
SECTION 1) Chemical Product and Supplier's Identification

Product ID : Antifreeze and Coolant 50-50
Product Name : Antifreeze and Coolant 50-50
Revision Date : 08/20/2014
Manufacturer's Name : Martin Lubricants
Address : 484 East 6th Street Smackover, AR, US, 71762
Emergency Phone : CHEMTREC: 1-800-424-9300
Information Phone : 903-988-4211
Date Printed : 08/22/2014

Product/Recommended Uses: Automobile antifreeze and coolant.

SECTION 2) Hazards Identification

Classification:

STOT (Single)- Category 1
Eye Damage / Irritation - Category 2
Germ Cell Mutagenicity Category 2
STOT (Repeated) - Category 2
UN GHS : Skin Corrosion/Irritation - Category 3 *
Acute Toxicity - Category 4 (oral)
Acute - Environment - Category 2
Chronic - Environment - Category 2

Pictograms:



Signal Word:

Danger.

Hazard Statements:

Causes damage to organs (liver, kidney and central nervous system).
Causes serious eye irritation.
May cause damage to organs through prolonged or repeated exposure.
Suspected of causing genetic defects.
Causes mild skin irritation.
Harmful if swallowed.
Toxic to aquatic life with long lasting effects.

Precautionary Statements - General:

Read label before use.
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.

Precautionary Statements - Prevention:

- Wear protective gloves/protective clothing/eye protection/face protection.
- Wash thoroughly after handling.
- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Do not eat, drink or smoke when using this product.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid release to the environment.

Precautionary Statements - Response:

- 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 advice/attention.
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- If skin irritation occurs: Get medical advice/attention.
- Specific treatment (see Section 4 First Aid Measures on this SDS).
- If exposed or concerned: Get medical advice/attention.
- Collect Spillage.

Precautionary Statements - Storage:

- Store locked up.

Precautionary Statements - Disposal:

- Dispose of contents/container to disposal recycling center.
- Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

SECTION 3) Composition / Information on Ingredients

CAS	Chemical Name	% by Weight
0000107-21-1	ETHYLENE GLYCOL	56% - 76%
0007632-00-0	SODIUM NITRITE	9% - 20%
0007732-18-5	WATER	9% - 20%

SECTION 4) First-aid Measures

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF exposed or concerned: Get medical advice/attention.

Eye Contact:

Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Rest eyes for 30 minutes.

Skin Contact:

Take off immediately all contaminated clothing, shoes, and leather goods (e.g., watchbands, belts). Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. Call a POISON CENTER/doctor if you feel unwell. Wash contaminated clothing before reuse.

Ingestion:

Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.

If exposed or concerned: Get medical advice/attention.

Notes:

IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT! Ethylene Glycol (EG) and Diethylene Glycol (DEG) intoxication may initially produce behavioral changes, drowsiness, vomiting, diarrhea, thirst, and convulsions. EG and DEG are nephrotoxic. End stages of poisoning may include renal damage or failure with acidosis. Supportive measures, supplemented with hemodialysis if indicated, may limit the progression and severity of toxic effects. May cause cardiopulmonary effects. For ETHYLENE GLYCOL POISONING, intravenous ethanol is a recognized antidotal treatment; other antidotal treatments also exist for ethylene glycol poisoning.

SECTION 5) Fire-fighting Measures

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide, water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Water or foam may cause frothing. If leak or spill has not ignited, use water spray to cool the containers and to provide protection for personnel attempting to stop the leak.

Unsuitable Extinguishing Media:

Do not use water in a jet.

Specific Hazards in Case of Fire:

A complex mixture of airborne solids, liquids and gases will evolve when this material undergoes pyrolysis or combustion. Acids, Aldehydes, Carbon Monoxide, Carbon Dioxide, Ketones and other unidentified organic compounds may be formed upon combustion.

Fire-fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel.

Special protective actions:

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) Accidental Release Measures

Emergency Procedure:

Immediately turn off or isolate any source of ignition. Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately. Dike and contain spill. Collect with an absorbent such as clay, sand or other suitable material. Transfer to a non-leaking container and seal tightly for proper disposal. For large spills, once contained, remove with vacuum truck or pump to storage/salvage vessels for disposal. Local authorities should be advised if significant spillages cannot be contained.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Recommended equipment:

Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains/surface waters/ groundwater. Retain and dispose of contaminated wash water. Discharge into the environment must be avoided.

