SAFETY DATA SHEET

1. Identification

Identification

Product name: **PLUSCO 304**

Additional identification

Chemical name: **Hydrostatic Corrosion Inhibitor Additive**

Recommended use and restriction on use

Recommended use: Not determined.
Restrictions on use: Not determined.

Details of the supplier of the safety data sheet

Supplier

Company Name: PLUSCO, INC.
Address: 14518 HENRY RD.
HOUSTON, TX 77060
(713)880-0316
Telephone:

Emergency telephone number: 1-800-275-1875

2. Hazard(s) identification

Hazard Classification

Health Hazards

Carcinogenicity	Category 2

Unknown toxicity

Acute toxicity, inhalation, vapor	29.5 %
Acute toxicity, inhalation, dust or mist	29.9 %

Label Elements:

Hazard Symbol:

Signal Word: Warning

Hazard Statement: Suspected of causing cancer.

Precautionary Statement:

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: If exposed or concerned: Get medical advice/attention.

Storage: Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None identified.

3. Composition/information on ingredients

Chemical name	CAS number	Percent by Weight
Triethanolamine	102-71-6	80%
Acyclic dicarboxylic acids	Confidential	20%

Trade secret information: A specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

General information: IF exposed or concerned: Get medical advice/attention.

Ingestion: Treat symptomatically. Get medical attention.

Inhalation: Remove exposed person to fresh air if adverse effects are observed.

Skin Contact: Wash with soap and water. If skin irritation occurs, get medical attention.

Eye contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses.

Most important symptoms/effects, acute and delayed

Symptoms: Symptoms may be delayed.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: CO2, dry chemical, foam, water spray, water fog.

Unsuitable extinguishing media: Not determined.

Specific hazards arising from the chemical: See section 10 for additional information. Water may cause splattering.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Wear full protective firegear including self-containing breathing apparatus operated in the positive pressure mode with full facepiece, coat, pants, gloves and boots.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Personal Protective Equipment must be worn, see Personal Protection Section for PPE recommendations. Ventilate area if spilled in confined space or other poorly ventilated areas.

Methods and material for containment and cleaning up: Dike far ahead of larger spill for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material.

Environmental Precautions: Avoid release to the environment. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Open container in a well ventilated area. Avoid breathing vapors. Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed.
Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Observe good industrial hygiene practices. Provide adequate ventilation. Use personal protective equipment as required. Launder contaminated clothing before reuse.

Maximum Handling Temperature: 50 °C 122 °F

Conditions for safe storage, including any incompatibilities: Store away from incompatible materials. See section 10 for incompatible materials.

Maximum Storage Temperature: 45 °C 113 °F

8. Exposure controls/personal protection

Control Parameters:

Occupational Exposure Limits

Chemical name	type	Exposure Limit Values	Source
Triethanolamine	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (02 2012)

Appropriate engineering controls: Use material in well ventilated area only. No special requirements under ordinary conditions of use and with adequate ventilation.

Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required.

Eye/face protection: If contact is likely, safety glasses with side shields are recommended.

Skin Protection

Hand Protection: Suitable gloves can be recommended by the glove supplier.

Other:	Chemical resistant boots. Gloves, coveralls, apron, boots as necessary to minimize contact. Long sleeve shirt is recommended.
Respiratory Protection:	Use respirator if irritation is experienced or if the recommended exposure limit is exceeded. Consult with an industrial hygienist to determine the appropriate respiratory protection for your specific use of this material. A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites.
Hygiene measures:	Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Appearance	
Physical state:	liquid
Form:	liquid
Color:	Amber
Odor:	Mild
Odor threshold:	No data available.
pH:	7.7
Freezing point:	No data available.
Boiling Point:	No data available.
Flash Point:	Material will not burn.
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	1.13 - 1.15 60.1 °F (15.6 °C)
Solubility(ies)	
Solubility in water:	Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	75 mm2/s (104 °F (40 °C))
Other information	
Pour Point Temperature:	-20 °F (-29 °C)

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.

Possibility of Hazardous Reactions:	Will not occur.
Conditions to Avoid:	Do not expose to excessive heat, ignition sources, or oxidizing materials.
Incompatible Materials:	Strong oxidizing agents. Avoid contact with nitrites, nitrates or nitrosating agents due to the potential for nitrosamine formation. Strong acids. Halogens and halogenated compounds. Organic anhydrides.
Hazardous Decomposition Products:	No data available.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	No data available.
Ingestion:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.

