



SAFETY DATA SHEET

This Safety Data Sheet Complies With the Requirements of: 29 CFR 1910.1200

Revision Date: 06-Apr-2015

Version 1

1. IDENTIFICATION

Product Identifier

Product Name CORR-SHIELD CS-1103

Other Means of Identification

Product Code CS-1103

UN/ID no UN1993

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Corrosion Inhibitor.

Details of the Supplier of the Safety Data Sheet

Aegis Chemical Solutions
Corporate Headquarters
4560 Kendrick Plaza Dr., Ste 190
Houston, TX 77032
Telephone: 281-258-4095

Emergency Telephone Number

Company Phone Number 281-258-4095

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This product is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin Corrosion/Irritation	Category 1 Sub-category A
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity (single exposure)	Category 1
Flammable liquids	Category 3

Label Elements

Emergency Overview

Danger

Hazard Statements

Harmful if swallowed
Harmful in contact with skin
Harmful if inhaled
Causes severe skin burns and eye damage
Causes damage to organs
Flammable liquid and vapor

**Color** Amber**Physical State** Liquid**Odor** Rotten-egg like**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Wear protective gloves/protective clothing/eye protection/face protection
 Use only outdoors or in a well-ventilated area
 Do not breathe dust/fume/gas/mist/vapors/spray
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting/spill-response/equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician
 Call a POISON CENTER or doctor/physician if you feel unwell
 Wash contaminated clothing before reuse
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER or doctor/physician if you feel unwell
 Immediately call a POISON CENTER or doctor/physician
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth
 Do NOT induce vomiting
 In case of fire: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards Not Otherwise Classified (HNOC)

Not applicable

Other Information

Unknown acute toxicity 35% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical Name	CAS No	Weight-%
Isopropyl alcohol	67-63-0	7
Methyl alcohol	67-56-1	7
Acetic acid	64-19-7	5.5

Thioglycolic acid	68-11-1	< 5
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If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of First Aid Measures

General Advice	Immediate medical attention is required. If symptoms persist, call a physician.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately. If symptoms persist, call a physician.
Skin Contact	Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Immediate medical attention is not required.
Inhalation	Immediate medical attention is required. Remove to fresh air. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, give oxygen. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician. Move to fresh air in case of accidental inhalation of vapors or decomposition products.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Drink plenty of water. Clean mouth with water and drink afterwards plenty of water. Call a physician.
Self-protection of the first aider	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms No information available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to Physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use. Dry chemical. Carbon dioxide (CO₂). Water spray (fog). Alcohol resistant foam.

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising From the Chemical

Keep product and empty container away from heat and sources of ignition. Risk of ignition.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency procedures

Personal Precautions Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges.

Environmental Precautions

Environmental Precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

Methods and Material for Containment and Cleaning Up

Methods for Containment Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

Methods for Cleaning Up Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Sweep up and shovel into suitable containers for disposal. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers. Take precautionary measures against static discharges.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation. All equipment used when handling the product must be grounded. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Keep away from heat.

Incompatible Materials Strong oxidizing agents. Acids. Chlorinated compounds.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Isopropyl alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m ³ STEL: 500 ppm STEL: 1225 mg/m ³
Methyl alcohol 67-56-1	STEL: 250 ppm TWA: 200 ppm S*	TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m ³ (vacated) S*	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³
Acetic acid 64-19-7	STEL: 15 ppm TWA: 10 ppm	TWA: 10 ppm TWA: 25 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 25 mg/m ³	IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³

Thioglycolic acid 68-11-1	TWA: 1 ppm S*	(vacated) TWA: 1 ppm (vacated) TWA: 4 mg/m ³ (vacated) S*	TWA: 1 ppm TWA: 4 mg/m ³
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NIOSH IDLH *Immediately Dangerous to Life or Health*

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate Engineering Controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual Protection Measures, Such as Personal Protective Equipment

Eye/Face Protection Tight sealing safety goggles. Face protection shield.

Skin and Body Protection No special technical protective measures are necessary. Wear protective gloves and protective clothing.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Liquid	Color	Amber
Odor	Rotten-egg like		
Odor Threshold	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	~ 4	
Melting Point/Freezing Point	No information available	
Boiling Point/Boiling Range	No information available	
Flash Point	~ 60 °C / 140 °F	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper Flammability Limit:	No information available	
Lower Flammability Limit:	No information available	
Vapor Pressure	No information available	
Vapor Density	No information available	
Specific Gravity	0.9913	
Water Solubility	Soluble in water	
Solubility in Other Solvents	No information available	
Partition Coefficient	No information available	
Autoignition Temperature	No information available	
Decomposition Temperature	No information available	
Kinematic Viscosity	No information available	
Dynamic Viscosity	No information available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Other Information

Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk Density	No information available

10. STABILITY AND REACTIVITY**Reactivity**

No data available.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Heat, flames and sparks.

Incompatible Materials

Strong oxidizing agents. Acids. Chlorinated compounds.

Hazardous Decomposition Products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION**Information on Likely Routes of Exposure**

Product Information Information given is based on available data of the components and the toxicology of similar products. The product has not been tested.

Inhalation Harmful by inhalation. May cause drowsiness or dizziness.

Eye Contact Risk of serious damage to eyes. May cause burns.

Skin Contact Harmful in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion Harmful if swallowed. May cause blindness if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Isopropyl alcohol 67-63-0	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m ³ (Rat) 4 h
Methyl alcohol 67-56-1	= 6200 mg/kg (Rat)	= 15800 mg/kg (Rabbit)	= 22500 ppm (Rat) 8 h = 64000 ppm (Rat) 4 h
Acetic acid 64-19-7	= 3310 mg/kg (Rat)	= 1060 mg/kg (Rabbit)	= 11.4 mg/L (Rat) 4 h
Thioglycolic acid 68-11-1	= 73 mg/kg (Rat)	= 848 mg/kg (Rabbit)	= 56.7 ppm (Rat) 4 h

Information on Toxicological Effects

Symptoms No information available.

Delayed and Immediate Effects as Well as Chronic Effects From Short and Long-term Exposure

Sensitization	No information available.
Germ Cell Mutagenicity	Not known to cause heritable genetic damage.
Carcinogenicity	No information available.
Reproductive Toxicity	This product does not contain any known or suspected reproductive hazards.

Teratogenicity	Not known to cause birth defects or have a deleterious effect on a developing fetus.
STOT - Single Exposure	Optic nerve. Liver. Kidney. Central nervous system.
STOT - Repeated Exposure	No information available.
Chronic Toxicity	Avoid repeated exposure.
Target Organ Effects	Central nervous system, Eyes, Gastrointestinal tract (GI), Respiratory system, Skin, Teeth.
Aspiration Hazard	No information available.

Numerical Measures of Toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	478 mg/kg
ATEmix (dermal)	1856 mg/kg
ATEmix (inhalation-dust/mist)	2.681 mg/l
ATEmix (inhalation-vapor)	799 mg/l

12. ECOLOGICAL INFORMATION**Ecotoxicity**

47% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical Name	Algae/Aquatic Plants	Fish	Crustacea
Isopropyl alcohol 67-63-0	1000: 96 h Desmodemus subspicatus mg/L EC50 1000: 72 h Desmodemus subspicatus mg/L EC50	11130: 96 h Pimephales promelas mg/L LC50 static 1400000: 96 h Lepomis macrochirus µg/L LC50 9640: 96 h Pimephales promelas mg/L LC50 flow-through	13299: 48 h Daphnia magna mg/L EC50
Methyl alcohol 67-56-1	-	28200: 96 h Pimephales promelas mg/L LC50 flow-through 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	-
Acetic acid 64-19-7	-	79: 96 h Pimephales promelas mg/L LC50 static 75: 96 h Lepomis macrochirus mg/L LC50 static	47: 24 h Daphnia magna mg/L EC50 65: 48 h Daphnia magna mg/L EC50 Static

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Chemical Name	Partition Coefficient
Isopropyl alcohol 67-63-0	0.05
Methyl alcohol 67-56-1	-0.77
Acetic acid 64-19-7	-0.31

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Do not reuse container. Empty drums should be completely drained properly bunged and promptly returned to a drum reconditioner, or properly disposed.

US EPA Waste Number D001, U154

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Methyl alcohol 67-56-1	-	Included in waste stream: F039	-	U154

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Isopropyl alcohol 67-63-0	Toxic Ignitable
Methyl alcohol 67-56-1	Toxic Ignitable
Acetic acid 64-19-7	Toxic Corrosive Ignitable

14. TRANSPORT INFORMATION

DOT

UN/ID no UN1993
Proper Shipping Name Flammable liquids, n.o.s. (contains methanol)
Hazard Class 3
Packing Group III

Reportable Quantity (RQ) There are no substances present in this product which are in a quantity greater than those defined in the Reportable Quantity table for "Hazardous Substance" in 49 CFR 171.8.

DOT Description UN1993, , Flammable liquids, n.o.s.(contains methanol), 3, PG III

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
ENCS Does not comply
IECSC Complies
KECL Does not comply
PICCS Does not comply
AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical Name	SARA 313 - Threshold Values %
Methyl alcohol - 67-56-1	1.0
Isopropyl alcohol - 67-63-0	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Acetic acid 64-19-7	5000 lb	-	-	X

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Methyl alcohol 67-56-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Acetic acid 64-19-7	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Methyl alcohol - 67-56-1	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Methyl alcohol 67-56-1	X	X	X
Isopropyl alcohol 67-63-0	X	X	X
Acetic acid 64-19-7	X	X	X
Thioglycolic acid 68-11-1	X	X	X

U.S. EPA Label Information

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health Hazards 2	Flammability 2	Instability 0	Physical and Chemical Properties -
<u>HMIS</u>	Health Hazards 2	Flammability 2	Physical Hazards 0	Personal Protection X

Revision Date: 06-Apr-2015

Revision Note:

This SDS was updated to comply with the 2012 OSHA Hazard Communication Standard.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet