SAFETY DATA SHEET

Issue Date 01-31-2018 **Revision Date** 01-31-2018 **Version** 3

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name: COOLING-SYSTEM TREATMENT

Other means of identification

Common Name: 0111
UN/ID No Not Regulated
Synonyms None
Product Categories Automotive Coolant Additive

Recommended use of the chemical and restrictions on use

Sale and Use Restrictions Not applicable
Recommended Use Restricted to professional users.
Uses advised against Consumer use

Details of the supplier of the safety data sheet

Supplier Address
MOC PRODUCTS CO., INC.
12306 Montague Street
Pacoima, CA 91331

Emergency telephone number

Company Phone Number MOC PRODUCTS CO., INC. (818) 794-3500
Emergency Telephone CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Emergency Overview

Warning

Hazard statements
May cause damage to organs through prolonged or repeated exposure

Appearance Aqueous solution, Basic **Physical state** Liquid **Odor** Bland, Mild Ammoniacal

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response
Get medical advice/attention if you feel unwell

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Other information
30.07 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %	Trade Secret
Ethylene Glycol	107-21-1	1-10	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Skin contact Immediately flush skin with plenty of water for at least 15 (30 or 60) minutes. Remove contaminated clothing and shoes. Thoroughly clean shoes before reuse. Wash contaminated clothing before reuse.

Inhalation If affected, remove to fresh air. If not breathing, give artificial respiration. In case of shortness of breath, give oxygen. Seek immediate medical attention/advice.

Eye contact Immediately flush eyes for at least 15 minutes. Get medical attention.

Ingestion If swallowed, rinse mouth with water (only if the person is conscious). Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice. If unconscious, place in recovery position and seek medical attention immediately.

Most important symptoms and effects, both acute and delayed

Symptoms Skin irritation, Eye irritation, Drowsiness, Dizziness.

Indication of any immediate medical attention and special treatment needed

Self-protection of the first aider Low hazard for usual industrial or commercial handling.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:
Use dry chemical, CO2, water spray (fog) or alcohol resistant foam.

Small Fire Dry chemical or CO2.

Large Fire Water spray or fog, Alcohol resistant foam.

Explosive properties: Not an explosive.

Specific hazards arising from the chemical
Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.

Hazardous combustion products Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx), Ammonia.

Specific methods:
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Special firefighting procedures:
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Avoid contact with skin and eyes. Use personal protective equipment. See Section 8 for information on appropriate personal protective equipment.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions: Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system. Do not let product enter drains.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so. Prevent from entering into soil, ditches, sewers, waterways or groundwater.

Methods for clean-up: Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to state, local, federal regulations.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling: Do not get in eyes, on skin, or on clothing. Keep only in the original container in a cool, well-ventilated place. Avoid prolonged or repeated contact with skin. Keep away from any incompatible materials (See Section 10).

Conditions for safe storage, including any incompatibilities

Technical measures/precautions: Eye wash and safety shower should be easily accessible.

Materials to avoid: Strong acids and strong bases; Strong oxidizing agents, Aldehydes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA Exposure Limits:	NIOSH IDLH
Ethylene Glycol 107-21-1	Ceiling: 100 mg/m^3 aerosol only	125 mg/m^3 (50 ppm)	-

Appropriate engineering controls

Engineering measures: Ensure adequate ventilation. Eye wash and safety shower should be easily accessible.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear normal work clothing, Chemical resistant gloves: (consult with the specific manufacturer to confirm performance).

Respiratory protection Ensure adequate ventilation. Not required under normal use. A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Use personal protective equipment as required. Avoid contact with eyes, skin and clothing. Wash face, hands and any exposed skin thoroughly after handling. Take off contaminated clothing and wash it before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid		
Appearance	Aqueous solution, Basic	**Odor**	Bland, Mild Ammoniacal
Color	Yellow	**Odor threshold**	No information available

Property	**Values**	**Remarks • Method**
pH	8.9 - 10.0	
Melting point/freezing point	< 0 °C / 32 °F	
Boiling point / boiling range	> 100 °C / 212 °F	
Flash point	> 111 °C / > 232 °F	(based on components)
Evaporation rate	Slower than ether	Slower than ether
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limit	No Data Available	
Lower flammability limit	No Data Available	
Vapor pressure	No Data Available	
Vapor density	Heavier than air	
Specific Gravity	1.07	
Water solubility	Soluble in water	
Solubility in other solvents	No Data Available	
Partition coefficient	No Data Available	
Autoignition temperature	No Data Available	
Decomposition temperature	No Data Available	
Kinematic viscosity	No information available	
Dynamic viscosity	No Data Available	
Explosive properties	No Data Available	
Oxidizing properties	No Data Available	

