

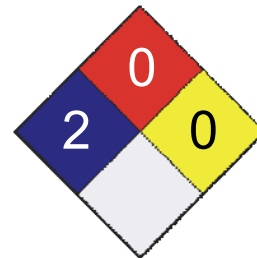
# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Product Name** Cal-Shield (4148)  
**CAS #** Mixture  
**Product use** Protectant  
**Manufacturer** Nu-Calgon  
 2008 Altom Court  
 St. Louis, MO 63146 US  
 Phone: 314-469-7000 / 800-554-5499  
 Emergency Phone: 1-800-424-9300 (CHEMTREC)

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 2
Flammability	0
Physical Hazard	0
Personal Protection	X



## 2. Hazards Identification

**Emergency overview** CAUTION  
 EYE IRRITANT. Skin irritation possible with prolonged exposure.

**Potential short term health effects**

**Routes of exposure** Eye, Skin contact, Inhalation, Ingestion.

**Eyes** May cause irritation.

**Skin** May cause irritation.

**Inhalation** May cause respiratory tract irritation.

**Ingestion** May cause stomach distress, nausea or vomiting.

**Target organs** Eyes. Respiratory system. Skin.

**Chronic effects** Prolonged or repeated exposure can cause drying, defatting and dermatitis.

**Signs and symptoms** Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

## 3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Isopropanol	67-63-0	1 - 5

## 4. First Aid Measures

**First aid procedures**

**Eye contact** Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.

**Skin contact** Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.

**Inhalation** If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

**Ingestion** Do not induce vomiting. Rinse mouth with water, then drink one or two glasses of water. Obtain medical attention. Never give anything by mouth if victim is unconscious, or is convulsing.

**Notes to physician** Symptoms may be delayed.

**General advice**

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	Not flammable by WHMIS/OSHA criteria.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water spray. Fog. Dry chemical. Foam.
<b>Unsuitable extinguishing media</b>	Not available
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	Not available
<b>Protective equipment for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon. Hydrogen fluoride.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available
<b>Sensitivity to static discharge</b>	Not available

## 6. Accidental Release Measures

<b>Personal precautions</b>	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
<b>Methods for containment</b>	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
<b>Methods for cleaning up</b>	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use.

## 7. Handling and Storage

<b>Handling</b>	Use good industrial hygiene practices in handling this material.
<b>Storage</b>	Keep out of reach of children. Store in a closed container away from incompatible materials.

## 8. Exposure Controls / Personal Protection

<b>Exposure limits</b>	
<b>Ingredient(s)</b>	<b>Exposure Limits</b>
Isopropanol	<b>ACGIH-TLV</b> TWA: 200 ppm STEL: 400 ppm <b>OSHA-PEL</b> TWA: 400 ppm
<b>Engineering controls</b>	General ventilation normally adequate.
<b>Personal protective equipment</b>	
<b>Eye / face protection</b>	Wear safety glasses with side shields.
<b>Hand protection</b>	Rubber gloves. Confirm with a reputable supplier first.
<b>Skin and body protection</b>	As required by employer code.
<b>Respiratory protection</b>	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Avoid breathing mists or vapors.
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

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## 9. Physical & Chemical Properties

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Appearance	liquid.
Color	amber
Form	Liquid
Odor	Characteristic
Odor threshold	Not available
Physical state	Liquid
pH	7.9 (Concentrate)
Melting point	Not available
Freezing point	0 °C (32.00 °F)
Boiling point	100 °C (212.00 °F)
Flash point	None to boiling
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1.01
Octanol/water coefficient	Not available
Solubility (H <sub>2</sub> O)	Complete
Auto-ignition temperature	Not available
VOC (Weight %)	Not available
Viscosity	Not available
Percent volatile	90

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## 10. Chemical Stability & Reactivity Information

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Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Oxidizers. Acids.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Hydrogen fluoride.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

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## 11. Toxicological Information

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### Component analysis - LC50

Ingredient(s)	LC50
Isopropanol	16970 mg/l/4h rat

### Component analysis - Oral LD50

Ingredient(s)	LD50
Isopropanol	4396 mg/kg rat

### Effects of acute exposure

Eye	May cause irritation.
Skin	May cause irritation.
Inhalation	May cause respiratory tract irritation.
Ingestion	May cause stomach distress, nausea or vomiting.
Sensitization	Non-hazardous by WHMIS/OSHA criteria.
Chronic effects	Non-hazardous by WHMIS/OSHA criteria.

<b>Carcinogenicity</b>	Non-hazardous by WHMIS/OSHA criteria.	
<b>ACGIH - Threshold Limit Values - Carcinogens</b>		
Isopropanol	67-63-0	A4 - Not Classifiable as a Human Carcinogen
<b>IARC - Group 3 (Not Classifiable)</b>		
Isopropanol	67-63-0	Monograph 71 [1999], Supplement 7 [1987], Monograph 15 [1977]
<b>Mutagenicity</b>	Non-hazardous by WHMIS/OSHA criteria.	
<b>Reproductive effects</b>	Non-hazardous by WHMIS/OSHA criteria.	
<b>Teratogenicity</b>	Non-hazardous by WHMIS/OSHA criteria.	

## 12. Ecological Information

<b>Ecotoxicity</b>	Components of this product have been identified as having potential environmental concerns.	
<b>Ecotoxicity - Freshwater Algae Data</b>		
Isopropanol	67-63-0	96 Hr EC50 Scenedesmus subspicatus: >1000 mg/L; 72 Hr EC50 Scenedesmus subspicatus: >1000 mg/L
<b>Ecotoxicity - Freshwater Fish Species Data</b>		
Isopropanol	67-63-0	96 Hr LC50 Pimephales promelas: 9640 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 94900 mg/L [flow-through] (29 days old); 96 Hr LC50 Pimephales promelas: 61200 mg/L [flow-through] (31 days old)
<b>Ecotoxicity - Microtox Data</b>		
Isopropanol	67-63-0	5 Min EC50 Photobacterium phosphoreum: 35390 mg/L
<b>Ecotoxicity - Water Flea Data</b>		
Isopropanol	67-63-0	48 Hr EC50 Daphnia magna: 13299 mg/L
<b>Environmental effects</b>	Not available	
<b>Aquatic toxicity</b>	Not available	
<b>Persistence / degradability</b>	Not available	
<b>Bioaccumulation / accumulation</b>	Not available	
<b>Partition coefficient</b>	Not available	
<b>Mobility in environmental media</b>	Not available	
<b>Chemical fate information</b>	Not available	

## 13. Disposal Considerations

<b>Waste codes</b>	Not available
<b>Disposal instructions</b>	Dispose in accordance with all applicable regulations.
<b>Waste from residues / unused products</b>	Not available
<b>Contaminated packaging</b>	Not available

## 14. Transport Information

<b>U.S. Department of Transportation (DOT)</b>	Not regulated as dangerous goods.
<b>Transportation of Dangerous Goods (TDG - Canada)</b>	Not regulated as dangerous goods.

## 15. Regulatory Information

<b>Canadian federal regulations</b>	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.	
<b>Canada - WHMIS - Ingredient Disclosure List</b>		
Isopropanol	67-63-0	1 %

**US Federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

**U.S. - CERCLA/SARA - Section 313 - Emission Reporting**

Isopropanol 67-63-0 1.0 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)

**Occupational Safety and Health Administration (OSHA)**

29 CFR 1910.1200 hazardous chemical Yes

**CERCLA (Superfund) reportable quantity**

None

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** Yes

**Clean Air Act (CAA)** Not available

**Clean Water Act (CWA)** Not available

**Safe Drinking Water Act (SDWA)** Not available

**Drug Enforcement Agency (DEA)** Not available

**Food and Drug Administration (FDA)** Not available

**WHMIS status** Controlled

**WHMIS classification** Class D - Division 2B

**WHMIS labeling**



**State regulations**

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances**

Isopropanol 67-63-0 Present

**U.S. - Massachusetts - Right To Know List**

Isopropanol 67-63-0 Present

**U.S. - Minnesota - Hazardous Substance List**

Isopropanol 67-63-0 Present

**U.S. - New Jersey - Right to Know Hazardous Substance List**

Isopropanol 67-63-0 sn 1076; sn 2381 (strong-acid process manufacture)

**U.S. - Pennsylvania - RTK (Right to Know) List**

Isopropanol 67-63-0 Environmental hazard

**U.S. - Rhode Island - Hazardous Substance List**

Isopropanol 67-63-0 Toxic; Flammable

**Inventory name**

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

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## 16. Other Information

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**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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