

## Section 1. Identification

**Product name** : CRO9159 CORROSION INHIBITOR  
**Product code** : CRO9159

### Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** : Corrosion Inhibitor

**Print date** : 9/8/2016  
**Validation date** : 9/8/2016  
**Version** : 1.01

**Supplier's details** : Baker Petrolite LLC  
12645 W. Airport Blvd.  
Sugar Land, TX 77478  
For Product Information/SDSs Call: 800-231-3606  
(8:00 a.m. - 5:00 p.m. CST, Monday - Friday) 281-276-5400

**Emergency telephone number (with hours of operation)** : CHEMTREC: 800-424-9300 (U.S. 24 hour)  
Baker Petrolite: 800-231-3606  
(001)281-276-5400  
CANUTEC: 613-996-6666 (Canada 24 hours)  
CHEMTREC Int'l 01-703-527-3887 (International 24 hour)

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 3  
SKIN IRRITATION - Category 2  
SERIOUS EYE DAMAGE - Category 1  
AQUATIC HAZARD (ACUTE) - Category 2  
AQUATIC HAZARD (LONG-TERM) - Category 3

### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : Flammable liquid and vapor.  
Causes serious eye damage.  
Causes skin irritation.  
Toxic to aquatic life.  
Harmful to aquatic life with long lasting effects.

### Precautionary statements

## Section 2. Hazards identification

- Prevention** : Wear protective gloves: > 8 hours (breakthrough time): Nitrile or Neoprene gloves.. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Avoid release to the environment. Wash hands thoroughly after handling.
- Response** : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. 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 physician.
- Storage** : Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	%	CAS number
Phosphates	1 - 5	Trade secret.
Quaternary ammonium chloride	1 - 5	Trade secret.
Light aromatic naphtha	1 - 5	64742-95-6
Amine derivative	1 - 5	Trade secret.
1,2,4-Trimethylbenzene	1 - 5	95-63-6
Fatty amine	0.1 - 1	Trade secret.
Hydrogen sulfide	<0.1	7783-06-4

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush the eye(s) continuously with lukewarm, gently flowing water for at least 20-60 minutes while holding the eyelid(s) open. Check for and remove any contact lenses. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash affected area with soap and mild detergent for at least 20 - 60 minutes. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

## Section 4. First aid measures

- Ingestion** : Get medical attention immediately. Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye damage.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Causes skin irritation.  
**Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : pain, watering, redness  
**Inhalation** : No specific data.  
**Skin contact** : pain or irritation, redness, blistering may occur  
**Ingestion** : stomach pains

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.  
**Specific treatments** : No specific treatment.  
**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.  
**Unsuitable extinguishing media** : Do not use water jet.

### Specific hazards arising from the chemical

- : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. This material is toxic to aquatic life. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

### Hazardous thermal decomposition products

- : carbon dioxide, carbon monoxide, nitrogen oxides, sulfur oxides, phosphorus oxides

## Section 5. Fire-fighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Dike spill area and do not allow product to reach sewage system or surface or ground water. Notify any reportable spill to authorities. (See section 12 for environmental risks and 13 for disposal information.) Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

If RQ (Reportable Quantity) is exceeded, report to National Spill Response Office at 1-800-424-8802.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use only non-sparking tools. Take precautionary measures against electrostatic discharges.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

## Section 7. Handling and storage

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Phosphates	None.
Quaternary ammonium chloride	None.
Light aromatic naphtha	None.
Amine derivative	None.
1,2,4-Trimethylbenzene	<p><b>ACGIH TLV (United States, 4/2014).</b>            TWA: 123 mg/m<sup>3</sup>, 0 times per shift, 8 hours.            TWA: 25 ppm, 0 times per shift, 8 hours.  <b>OSHA PEL 1989 (United States, 3/1989).</b>            TWA: 125 mg/m<sup>3</sup>, 0 times per shift, 8 hours.            TWA: 25 ppm, 0 times per shift, 8 hours.</p>
Fatty amine	None.
Hydrogen sulfide	<p><b>ACGIH TLV (United States, 4/2014).</b>            STEL: 5 ppm, 0 times per shift, 15 minutes.            TWA: 1 ppm, 0 times per shift, 8 hours.  <b>OSHA PEL 1989 (United States, 3/1989).</b>            STEL: 21 mg/m<sup>3</sup>, 0 times per shift, 15 minutes.            STEL: 15 ppm, 0 times per shift, 15 minutes.            TWA: 14 mg/m<sup>3</sup>, 0 times per shift, 8 hours.            TWA: 10 ppm, 0 times per shift, 8 hours.  <b>OSHA PEL Z2 (United States, 2/2013).</b>            AMP: 50 ppm, 0 times per shift, 10 minutes.            CEIL: 20 ppm, 0 times per shift, 0 hours.</p>

Consult local authorities for acceptable exposure limits.

If OSHA permissible exposure levels are shown above they are the OSHA 1989 levels or are from subsequent OSHA regulatory actions. Although the 1989 levels have been vacated the 11th Circuit Court of Appeals, Baker Hughes recommends that these lower exposure levels be observed as reasonable worker protection.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Individual protection measures

## Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.
- Eye/face protection** : Wear chemical safety goggles. When transferring material wear face-shield in addition to chemical safety goggles. If inhalation hazards exist, a full-face respirator may be required instead.
- Hand protection** : Chemical-resistant gloves: Nitrile or Neoprene gloves.
- Skin protection** : Wear long sleeves and chemical resistant apron to prevent repeated or prolonged skin contact.
- Respiratory protection** : If a risk assessment indicates it is necessary, use a properly fitted, air purifying or supplied air respirator complying with an approved standard. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid. [Opaque.]
- Color** : Tan. [Light]
- Odor** : Amine-like. Mercaptan. [Slight]
- Odor threshold** : Not available.
- pH** : 3.3 [Conc. (% w/w): 5%]  
: 5% of product in 75% isopropanol / 25% water solution
- Melting/freezing point** : Not available.
- Boiling point** : Not available.
- Initial Boiling Point** : Not available.
- Flash point** : Closed cup: 50.6°C (123.1°F) [TCC]
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : >1 [Air = 1]
- Relative density** : 0.992 (22.2°C)
- Density** : 8.26 (lbs/gal)
- Solubility in water** : Dispersible
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (16°C):
- VOC** : Not available.
- Pour Point** : Not available.

## Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
- Incompatible materials** : Reactive or incompatible with the following materials: oxidizing materials.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Phosphates	LD50 Dermal	Rabbit	>8000 mg/kg	-
	LD50 Oral	Rat	9200 mg/kg	-
Quaternary ammonium chloride	LD50 Dermal	Rat	1664 mg/kg	-
	LD50 Oral	Rat	295 mg/kg	-
Light aromatic naphtha	LD50 Oral	Rat	2900 mg/kg	-
Amine derivative	LD50 Dermal	Rabbit	>23500 mg/kg	-
	LD50 Oral	Rat	>19000 mg/kg	-
1,2,4-Trimethylbenzene	LC50 Inhalation Vapor	Rat	18000 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	5 g/kg	-
Fatty amine	LD50 Dermal	Rat	5600 mg/kg	-
	LD50 Oral	Rat	1330 mg/kg	-
Hydrogen sulfide	LC50 Inhalation Gas.	Rat	444 ppm	4 hours
	LC50 Inhalation Vapor	Rat	700 mg/m <sup>3</sup>	4 hours
	LCLo Inhalation Gas.	Man	634 ppm	1 hours

#### Irritation/Corrosion

No applicable toxicity data

#### Sensitization

No applicable toxicity data

#### Mutagenicity

No applicable toxicity data

#### Carcinogenicity

No applicable toxicity data

#### Reproductive toxicity

No applicable toxicity data

#### Teratogenicity

No applicable toxicity data



## Section 11. Toxicological information

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Light aromatic naphtha 1,2,4-Trimethylbenzene	Category 3 Category 3	Not applicable. Not applicable.	Narcotic effects Respiratory tract irritation
Hydrogen sulfide	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not applicable.

### Aspiration hazard

Name	Result
Light aromatic naphtha	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Routes of entry anticipated: Dermal, Inhalation.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	11531.2 mg/kg
Dermal	42930.4 mg/kg
Inhalation (vapors)	1368.5 mg/l

## Section 12. Ecological information

### Toxicity



## Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
Phosphates	Acute EC50 0.48 mg/l Acute LC50 3.2 mg/l	Algae - Skeletonema Fish	72 hours 96 hours
Quaternary ammonium chloride	Acute LC50 0.145 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
1,2,4-Trimethylbenzene	Acute LC50 4910 µg/l Marine water	Crustaceans - Elasmopus pecteniscus	48 hours
Hydrogen sulfide	Acute LC50 22.4 mg/l Fresh water Acute EC50 62 µg/l Fresh water	Fish - Tilapia zillii Crustaceans - Gammarus pseudolimnaeus	96 hours 2 days
	Acute LC50 2 µg/l Fresh water	Fish - Coregonus clupeaformis - Yolk-sac fry	96 hours

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Phosphates	-	28 % - 28 days	-	-





Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Phosphates	-	-	Inherent

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
<b>UN number</b>	UN1993	UN1993	UN1993	UN1993
<b>UN proper shipping name</b>	FLAMMABLE LIQUID, N.O.S. (Contains: Light aromatic naphtha, 1,2, 4-Trimethylbenzene)	FLAMMABLE LIQUID, N.O.S. (Contains: Light aromatic naphtha, 1,2, 4-Trimethylbenzene)	FLAMMABLE LIQUID, N.O.S. (Contains: Light aromatic naphtha, 1,2, 4-Trimethylbenzene)	FLAMMABLE LIQUID, N.O.S. (Contains: Light aromatic naphtha, 1,2, 4-Trimethylbenzene)
<b>Transport hazard class(es)</b>	3 	3 	3 	3 
<b>Packing group</b>	III	III	III	III
<b>Environmental hazards</b>	No.	No.	No.	No.

## Section 14. Transport information

<b>Additional information</b>	This product may be re-classified as "Combustible Liquid," unless transported by vessel or aircraft. Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials in package sizes less than the product reportable quantity.	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).	<b>Emergency schedules (EmS)</b> F-E S-E	-
-------------------------------	--	---	---	---

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

**DOT Reportable Quantity** Xylene, 5882 gal of this product.

**Marine pollutant** Not available.

**North-America NAERG** : 128

## Section 15. Regulatory information

**U.S. Federal regulations** : **TSCA 5(a)2 final significant new use rules:** Amine derivative  
**TSCA 12(b) one-time export:** Amine derivative  
**TSCA 12(b) annual export notification:** No products were found.  
**United States inventory (TSCA 8b):** All components are listed or exempted.  
**Clean Water Act (CWA) 307:** naphthalene  
**Clean Water Act (CWA) 311:** hydrogen sulphide; Xylene; Ethylbenzene; Naphthalene  
**Clean Air Act (CAA) 112 regulated toxic substances:** No products were found.

### United States - Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :

List name	Status	Ingredient name	Name on list	Conc.
None of the components are listed.				

### SARA 302/304

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Hydrogen sulfide	< 0.1	Yes.	500	-	100	-

### SARA 311/312

**Classification** : Fire hazard  
Immediate (acute) health hazard

### SARA 313

## Section 15. Regulatory information

	Product name	CAS number	%
Supplier notification	1,2,4-Trimethylbenzene	95-63-6	1 - 5

### Canada

Canada (CEPA DSL): : All components are listed or exempted.

## Section 16. Other information

### National Fire Protection Association (U.S.A.)



### History

Date of printing : 9/8/2016

### Notice to reader

**NOTE:** The information on this SDS is based on data which is considered to be accurate. Baker Hughes, however, makes no guarantees or warranty, either expressed or implied of the accuracy or completeness of this information.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This SDS was prepared and is to be used for this product. If the product is used as a component in another product, this SDS information may not be applicable.