SECTION 7) Handling and Storage

General:

Wash hands after use.
Do not get in eyes, on skin or on clothing.
Do not breathe vapors or mists.
Use good personal hygiene practices.
Eating, drinking and smoking in work areas is prohibited.
Remove contaminated clothing and protective equipment before entering eating areas.
Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, sources of ignition and incompatibilities. Protect containers against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty container retain residue and may be dangerous.

SECTION 8) Exposure Controls/Personal Protection

Appropriate Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Eye protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin protection:

Use of gloves approved to relevant standards 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, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

If handling hot material, use insulated protective equipment.

Respiratory protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA-Tables-Z1,2,3	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
ETHYLENE GLYCOL												

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)	ACGIH Carcinogen	ACGIH Notations	ACGIH TLV Basis
ETHYLENE GLYCOL				C 100	A4	A4	URT & eye irr

SECTION 9) Physical and Chemical Properties**Physical Properties**

Density [lb/gal]	9.180
% Solids By Weight	16.843%
Density VOC	6.097
% VOC	66.421%
VOC Actual [lb/gal]	6.097
VOC Actual [g/l]	730.646
Specific Gravity	1.100
VOC Regulatory [lb/gal]	6.097
VOC Regulatory [g/l]	730.653

Appearance	May be dyed fluorescent green liquid
Odor Threshold	N.A.
Odor Description	Mild odor
pH	N.A.
Flammability	Flash Point at or above 200 °F
Flash Point Symbol	>
Flash Point	266 °F
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	N.A.
Vapor Density	N.A.
Water Solubility	N.A.
Viscosity	30 cSt @40°C
Freezing Point	N.A.
Melting Point	N.A.
Low Boiling Point	> 212 °F
High Boiling Point	N.A.

Auto Ignition Temp	N.A.
Evaporation Rate	N.A.
Decomposition Pt	N.A.
Coefficient Water/Oil	N.A.

SECTION 10) Stability and Reactivity

Stability:

Stable

Hazardous Polymerization:

Not available.

Incompatible Materials:

Incompatible with strong oxidizers and bases.

Incompatible with strong acids.

Conditions to Avoid:

Avoid heat, flame, and contact with incompatible materials.

Hazardous Decomposition Products:

Thermal decomposition products are highly dependent on combustion conditions. A complex mixture of airborne solids, liquids and gases will evolve when this material undergoes pyrolysis or combustion. Acids, Aldehydes, Carbon Monoxide, Carbon Dioxide, Ketones and other unidentified organic compounds may be formed upon combustion.

SECTION 11) Toxicological Information

Acute Toxicity:

Oral : Harmful if swallowed.

Absorption through the skin may result in central nervous system and adverse reproductive effects.

Ingestion or breathing of heated vapors and mist may result in central nervous system and adverse reproductive effects.

Exposure to liquid, vapor or mist may cause irritation to respiratory tract.

Skin Corrosion/Irritation:

May cause mild irritation of the skin.

Serious Eye Damage/Irritation:

Causes serious eye irritation.

Carcinogenicity:

No data available.

Germ Cell Mutagenicity:

No data available.

Reproductive Toxicity:

No data available.

Respiratory or Skin Sensitization:

No data available.

Specific Target Organ Toxicity - Single Exposure:

Causes damage to organs (liver, kidney and nervous system).

Specific Target Organ Toxicity - Repeated Exposure:

May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard:

No data available.

LD50 (oral, rat): 5.89 g/kg; 8.54 g/kg; 13.0 g/kg (5)

LD50 (oral, mouse): 7.5 g/kg; 15.28 g/kg (5,6)

LD50 (oral, guinea pig): 6.6 g/kg; 11.0 g/kg (5)

LD50 (oral, rabbit): 5.0 g/kg (5)

LD50 (dermal, rabbit): 9.5 g/kg (6)

SECTION 12) Ecological Information

Toxicity:

Toxic to aquatic life with long lasting effects.

Persistence and Degradability:

No data available.

Bio-accumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION 13) Disposal Considerations

Waste Disposal:

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) Transport Information

U.S. DOT Information:

Bulk Shipping Description: Ethylene Glycol

Non-Bulk Shipping Description: Ethylene Glycol

Identification Number: UN 3082

Hazard Classification: 9 (Miscellaneous)

Other: See 49 CFR for additional requirements for descriptions, allowed modes of transport and packaging. For more information concerning spills during transport, consult latest DOT Emergency Response Guidebook for Hazardous Materials Incidents, DOT P 5800.3.

IMDG Information:

Not determined.

IATA Information:

Not determined.

SECTION 15) Regulatory Information

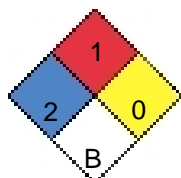
CAS	Chemical Name	% By Weight	Regulation List
0000107-21-1	ETHYLENE GLYCOL	56% - 76%	CERCLA,HAPS,SARA312,SARA313,TSCA,TX_ESL,KS_HAPs,KS_EmissionInventory - KS_Emission Inventory
0007632-00-0	SODIUM NITRITE	9% - 20%	CERCLA,SARA312,SARA313,TSCA,TX_ESL
0007732-18-5	WATER	9% - 20%	TSCA

SECTION 16) Other Information Including Information on Preparation and Revision of the SDS

Glossary:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

HMIS



Chronic :



DISCLAIMER

Information provided in this Safety Data Sheet is considered accurate and reliable based on information issued from internal and outside sources to the best of Martin Operating Partnership's knowledge; however, Martin Operating Partnership makes no representations, guarantees or warranties, expressed or implied, of merchantability or fitness for the particular purpose, regarding the accuracy of such information or the result to be obtained from the use thereof or as to the sufficiency of information herein presented. Martin Operating Partnership assumes no responsibility for injury to recipient or to third persons or for any damage to any property and recipient assumes all such risks.

This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, Martin Resources; A Division of Martin Operating Partnership L.P., must rely upon information provided by the material manufacturers or distributors.

SECTION 1) Chemical Product and Supplier's Identification

Product ID : Antifreeze and Coolant
Product Name : Antifreeze and Coolant
Revision Date : 10/06/2014
Manufacturer's Name : Martin Lubricants
Address : 484 East 6th Street Smackover, AR, US, 71762
Emergency Phone : CHEMTREC: 1-800-424-9300
Information Phone : 903-988-4211
Date Printed : 10/06/2014

Product/Recommended Uses: Automobile antifreeze and coolant

SECTION 2) Hazards Identification

Classification:

STOT (Single)- Category 1
Eye Damage / Irritation - Category 2
Germ Cell Mutagenicity Category 2
STOT (Repeated) - Category 2
UN GHS : Skin Corrosion/Irritation - Category 3 *
Acute Toxicity - Category 4 (oral)
Acute - Environment - Category 2
Chronic - Environment - Category 2

Pictograms:



Signal Word:

Danger.

Hazard Statements:

Causes damage to organs (liver, kidney and central nervous system).
Causes serious eye irritation.
May cause damage to organs through prolonged or repeated exposure.
Suspected of causing genetic defects.
Causes mild skin irritation.
Harmful if swallowed.
Toxic to aquatic life with long lasting effects.

Precautionary Statements - General:

Read label before use.
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.

Precautionary Statements - Prevention:

- Wear protective gloves/protective clothing/eye protection/face protection.
- Wash thoroughly after handling.
- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Do not eat, drink or smoke when using this product.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid release to the environment.

Precautionary Statements - Response:

- 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 advice/attention.
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- If skin irritation occurs: Get medical advice/attention.
- Specific treatment (see Section 4 First Aid Measures on this SDS).
- If exposed or concerned: Get medical advice/attention.
- Collect Spillage.

Precautionary Statements - Storage:

- Store locked up.

Precautionary Statements - Disposal:

- Dispose of contents/container to disposal recycling center.
- Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

SECTION 3) Composition / Information on Ingredients

CAS	Chemical Name	% by Weight
0000107-21-1	ETHYLENE GLYCOL	56% - 76%
0007632-00-0	SODIUM NITRITE	9% - 20%
0007732-18-5	WATER	9% - 20%

SECTION 4) First-aid Measures

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF exposed or concerned: Get medical advice/attention.

Eye Contact:

Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Rest eyes for 30 minutes.

Skin Contact:

Take off immediately all contaminated clothing, shoes, and leather goods (e.g., watchbands, belts). Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. Call a POISON CENTER/doctor if you feel unwell. Wash contaminated clothing before reuse.

Ingestion:

Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.

If exposed or concerned: Get medical advice/attention.

Notes:

IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT! Ethylene Glycol (EG) and Diethylene Glycol (DEG) intoxication may initially produce behavioral changes, drowsiness, vomiting, diarrhea, thirst, and convulsions. EG and DEG are nephrotoxic. End stages of poisoning may include renal damage or failure with acidosis. Supportive measures, supplemented with hemodialysis if indicated, may limit the progression and severity of toxic effects. May cause cardiopulmonary effects. For ETHYLENE GLYCOL POISONING, intravenous ethanol is a recognized antidotal treatment; other antidotal treatments also exist for ethylene glycol poisoning.

SECTION 5) Fire-fighting Measures

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide, water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Water or foam may cause frothing. If leak or spill has not ignited, use water spray to cool the containers and to provide protection for personnel attempting to stop the leak.

Unsuitable Extinguishing Media:

Do not use water in a jet.

Specific Hazards in Case of Fire:

A complex mixture of airborne solids, liquids and gases will evolve when this material undergoes pyrolysis or combustion. Acids, Aldehydes, Carbon Monoxide, Carbon Dioxide, Ketones and other unidentified organic compounds may be formed upon combustion.

Fire-fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel.

Special protective actions:

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) Accidental Release Measures

Emergency Procedure:

Immediately turn off or isolate any source of ignition. Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Clean up immediately. Dike and contain spill. Collect with an absorbent such as clay, sand or other suitable material. Transfer to a non-leaking container and seal tightly for proper disposal. For large spills, once contained, remove with vacuum truck or pump to storage/salvage vessels for disposal. Local authorities should be advised if significant spillages cannot be contained.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Recommended equipment:

Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains/surface waters/ groundwater. Retain and dispose of contaminated wash water. Discharge into the environment must be avoided.

SECTION 7) Handling and Storage

General:

Wash hands after use.
Do not get in eyes, on skin or on clothing.
Do not breathe vapors or mists.
Use good personal hygiene practices.
Eating, drinking and smoking in work areas is prohibited.
Remove contaminated clothing and protective equipment before entering eating areas.
Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, sources of ignition and incompatibilities. Protect containers against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty container retain residue and may be dangerous.

SECTION 8) Exposure Controls/Personal Protection

Appropriate Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Eye protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin protection:

Use of gloves approved to relevant standards 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, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

If handling hot material, use insulated protective equipment.

Respiratory protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA-Tables-Z1,2,3	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
ETHYLENE GLYCOL												

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)	ACGIH Carcinogen	ACGIH Notations	ACGIH TLV Basis
ETHYLENE GLYCOL				C 100	A4	A4	URT & eye irr

SECTION 9) Physical and Chemical Properties**Physical Properties**

Density [lb/gal]	9.180
% Solids By Weight	16.843%
Density VOC	6.097
% VOC	66.421%
VOC Actual [lb/gal]	6.097
VOC Actual [g/l]	730.646
Specific Gravity	1.100
VOC Regulatory [lb/gal]	6.097
VOC Regulatory [g/l]	730.653

Appearance	May be dyed fluorescent green liquid.
Odor Threshold	N.A.
Odor Description	Mild odor
pH	N.A.
Flammability	N/A
Flash Point Symbol	>
Flash Point	130 °C
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	N.A.
Vapor Density	N.A.
Water Solubility	N.A.
Viscosity	30 cSt @40C
Freezing Point	N.A.
Melting Point	N.A.
Low Boiling Point	100 °C
High Boiling Point	N.A.

Auto Ignition Temp	N.A.
Evaporation Rate	N.A.
Decomposition Pt	N.A.
Coefficient Water/Oil	N.A.

SECTION 10) Stability and Reactivity

Stability:

Stable

Hazardous Polymerization:

Not available.

Incompatible Materials:

Incompatible with strong oxidizers and bases.

Incompatible with strong acids.

Conditions to Avoid:

Avoid heat, flame, and contact with incompatible materials.

Hazardous Decomposition Products:

Thermal decomposition products are highly dependent on combustion conditions. A complex mixture of airborne solids, liquids and gases will evolve when this material undergoes pyrolysis or combustion. Acids, Aldehydes, Carbon Monoxide, Carbon Dioxide, Ketones and other unidentified organic compounds may be formed upon combustion.

SECTION 11) Toxicological Information

Acute Toxicity:

Oral : Harmful if swallowed.

Absorption through the skin may result in central nervous system and adverse reproductive effects.

Ingestion or breathing of heated vapors and mist may result in central nervous system and adverse reproductive effects.

Exposure to liquid, vapor or mist may cause irritation to respiratory tract.

Skin Corrosion/Irritation:

May cause mild irritation of the skin.

Serious Eye Damage/Irritation:

Causes serious eye irritation.

Carcinogenicity:

No data available.

Germ Cell Mutagenicity:

No data available.

Reproductive Toxicity:

No data available.

Respiratory or Skin Sensitization:

No data available.

Specific Target Organ Toxicity - Single Exposure:

Causes damage to organs (liver, kidney and nervous system).

Specific Target Organ Toxicity - Repeated Exposure:

May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard:

No data available.

0000107-21-1

ETHYLENE GLYCOL

LD50 (oral, rat): 5.89 g/kg; 8.54 g/kg; 13.0 g/kg (5)

LD50 (oral, mouse): 7.5 g/kg; 15.28 g/kg (5,6)

LD50 (oral, guinea pig): 6.6 g/kg; 11.0 g/kg (5)

LD50 (oral, rabbit): 5.0 g/kg (5)

LD50 (dermal, rabbit): 9.5 g/kg (6)

SECTION 12) Ecological Information

Toxicity:

Toxic to aquatic life with long lasting effects.

Persistence and Degradability:

No data available.

Bio-accumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION 13) Disposal Considerations

Waste Disposal:

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) Transport Information

U.S. DOT Information:

Bulk Shipping Description: Ethylene Glycol
Non-Bulk Shipping Description: Ethylene Glycol
Identification Number: UN 3082
Hazard Classification: 9 (Miscellaneous)

Other: See 49 CFR for additional requirements for descriptions, allowed modes of transport and packaging. For more information concerning spills during transport, consult latest DOT Emergency Response Guidebook for Hazardous Materials Incidents, DOT P 5800.3.

IMDG Information:

Not determined.

IATA Information:

Not determined.

SECTION 15) Regulatory Information

CAS	Chemical Name	% By Weight	Regulation List
0000107-21-1	ETHYLENE GLYCOL	56% - 76%	CERCLA,HAPS,SARA312,SARA313,TSCA,TX_ESL,KS_HAPs,KS_EmissionInventory - KS_Emission Inventory
0007632-00-0	SODIUM NITRITE	9% - 20%	CERCLA,SARA312,SARA313,TSCA,TX_ESL
0007732-18-5	WATER	9% - 20%	TSCA

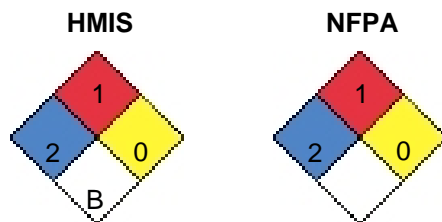
SECTION 16) Other Information Including Information on Preparation and Revision of the SDS

Glossary:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

Other Information:

* There are points of differences between OSHA GHS and UN GHS. In 90% of the categories, they can be used interchangeably, but for the Skin Corrosion/Irritant Category and the Specific Target Organ Toxicity (Single and Repeated Exposure) Categories. In these cases, our system will say UN GHS.



Chronic :



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