

SDS: 159-2 ANTIFREEZE RAD GOLD

SECTION 1. IDENTIFICATION

Product name: ANTIFREEZE RAD GOLD

Product code: SD159-03, SD159-03G, SD159-45G, SD159-45R, SD159-1100, SD159-1100B& 2HSD159, 2HSD159G, 2HSD159B.

SDS number: 159-2

Use of product: Antifreeze.
Please refer to Product label.

Company Identification
HALL CHEM MFG. INC.

1270 rue Nobel
Boucherville QC J4B 5H1
Tel.: (450) 645-0296
Fax: (450) 645-0444

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact CANUTEC: 613-996-6666

Local Emergency Contact: 613-996-6666

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification:

Acute toxicity (Oral) - Category 4; Specific target organ toxicity (repeated exposure) - Category 2;
Serious eye damage/eye irritation - Category 2A.

GHS Label Elements:

Hazard pictograms:



Signal Word:

Warning

Hazard Statement(s):

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H373 May cause damage to organs (kidneys) through prolonged or repeated exposure following skin contact and/or if swallowed.

Precautionary Statement(s):

Prevention:

P102 Keep out of reach of children.

P103 Read label before use.

P101 If medical advice is needed, have product container or label at hand.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash hands and skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301 + P310 IF SWALLOWED Immediately call a POISON CENTRE/doctor.P330 Rinse mouth.

P303 + P361 + P353: IF ON SKIN (or hair) Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P314 Get medical advice/attention if you feel unwell.

P305+P338+P351 IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P313+P337 If eye irritation persists: Get medical advice/attention.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards:

No data available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical name	% V/V	CASE #
Ethylene glycol	90 to 95	107-21-1
Diethylene glycol	0 to 5	111-46-6
Corrosion Inhibitors*		

*The specific chemical identity and/or exact percentage of composition (concentration) has been withheld as a trade secret.

SECTION 4. FIRST-AID MEASURES

Description of first aid measures:

Skin contact:

If on skin or hair, immediately remove all contaminated clothing and wash before reuse. Wash exposed area with soap and water.

Contact with eyes:

On case of eye contact, rinse cautiously with water for several minutes with eyelids held open. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, consult a physician, preferably an ophthalmologist.

Inhalation:

If inhaled, remove source of exposure and move person to fresh air. If difficulties occur after vapor/aerosol has been inhaled, consult a physician.

Ingestion:

If swallowed, rinse mouth immediately and then drink plenty of water. Immediately call a POISON CENTRE/doctor.

Most important symptoms and effects, acute and delayed:

The most important known symptoms and effect are described in the labeling (see section 2) and /or section 11: Toxicology Information.

Immediate medical attention and special treatment:

This product contains ethylene glycol. Ethanol decreases the metabolism of ethylene glycol to toxic metabolites. Ethanol should be administered as soon as possible in cases of severe poisoning since the elimination half-life of ethylene glycol is 3 hours. If medical care will be delayed several hours, use three to four 1-ounce oral "shots" of 86-proof whiskey before or during transport to the hospital.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing methods:

Suitable extinguishing media: Alcohol foam, carbon dioxide, dry chemical.

Unsuitable extinguishing media: Do not use direct water stream. May spread fire.

Hazardous combustion product:

Burning may produce carbon dioxide and carbon monoxide and oxides of nitrogen.

Specific Hazards Arising from the Chemical:

Can ignite if strongly heated. Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advices for fire-fighters:

Special protective equipment: Wear a self-contained apparatus. If protective equipment is not available or not used, fight fire from a protected location or safe distance.

SECTION 6. ACCIDENTAL RELEASE MEASURES

High risk of slipping due to leakage/spillage of product.

Protective equipment and emergency procedures:

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions:

Do not discharge into drains/ surface waters/ groundwater.

Methods and materials for containment and cleaning up:

For large amount: Pump off product into suitable and properly labeled containers.

For residues: Pick up with suitable absorbent material.

Dispose of absorbed material in accordance with regulations.

See section 13, Disposal considerations, for additional information.

SECTION 7. HANDLING AND STORAGE

Precaution for safe handling:

Ensure thorough ventilation of stores and work areas. Shut containers immediately after taking product because product takes up the humidity of air.

Protection against fire and explosion:

No special precautions necessary.

Conditions for safe storage:

Keep container tightly sealed in a dry place. Storage in galvanized container is not recommended.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Paramètres de contrôle :

Chemical name	TWA	STEL	ACGIH aerosol only
Ethylene glycol	50 mg/m ³	100m g/m ³	100 mg/m ³
Diethylene glycol	84 mg/m ³	Not established	Not established
Corrosion Inhibitors*	Not established	Not established	Not established

The substance can be absorbed through the skin.

Exposure controls:

Engineering controls:

Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures:

Eye/face protection:

Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Body protection:

Wear chemical protective clothing e.g. gloves, aprons, and boots. Nitrile, rubber.

Respiratory Protection:

Not normally required if product is used as directed. For non-routine or emergency situations: wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

General safety and hygiene measures:

Do not inhale gases/vapors/aerosols. Handle accordance with good industrial hygiene and safety practice. Wearing a closed work clothing is recommended. No eating, drinking, smoking or tobacco use at the place of work.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Physical state : Liquid	Appearance : Viscous, Yellow, Red or no color(clear).	Odor : Product specific	Odor threshold : Not available
Vapor tension (20°C): 0,06 mm Hg	Vapor density (air=1) : 2,2	Evaporating rate(butyl acétate =1): (butyl acetate = 1) : 0,01	
Boiling point : 140°C to 158°C (285°F-317°F)	Freezing point : -37°C (50/50)	pH : 7,5-11.0	
Density (20°C) : 1,12	Distribution factor water/oil : Not available	Solubility in water: 100%	
Flash point : ≥116.1 °C Tag closed cup	Auto-ignition temperature: ≥400°C	Flammable limits in air: Lower: 3.2 % (V) Upper: 15.3 % (V)	

Other information:

Hygroscopic

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10. STABILITY AND REACTIVITY

Chemical stability:

The product is stable if stored as prescribed/indicated.

Possibility of hazardous reactions:

No hazardous reaction if stored and handled as prescribed/indicated.

Condition to avoid:

No condition to avoid anticipated.

Incompatibility with other products:

Avoid oxidizers, reducing agents and acids. Strong acids. Strong bases. Strong oxidizers.

Reactivity:

No corrosive effect on metal.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity:

Chemical name	LD50 oral/rat	LD50 dermal lapin	LC50, Rat, 4 Hour, Aerosol
Ethylene glycol	6,000 mg/kg	22,270mg/kg	6,91mg/l
Corrosion Inhibitors	Not established	Not established	Not established

Oral toxicity is expected to be moderate in humans due to ethylene glycol even though tests with animals show a lower degree of toxicity. Ingestion of quantities (approximately 65 mL (2 oz.) for diethylene glycol or 100 mL (3 oz.) for ethylene glycol) has caused death in humans. May cause nausea and vomiting. May cause abdominal

discomfort or diarrhea. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):

LD50, Rat, > 6,000 mg/kg Estimated.

For Ethylene glycol:

Lethal Dose, Human, adult, 100 ml

Diethylene glycol:

Lethal Dose, Human, adult, 65 ml Estimated.

Acute dermal toxicity:

Prolonged skin contact is unlikely to result in absorption of harmful amounts. Repeated skin exposure to large quantities may result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potentially lethal amounts.

Based on information for component(s):

LD50, Rabbit, > 22,270 mg/kg Estimated.

Acute inhalation toxicity:

At room temperature, exposure to vapor is minimal due to low volatility. With good ventilation, single exposure is not expected to cause adverse effects. If material is heated or areas are poorly ventilated, vapor/mist may accumulate and cause respiratory irritation and symptoms such as headache and nausea.

For Ethylene glycol:

LC50, Rat, 4 Hour, Aerosol, > 6.91 mg/l

Skin corrosion/irritation :

Brief contact is essentially non irritating to skin. Prolonged contact may cause slight skin irritation with local redness.

Repeated contact may cause skin irritation with local redness.