Other information

Softening point	No Data Available
Molecular weight	No Data Available
VOC Content (%)	
VOC Content (%)	5.00
Density	1.07 g/cc
Bulk density	No Data Available

10. STABILITY AND REACTIVITY

Reactivity

Reactivity Stable: Stable under normal conditions.

Chemical stability

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid

Keep out of reach of children.

Incompatible materials

Materials to avoid: Strong acids and strong bases; Strong oxidizing agents, Aldehydes.

Hazardous Decomposition Products

Hazardous Decomposition Products Carbon monoxide, Carbon dioxide (CO2), Aldehydes, Ketones, Organic acids, Hydrocarbons, Nitrogen oxides (NOx), Ammonia.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information WARNING: Harmful or fatal if swallowed. May cause eye irritation. May cause skin irritation. May cause damage to organs through prolonged or repeated exposure.

Inhalation In high concentrations: May be harmful if inhaled. Avoid breathing vapors or mists.

Eye contact May cause irritation: redness, stinging and tearing.

Skin Contact May cause irritation: May include redness and burning.

Ingestion Contains .?: Ethylene Glycol (CAS#107-21-1). Harmful if swallowed. Causes damage to the following organs:. Liver, Kidney, Brain.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylene Glycol 107-21-1	= 4700 mg/kg (Rat)	=10,626 mg/kg (Rabbit)	-

Information on toxicological effects

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Mutagenic effects: No data available to indicate product or any components present at or greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by IARC, NTP, or OSHA.
Reproductive toxicity Ethylene Glycol (CAS#107-21-1): Laboratory experiments have shown teratogenic effects. Experiments have shown reproductive toxicity effects on laboratory animals.
STOT - single exposure Not classified.
STOT - repeated exposure Category 2. May cause damage to organs through prolonged or repeated exposure if swallowed: Kidney.
Chronic toxicity Prolonged skin contact may defat the skin and produce dermatitis.
Subchronic toxicity No information available.
Target Organ Effects Liver, Kidney, Eyes, Skin, Central nervous system, Brain.
Neurological effects May affect the central nervous system causing dizziness, headache or nausea.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 30.07 % of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 5456 mg/kg
ATEmix (inhalation-dust/mist) 16.4 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

30.07 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethylene Glycol 107-21-1	6500 - 13000: 96 h Pseudokirchneriella subcapitata mg/L EC50	41000: 96 h Oncorhynchus mykiss mg/L LC50 14 - 18: 96 h Oncorhynchus mykiss mL/L LC50 static 27540: 96 h Lepomis macrochirus mg/L LC50 static 40761: 96 h Oncorhynchus mykiss mg/L LC50 static 40000 - 60000: 96 h Pimephales promelas mg/L LC50 static 16000: 96 h Poecilia reticulata mg/L LC50 static		46300: 48 h Daphnia magna mg/L EC50

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
Soluble in water.

Chemical Name	Partition coefficient
Ethylene Glycol 107-21-1	-1.36

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS Number	Weight %	SARA 313 - Threshold Values %
Ethylene Glycol 107-21-1	107-21-1	1-10	1.0 % de minimis concentration

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ethylene Glycol 107-21-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

State Regulations (RTK)

California Proposition 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm:

Chemical Name	CAS Number	California Proposition 65
Ethylene Glycol	107-21-1	Developmental
Diethanolamine	111-42-2	Carcinogen

U.S. State Right-to-Know Regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA Rating

Health hazards 1
Flammability 1
Instability 0
Physical and Chemical Properties -

HMIS Rating
Health hazards 1*
Flammability 1
Physical hazards 0
Personal protection B
Chronic Hazard Star Legend * = *Chronic Health Hazard*

Prepared by	Environmental Health and Safety Department
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Revision Note	

The Emergency Overview has changed. SEE SECTION 2. This data sheet contains changes from the previous version in section(s): 2, 4, 11, 12, 15, 16.

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet