



CHEMICAL PRODUCT SAFETY DATA SHEET

Prepared in accordance with GB/T 16483 and GB/T 17519.

1. Chemical product and company identification

Product name	SP-400™ Corrosion Inhibitor (aerosol)
Product code	03282, PR03282
Company name	CRC Industries, Inc.
Address	885 Louis Dr. Warminster, PA 18974 US
Telephone	
General Information	1-215-674-4300
Technical Assistance	1-800-521-3168
Customer Service	1-800-272-4620
24-Hour Emergency (CHEMTREC)	+86 532 83889090 (China) 1-703-527-3887 (International)
Website	www.crcindustries.com

Recommended use and Limitations on use

Recommended use	Corrosion inhibitor
Issue date	11-26-2014
Supersedes date	11-25-2014

2. Hazards identification

Emergency overview Extremely flammable aerosol. Pressurized container may explode when exposed to heat or flame. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. May be harmful if swallowed. May be harmful in contact with skin. Causes skin irritation. Causes serious eye irritation. Possible reproductive hazard. May cause damage to organs through prolonged or repeated exposure. Dangerous for the environment if discharged into watercourses.

GHS-classification

Physical hazards	Aerosols	Category 1
Health hazards	Acute toxicity, oral	Category 5
	Acute toxicity, dermal	Category 5
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Reproductive toxicity (fertility)	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2 (eyes, skin, respiratory system, central nervous system)
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
Other hazards which do not result in classification	Not classified.	

Label elements

Pictograms



GHS-labeling

Signal word Danger

Hazard statement	Extremely flammable aerosol. Pressurized container: May burst if heated. May be harmful if swallowed. May be harmful in contact with skin. Causes skin irritation. Causes serious eye irritation. Suspected of damaging fertility or the unborn child by ingestion. May cause drowsiness or dizziness. May cause damage to organs (Central nervous system, Respiratory system, Eyes, Skin) through prolonged or repeated exposure. May be fatal if swallowed and enters airways. Toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not breathe gas/fumes/vapor/spray. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.
Response	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (see this label). If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. If exposed or concerned: Get medical attention. Collect spillage.
Storage	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Physical and chemical hazards	Extremely flammable aerosol. Pressurized container: May burst if heated.
Health hazards	May be fatal if swallowed and enters airways. Suspected of damaging fertility. May cause drowsiness and dizziness. May be harmful if swallowed. May be harmful if absorbed through skin. Causes skin irritation. Causes serious eye irritation. May cause damage to organs (Central nervous system, Respiratory system, eyes, skin) through prolonged or repeated exposure.
Environmental hazards	Toxic to aquatic life with long lasting effects.

3. Composition/information on ingredients

Substance/mixture	Mixture	CAS Number	Concentration (%)
Chemical name			
Liquefied Petroleum Gas		68476-86-8	20 - 30
2-Methylpentane		107-83-5	10 - 20
Calcium oxidate		Proprietary	10 - 20
Naphtha (petroleum), hydrotreated light		64742-49-0	10 - 20
Stoddard Solvent		8052-41-3	10 - 20
Dipropylene glycol monomethyl ether		34590-94-8	3 - 5
Distillates (petroleum), hydrotreated light		64742-47-8	3 - 5
Microcrystalline Wax		63231-60-7	1 - 3
Oil soluble calcium sulfonates		Proprietary	1 - 3
n-Hexane		110-54-3	< 1

4. First aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Provide oxygen or artificial respiration if needed. Get medical attention if symptoms persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists. Take off contaminated clothing and wash before reuse.
Eye contact	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Rinse mouth. Do not induce vomiting. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms and health effects	Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Aspiration may cause pulmonary edema and pneumonitis. Skin irritation. May cause redness and pain. Causes serious eye irritation. Prolonged exposure may cause chronic effects.

Expected acute symptoms and delayed symptoms	Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Aspiration may cause pulmonary edema and pneumonitis. Skin irritation. May cause redness and pain. Causes serious eye irritation. Prolonged exposure may cause chronic effects.
Personal protection for first-aid responders	IF exposed or concerned: Get medical advice/attention. 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.
Notes to physician	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

5. Fire-fighting measures

Extinguishing media	Alcohol resistant foam. Water spray. Dry chemical powder. Carbon dioxide (CO2).
Extinguishing media to avoid	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards	Contents under pressure. Pressurized container may rupture when exposed to heat or flame. During fire, gases hazardous to health may be formed. This product is a poor conductor of electricity and can become electrostatically charged.
Special fire fighting procedures	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Protection of fire-fighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
General fire hazards	Extremely flammable aerosol.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Use water spray to cool unopened containers. In the event of fire and/or explosion do not breathe fumes.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use personal protection recommended in Section 8 of the SDS.
Environmental precautions	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.
Clean-up methods and materials and containment measures	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS. Prevent entry into waterways, sewer, basements or confined areas.
Prevention of secondary hazards	Not available.