Serious eye damage/eye irritation:

May cause slight eye irritation.

Corneal injury is unlikely.

Vapor or mist may cause eye irritation.

Sensitization:

Based on information for component(s):

Did not cause allergic skin reactions when tested. For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure):

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on information for component(s):

Central nervous system.

Kidney.

Gastrointestinal tract.

Observations in humans include:

Nystagmus (involuntary eye movement).

In animals, effects have been reported on the following organs:

Bladder.

Liver.

Carcinogenicity :

Ethylene glycol did not cause cancer in long-term animal studies. Diethylene glycol has been tested for carcinogenicity in animal studies and is not believed to pose a carcinogenic risk to man.

Teratogenicity:

Based on animal studies, ingestion of very large amounts of ethylene glycol appears to be the major and possibly only route of exposure to produce birth defects. Exposures by inhalation or skin contact, the primary routes of occupational exposure, had minimal effect on the fetus, in animal studies. Diethylene glycol has caused toxicity to the fetus and some birth defects at maternally toxic, high doses in animals. Other animal studies have not reproduced birth defects even at much higher doses that caused severe maternal toxicity.

Reproductive toxicity:

Ingestion of large amounts of ethylene glycol has been shown to interfere with reproduction in animals. Diethylene glycol did not interfere with reproduction in animal studies except at very high doses.

Mutagenicity

Contains a component(s) which were negative in in vitro genetic toxicity studies.

Aspiration Hazard:

Based on physical properties, not likely to be an aspiration hazard

SECTION 12. ECOLOGICAL INFORMATION

Eco toxicity:

Chemical name	LC50	EC50 Daphnie	EC50
Ethylene glycol	72,860 mg/l 96 h - Fish	100 mg/l 48 h	6,500-13,000 mg/l 96h, Algae
Corrosion Inhibitors	Not established	Not established	Not established

Ethylene glycol :

Acute toxicity to fish:

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, 72,860 mg/l, Other guidelines

Acute toxicity to aquatic invertebrates:

EC50, Daphnia magna (Water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

EC50, green alga Pseudokirchneriella subcapitata (formerly known as Selenastrum capricornutum), 96 Hour, Growth inhibition, 6,500 - 13,000 mg/l, Other guidelines

Toxicity to bacteria :

EC50, Bacteria (active sludge), 30 min, 225 mg/l, OECD 209 Test

Persistence and degradability:

Ethylene glycol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

10-day Window: Pass

Biodegradation: 90 - 100 %

Exposure time: 10 d

Method:

OECD Test Guideline 301A or Equivalent

10-day Window: Not applicable

Biodegradation: 90 %

Exposure time: 1 d

Method:

OECD Test Guideline 302B or Equivalent

Theoretical Oxygen Demand: 1.29 mg/mg

Bioaccumulation:

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

10-day Window: Pass

Biodegradation: 90 - 100 %

Exposure time: 20 d

Method: OECD Test Guideline 301A or Equivalent

10-day Window: Not applicable

Biodegradation: 82 - 98 %

Exposure time: 28 d

Method: OECD Test Guideline 302C or Equivalent

Theoretical Oxygen Demand: 1.51 mg/mg Estimated.

Mobility in soil:

Ethylene glycol:

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient (Koc): 1 Estimated.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.

The generation of waste should be avoided or minimized wherever possible.

Must be disposed of or incinerated according with local regulation.

Untampered packaging can be re-used.

Pack that cannot be cleaned should be disposed of in the same manner as the contents.

SECTION 14. TRANSPORT INFORMATION

Not classified as a dangerous good under Canadian transport regulations.

SECTION 15. REGULATORY INFORMATION

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

SECTION 16. OTHER INFORMATION

Prepared by:
Hall Chem Mfg. Inc.

Date / Revised: January 2018

The information in this detailed S.D.S. is available on request, for the customer service. It must not be used for any other purpose and its reproduction and/or publication is forbidden without the consent of HALL CHEM MFG. INC. Even though this information is based on reliable sources, HALL CHEM MFG. INC. cannot guarantee its accuracy and formally excludes all explicit guarantee relative to the exactitude of this information or of the results following its application.