SAFETY DATA SHEET

REX Conventional (Green) Pre-Mix 50/50 Anti-Freeze

Section 1. Identification

GHS product identifier : Conventional 50/50 Antifreeze
Synonyms : Permanent Antifreeze
Product Code : GC5050

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

Recommended use : Automotive Antifreeze
Supplier Details : Como Lube & Supplies, Inc.
PO Box 16987
Duluth, MN 55802
Emergency telephone number : Technical Contact: 800-962-5417
National Poison Center: 800-222-1222, CHEMTREC 800-424-9300

Section 2. Hazard Identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.120, this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Acute toxicity (Oral) Category 4
Specific target organ toxicity – repeated exposure Category 2 (Kidney)

GHS Label elements

Hazard pictograms :

Signal word : Warning
Hazard statements : PHYSICAL HAZARDS: Not classified as a physical hazard under GHS criteria.
HEALTH HAZARDS: H302 Harmful if swallowed. H373 May cause damage to organs through prolonged or repeated exposure if swallowed.
ENVIRONMENTAL HAZARDS: Not classified as an environmental hazard under GHS criteria.

Precautionary statements

General : Harmful if swallowed. Keep out of reach of children and away from pets.
Prevention : P264 Wash hands thoroughly after handling. P270 Do not eat, drink or smoke when using this product.
Response : P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. P330 Rinse mouth.
Storage : No precautionary phrases.
Disposal : P501 Dispose of contents/ container to an approved waste disposal plant.
Hazards not otherwise classified : Intentional abuse, misuse or other massive exposure may cause multiple organ damage and or death.

The classification of this material is based on OSHA HCS 2012 criteria.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of Identification : Automotive Antifreeze

Ingredient name	Synonyms	%	CAS number
Ethanediol	ethane-1,2-diol (Ingested)	90 - 100	107-21-1
Diethylene glycol	2,2'-oxydiethanol	1 - 5	111-46-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

General advice : DO NOT DELAY. Keep victim calm. Obtain medical treatment immediately.

Eye : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

Skin contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

Ingestion : DO NOT DELAY. If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Most important symptoms/effects, acute and delayed

: Kidney toxicity may be recognized by blood in the urine or increased or decreased urine flow. Other signs and symptoms can include nausea, vomiting, abdominal cramps, diarrhea, and lumbar pain shortly after ingestion, and possibly narcosis and death.

High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

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

Specific treatments : IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT! The preferred treatment is immediate transportation to a medical facility and use of appropriate treatment including possible administration of activated charcoal, gastric lavage and or gastric aspiration. If none of the above are immediately available and a delay of more than one hour is anticipated before such medical attention can be obtained, induction of vomiting may be appropriate using IPECAC syrup (Contraindicated if there are any signs of CNS depression). This should be considered on a case by case basis following specialist advice. Specific other treatments may include ethanol therapy, fomepizole, treatment of acidosis and haemodialysis. Seek specialist advice without delay.

Protection of first-aiders : When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Specific hazards arising from the chemical : Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide may be evolved if incomplete combustion occurs. Unidentified organic and inorganic compounds.

Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : None known.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon dioxide, carbon monoxide.

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.

Special protective equipment for fire-fighters : Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

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. Put on appropriate personal protective equipment.

For emergency responders : Avoid contact with skin and eyes.
If specialized 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 nonemergency personnel".

Environmental precautions : Use appropriate containment to avoid environmental contamination. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Small spill : For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to

evaporate or soak up with an appropriate absorbent material and dispose of safely Remove contaminated soil and dispose of safely.

Large spill : For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

Additional advice : For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet.

Local authorities should be advised if significant spillages cannot be contained.

U.S. regulations may require reporting releases of this material to the environment which exceed the reportable quantity (refer to Chapter 15) to the National Response Center at (800) 424-8802.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Precautions for safe handling : Avoid prolonged or repeated contact with skin. Avoid inhaling vapor and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.

Conditions for safe storage

Including any incompatibities : Keep container tightly closed and in a cool, well-ventilated.
Store at ambient temperature.
Avoid contact with strong oxidizing agents.

Packaging material : Suitable material: For containers or container linings, use mild steel or high density polyethylene.
Unsuitable material: Zinc. Avoid contact with galvanized materials.

Container Advice : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits :

Components	CAS	Value Type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ethanediol	107-21-1	C (Aerosol only)	100 mg/m3	ACGIH

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological

monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analyzed by an accredited laboratory.
Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.
National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods
http://www.cdc.gov/niosh/
Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods
http://www.osha.gov/

Appropriate engineering controls : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances.
Appropriate measures include:
Adequate ventilation to control airborne concentrations.
Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
General Information:
Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.
Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Drain down system prior to equipment break-in or maintenance.
Retain drain downs in sealed storage pending disposal or subsequent recycle.
Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking.
Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Environmental exposure controls

General advice : Take appropriate measures to fulfill the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Chapter 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water.
Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapor.

Individual protection measures

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. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : If material is handled such that it could be splashed into eyes, protective eyewear is recommended.

Skin protection

Hand protection : Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. PVC, neoprene or nitrile rubber gloves Suitability and durability of a glove is dependent on

usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.

Body protection : Skin protection is not ordinarily required beyond standard work clothes. It is good practice to wear chemical resistant gloves.

Other protection : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory protection : No respiratory protection is ordinarily required under normal conditions of use.

In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material.

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for the combination of organic gases and vapors [Type A/Type P boiling point >65°C (149°F)].

Section 9. Physical and chemical properties

Physical state : Liquid at room temperature.

Color : Green.

Odor : Characteristic

pH : Not available.

Melting point/freezing point : -37 °C / -34 °F (50.0 hPa) Method: ASTM D1177

Boiling point : > 100 °C / 212 °F estimated value

Flash point : 130 °C / 266 °F Method: ASTM D93 (PMCC)

Evaporation rate : Not available.

Lower and upper explosive (flammable) limits : Lower - Typical 3 %(V).
Upper - Typical 15 %(V).

Auto-ignition temperature : > 200 °C / 392 °F.

Vapor pressure : Data not available.

Vapor density : Data not available.

Relative density : 0.909 (15 °C / 59 °F).

Density : 909 kg/m3 (15.0 °C / 59.0 °F).

Gravity, °API : 31

Solubility

Water solubility : Completely soluble.

Solubility in other solvents : Data not available.

Viscosity : 30 mm2/s (40.0 °C / 104.0 °F).

Section 10. Stability and reactivity

Reactivity : Not expected to be Explosive, Self-Reactive, Self-Heating, or an Organic Peroxide under US GHS Definition(s).

Chemical stability : The product is stable.

Possibility of hazardous reactions : Reacts with strong oxidizing agents.

Conditions to avoid : Extremes of temperature and direct sunlight.

Incompatible materials : Strong oxidizing agents.

Hazardous decomposition Products : Hazardous decomposition products are not expected to form during normal storage.

Section 11. Toxicological information

Information on toxicological effects

Basis for assessment : Information given is based on data on the components and the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Acute toxicity

Acute oral toxicity : LD50 (rat): > 500 - 2,000 mg/kg
Harmful if swallowed.
There is a marked difference in acute oral toxicity between rodents and man, man being more susceptible than rodents. The estimated fatal dose for man is 100 milliliters (1/2 cup). This material has also been shown to be toxic and potentially lethal by ingestion to cats and dogs.
Ingestion may cause drowsiness and dizziness.

Acute inhalation toxicity : LC 50 (Rat): > 5 mg/l
Exposure time: 4 h
Low toxicity

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Low toxicity

Irritation/Corrosion

: Expected to be slightly irritating.

Sensitization

Skin : Not expected to be a skin sensitizer.

Eyes : Expected to be slightly irritating.

Respiratory : Not expected to be a skin sensitizer.

Mutagenicity

Conclusion/Summary : Not considered a mutagenic hazard.

Carcinogenicity

Conclusion/Summary : Not expected to be carcinogenic.

IARC : Group 2A: Probably carcinogenic to humans
Sodium nitrate 7631-99-4

ACGIH : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP : No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Conclusion/Summary : Not expected to impair fertility. Not expected to be a developmental toxicant.

Teratogenicity
Conclusion/Summary : No additional information.

Specific target organ toxicity (single exposure) : Not expected to be a hazard.

Specific target organ toxicity (repeated exposure) : Kidney: can cause kidney damage.

Aspiration hazard : Not considered an aspiration hazard.

Information on the likely routes of exposure : Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.

Section 12. Ecological information

Toxicity
Basis for assessment : Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component.

Toxicity to fish (Acute toxicity) : Expected to be practically non-toxic: LC/EC/IC50 > 100 mg/l

Toxicity to daphnia and other aquatic invertebrates (Acute toxicity) : Expected to be practically non-toxic: LC/EC/IC50 > 100 mg/l

Toxicity to algae (Acute toxicity) : Expected to be practically non-toxic: LC/EC/IC50 > 100 mg/l

Toxicity to fish (Chronic toxicity) : Data not available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Data not available

Toxicity to bacteria (Acute toxicity) : Data not available

Persistence and degradability
Conclusion/Summary : Readily biodegradable.

Bioaccumulative potential
Conclusion/Summary : Not expected to bioaccumulate significantly.

Mobility in soil : Liquid under most environmental conditions.
If product enters soil, it will be highly mobile and may contaminate groundwater.
Dissolves in water.

Other adverse effects : No data available.

Section 13. Disposal considerations

Disposal methods : Recover or recycle if possible.
It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable

regulations. Do not dispose into the environment, in drains or in water courses

Contaminated packaging : Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.
Disposal should be in accordance with applicable regional, national, and local laws and regulations.

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

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN 3082.	Not regulated as a dangerous good.	Not regulated as a dangerous good.
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ethylene glycol)	Not applicable.	Not applicable.
Transport hazard class(es)	9.	Not applicable.	Not applicable.
Packaging group	III.	Not applicable.	Not applicable.
Environmental hazards	No.	No.	No.
Reportable quantity	Ethylene glycol (5000 Lb)		
Additional information	This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less.	-	-

Special precautions for user : Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport. 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 IBC Code : MARPOL Annex 1 rules apply for bulk shipments by sea.

Section 15. Regulatory information

U.S. Federal regulations : **OSHA Hazards** : Toxic by ingestion

CERCLA Reportable Quantity

Components	CAS	Component RQ (lbs)	Calculated product RQ (lbs)
Ethylene Glycol	107-21-1	5000	5000

CERCLA Reportable Quantity

Calculated RQ exceeds reasonably attainable upper limit. Como Lube & Supplies classifies this material as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA. The components with RQs are given for information.

SARA 302/304

Composition/information on ingredients

SARA 304 RQ : This material does not contain any components with a section 304 EHS RQ.

SARA 311/312

Classification : Acute Health Hazard

SARA 313 : This product (does) contain toxic chemicals subject to the reporting requirements of SARA Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

Product Name	CAS number	%
Ethanediol	107-21-1	100

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

New Jersey : Ethanediol 107-21-1

Pennsylvania : Ethanediol 107-21-1
Diethylene glycol 111-46-6

California Prop. 65 : **WARNING**: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Section 16. Other information

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

Flammability

Health **Instability/Reactivity**

Special

This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of revision / Supersedes : 06/27/216 : 03/09/2012

Key to abbreviations

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labeling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
$LogP_{ow}$ = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

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