal Protection

Workers should have access to an eye wash fountain. Normal industrial eye protection practices should be employed.
If the specific application may result in splashing, safety goggles (VNC11 supplier – MSA) should be utilised.
Neoprene (Technic 420-supplier MSA) gloves must be utilised.

### 9. Physical and Chemical Properties

Appearance	Colourless liquid
pH	11.0 – 12.0
Density	1.10– 1.20 g/cm <sup>3</sup>
Solubility (water)	100 %

### 10. Stability and Reactivity

Stability	Stable under normal conditions.
Conditions to avoid	Avoid contact with acids
Hazardous decomposition products	None

### 11. Toxicological Information

Toxicity - Acute oral	LD <sub>50</sub> (oral – rat): 1153 mg/kg
Acute dermal	250 mg/24H SEV ( skn – hmn)
Carcinogenicity	No evidence of carcinogenic properties
Mutagenicity	No evidence of mutagenic effects
Teratogenicity	No evidence of teratogenic effects
Reproductive hazards	Not expected to impair fertility

<b>Prepared by:</b> Sabelo Dladla	<b>Approved by:</b> Doug Cutter
<b>Reviewed by:</b> Zanele Mthimunye	<b>Revision Date:</b> 20 May 2013
<b>Status:</b> Issued	<b>Issue Date:</b> 20 May 2013

It is the responsibility of the user to verify that this copy is the latest version.

## MATERIAL SAFETY DATA SHEET

**Description:** SAF –EA DELTA      **Revision Number:** 01  
FORCE SCC1  
**Document Number:** MSDS C031



### 12. Ecological Information

SAF -EA DELTA FORCE SCC1 is totally miscible with water and will progressively be diluted if allowed to enter drains or watercourses. The product does not contain substances that are harmful to the environment, fish or wildlife. None of the substances in the product are classified as harmful or dangerous according to any EC rules relating to harmful substances. The product will be mineralised by the carbon dioxide in the air and the soil and transformed to insoluble silicates or silicic acid. The product is used for the treatment of soil contamination with various kinds of organic and inorganic pollutants with minimal impact on the environment.

### 13. Disposal Considerations

Minor spillages can be flushed out with plenty of water. Large quantities can be removed by sand or other porous material and disposed off according to local and national regulations. **Remark: the primary function of the product is the cleaning of contaminated soil.**

Empty containers may contain product residue and must be handled accordingly.

### 14. Transport Information

Substance identity no	C031
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

EEC Classification	Irritant (xi)
EC Risk phrases	R36/38
EC Safety phrases	S24/25

### 16. Other Information

Reference: SABS 0265: 1999, SABS 0228: 1995, SABS ISO 11014-1: 1994, M.S.D.S (Suppliers of raw's)

Issued by: Sabelo Dladla

**EMERGENCY NUMBERS: 011 406 4000 / 082 412 2298**

<b>Prepared by:</b> Sabelo Dladla	<b>Approved by:</b> Doug Cutter
<b>Reviewed by:</b> Zanele Mthimunye	<b>Revision Date:</b> 20 May 2013
<b>Status:</b> Issued	<b>Issue Date:</b> 20 May 2013

It is the responsibility of the user to verify that this copy is the latest version.

## MATERIAL SAFETY DATA SHEET

**Description:** SAF –EA DELTA      **Revision Number:** 01  
FORCE SCC1  
**Document Number:** MSDS C031



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.	
18/02/2011	Technical Manager	New Issue	MSDS C031	00
20/05/2013	Technical Manager	Document review and change of Company logo.	MSDS C031	01

**Prepared by:** Sabelo Dladla      **Approved by:** Doug Cutter  
**Reviewed by:** Zanele Mthimunye      **Revision Date:** 20 May 2013  
**Status:** Issued      **Issue Date:** 20 May 2013

It is the responsibility of the user to verify that this copy is the latest version.