7. Handling and storage

Handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Static electricity and formation of sparks must be prevented. Do not re-use empty containers. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Wash contaminated clothing before reuse. Avoid release to the environment.
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Storage Level 3 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Exposure limits

China

Components	Type	Value	Form
Calcium carbonate (CAS 471-34-1)	TWA	8 mg/m3	Total dust.
		4 mg/m3	Respirable dust.
Dipropylene glycol monomethyl ether (CAS 34590-94-8)	STEL	900 mg/m3	
	TWA	600 mg/m3	
Isopentane (CAS 78-78-4)	STEL	1000 mg/m3	
	TWA	500 mg/m3	
n-Hexane (CAS 110-54-3)	STEL	180 mg/m3	
	TWA	100 mg/m3	
n-Pentane (CAS 109-66-0)	STEL	1000 mg/m3	
	TWA	500 mg/m3	

Biological limit values

China. Biological limit values for occupational exposure (WS/T 110 to 115, 239 to 243, and 264 to 267)

Components	Value	Determinant	Specimen	Sampling Time
n-Hexane (CAS 110-54-3)	4 mg/l	2,5-Hexanedione	Urine	*
	35 mmol/l	2,5-Hexanedione	Urine	*

* - For sampling details, please see the source document.

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedione, without hydrolysis	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

China OELs: Skin designation

DIPROPYLENE GLYCOL METHYL ETHER (CAS 34590-94-8)	Can be absorbed through the skin.
N-HEXANE (CAS 110-54-3)	Can be absorbed through the skin.

Control parameters

Follow standard monitoring procedures.

Engineering measures

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Personal protective equipment

Respiratory protection

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Hand protection

Wear protective gloves such as: Neoprene. Nitrile.

Eye protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear appropriate chemical resistant clothing.

Hygiene measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Liquid.
Color	Dark amber.
Odor	Petroleum.
pH	Not available.
Melting point/freezing point	-244.7 °F (-153.7 °C) estimated
Boiling point, initial boiling point, and boiling range	118.4 °F (48 °C) estimated
Flash point	< 0 °F (< -17.8 °C) Tag Closed Cup
Flammability limit - lower (%)	0.7 % estimated
Flammability limit - upper (%)	14 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	1437.2 hPa estimated
Vapor density	Not available.
Relative density	0.72 estimated
Density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	404.6 °F (207 °C) estimated
Decomposition temperature	Not available.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Oxidizing agents.
Hazardous decomposition products	Carbon oxides. Aldehydes.

11. Toxicological information

Acute toxicity	Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May be fatal if swallowed and enters airways. May be harmful in contact with skin. May be harmful if swallowed.
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Product	Species	Test Results
SP-400™ Corrosion Inhibitor (aerosol)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	4361.644 mg/kg estimated
<i>Inhalation</i>		
LC50	Rat	28.2233 mg/l estimated
<i>Oral</i>		
LD50	Rat	4778.8735 mg/kg estimated
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.	

Symptoms	Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Aspiration may cause pulmonary edema and pneumonitis. Skin irritation. May cause redness and pain. Causes serious eye irritation.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitization	Due to lack of data the classification is not possible.
Skin sensitization	Not classified.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Stoddard Solvent (CAS 8052-41-3)	3 Not classifiable as to carcinogenicity to humans.
Toxic to reproduction	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity following single exposure	May cause drowsiness and dizziness.
Specific target organ toxicity following repeated exposure	May cause damage to organs (Central nervous system, Respiratory system, Eyes, Skin) through prolonged or repeated exposure.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicological data

Components	Species	Test Results
Calcium carbonate (CAS 471-34-1)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>) > 56000 mg/l, 96 hours
Dipropylene glycol monomethyl ether (CAS 34590-94-8)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Daphnia > 5000 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 10000 mg/l, 96 hours
Distillates (petroleum), hydrotreated light (CAS 64742-47-8)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 45 mg/l, 96 hours
n-Hexane (CAS 110-54-3)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 2.101 - 2.981 mg/l, 96 hours
Ecotoxicity	Toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.	
Persistence and degradability	No data is available on the degradability of this product.	
Bioaccumulation		
Bioaccumulative potential		
Octanol/water partition coefficient log Kow		
2,2-Dimethylbutane		3.82
2,3-Dimethylbutane		3.42
2-Methylpentane		3.74
3-Methylpentane		3.6
Isopentane		2.3
n-Hexane		3.9
n-Pentane		3.39
Stoddard Solvent		3.16 - 7.15
Mobility in soil	Not available.	

Other hazardous effects Not available.

13. Disposal considerations

Residual waste Dispose of in accordance with local regulations.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Recommended methods for final destination

Local disposal regulations Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national regulations.

14. Transport information

CNDG

UN number UN1950

UN proper shipping name Aerosols, flammable, (each not exceeding 1 L capacity)

Transport hazard class(es)

Class 2.1

Subsidiary risk -

Label(s) 2.1

Packing group Not applicable.

Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number UN1950

UN proper shipping name Aerosols, flammable, Limited Quantity

Transport hazard class(es)

Class 2.1

Subsidiary risk -

Packing group Not applicable.

Environmental hazards No.

ERG Code 10L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Allowed.

Cargo aircraft only Allowed.

IMDG

UN number UN1950

UN proper shipping name AEROSOLS, LIMITED QUANTITY

Transport hazard class(es)

Class 2

Subsidiary risk -

Packing group Not applicable.

Environmental hazards

Marine pollutant No.

EmS F-D, S-U

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

CNDG; IATA; IMDG**15. Regulatory information****International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Applicable regulations

This safety data sheet conforms to the following laws, regulations and standards:

Regulations on the Control over Safety of Dangerous Chemicals

Regulations on Labor Protection in Workplaces Where Toxic Products Are Used

Measures for the Safe Use of Chemicals in Workplaces

Safety Data Sheet for Chemical Products - Content and Order of Sections (GB/T 16483-2008)

General Rules for Preparation of Precautionary Labels for Chemicals (GB15258-2009)

Packing Symbol of Dangerous Goods(GB190-2009)

Packing - Pictorial Marking for Handling of Goods (GB/T191-2009)

General Rule For Classification and Hazard Communication of Chemicals (GB 13690-2009) and Dangerous Chemical Products

2,2-Dimethylbutane (CAS 75-83-2)

2,3-Dimethylbutane (CAS 79-29-8)

2-Methylpentane (CAS 107-83-5)

3-Methylpentane (CAS 96-14-0)

Isopentane (CAS 78-78-4)

n-Hexane (CAS 110-54-3)

n-Pentane (CAS 109-66-0)

Occupational exposure limits for hazardous agents in the workplace (GBZ 2.1-2007)

Calcium carbonate (CAS 471-34-1)

Dipropylene glycol monomethyl ether (CAS 34590-94-8)

Isopentane (CAS 78-78-4)

n-Hexane (CAS 110-54-3)

n-Pentane (CAS 109-66-0)

National Catalogue of Hazardous Wastes

Distillates (petroleum), hydrotreated light paraffinic (CAS 64742-55-8)

Petrolatum, Micro Soft Wax (CAS 8009-03-8)

Stoddard Solvent (CAS 8052-41-3)

Restricted Import/Export Toxic Chemical List (MEP and GCA Announcement No. 2008-66, Dec. 1, 2008, amended through MEP and Customs Notice No. 2011-91, December 28, 2011)

Not regulated.

Classification and code of dangerous goods (GB6944-2005)

Regulated.

List of Dangerous Goods (GB 12268-2005)

Regulated.

The Principle of Classification of Transport Packaging Groups of Dangerous Goods (GB/T15098-2008)

Regulated.

General Specifications for Transport Packages of Dangerous Goods (GB 12463-2009)

Regulated.

Regulations on Road Transport of Dangerous Goods

Regulated.

Regulations on Rail Road Transport of Dangerous Goods

Regulated.

UN Recommendations on the Transport of Dangerous Goods (UN RTDG)Regulated.

16. Other information**References**

EPA: AQUIRE database

NLM: Hazardous Substances Data Base

US. IARC Monographs on Occupational Exposures to Chemical Agents

Further information

CRC # 522G-H

Disclaimer

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.