Information on toxicological effects

Acute toxicity

Oral

Product**:**	LD 50 (Rat): > 5,000 mg/kg (Measured) Not classified

Dermal

Product**:**	LD 50 (Rabbit): > 2,000 mg/kg (Measured) Not classified

Inhalation

Product**:**	Not classified for acute toxicity based on available data.

Skin Corrosion/Irritation:

Product**:**	Classification: Not irritating (Measured); Rabbit. Remarks: Prolonged or repeated contact as from clothing wet with the material may cause burns. Not classified as a primary skin irritant.

Serious Eye Damage/Eye Irritation:

Product**:**	Classification: Not irritating (Measured); Rabbit. Remarks: Not classified as a primary eye irritant.

Respiratory sensitization:

No data available

Skin sensitization:

Product**:**	Remarks: May cause skin sensitzation in sensitive individuals.
Triethanolamine	(Literature) May cause skin sensitzation in sensitive individuals. Classification: Not a skin sensitizer. (Literature)

Specific Target Organ Toxicity - Single Exposure:

Triethanolamine	If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.

Diethanolamine	If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.

Aspiration Hazard:

No data available

Other effects:

Triethanolamine	Liver Kidney Trace quantities of ethylene oxide (ETO) may accumulate in the headspace of storage vessels. Ethylene oxide is a potential carcinogens and reproductive hazard for humans. Although such exposures are not expected to exceed exposure limits, adequate ventilation is recommended.
	Liver Kidney Blood

Chronic Effects

Carcinogenicity:

Product**:**	Not available.
	Suspect cancer hazard - may cause cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity:

Triethanolamine	In vitro mutagenicity tests have been negative.
	This material has not exhibited mutagenic or genotoxic potential in laboratory tests.

Reproductive toxicity:

No data available

Specific Target Organ Toxicity - Repeated Exposure:

Product**:**	Repeated overexposure may result in liver and kidney damage.
Triethanolamine	Repeated overexposure may result in liver and kidney damage.
	Ingestion of diethanolamine has produced nervous system injury in dogs and rats. In addition, heart lesions have been observed in treated mice. Repeated overexposure may result in liver and kidney damage.

12. Ecological information

Ecotoxicity

Fish

Triethanolamine	LC 50 (Rainbow Trout, 4 d): 11,800 mg/l

Aquatic Invertebrates

Triethanolamine	EC 50 (Water flea (Ceriodaphnia dubia), 2 d): 609.88 mg/l EC 50 (Water flea (Daphnia magna), 21 d): > 16 mg/l NOEC (Water flea (Daphnia magna), 21 d): 16 mg/l

Toxicity to Aquatic Plants

Triethanolamine	EC 50 (Green algae (Selenastrum capricornutum), 3 d): 512 mg/l

Toxicity to soil dwelling organisms

No data available

Sediment Toxicity

No data available

Toxicity to Terrestrial Plants

No data available

Toxicity to Above-Ground Organisms

No data available

Toxicity to microorganisms

Triethanolamine	EC 50 (Sludge, 7.5 d): > 1,000 mg/l

Persistence and Degradability

Biodegradation

Triethanolamine	OECD TG 301 E, 96 %, 19 d, Readily biodegradable

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available

Partition Coefficient n-octanol / water (log Kow)

Triethanolamine	Log Kow: -1.75 (calculated)

Mobility:

No data available

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Dispose of packaging or containers in accordance with local, regional, national and international regulations. Empty container contains product residue which may exhibit hazards of product.

Contaminated Packaging: Container packaging may exhibit hazards.

14. Transport information

DOT

Not regulated.

IMDG

Not regulated.

IATA

Not regulated.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

None known.

Shipping descriptions may vary based on mode of transport, quantities ,temperature of the material, package size, and/or origin and destination It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material. Review classification requirements before shipping materials at elevated temperatures.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

None known.

SARA 302 Extremely Hazardous Substance
SARA 304 Emergency Release Notification
SARA 311/312 Hazardous Chemical
SARA 313 (TRI Reporting)

This product may contain chemical(s) regulated under the Superfund Amendments and Reauthorization Act (SARA). For additional information please contact Lubrizol Customer Assistance: America(s): AmerLZAMCustomerAssistance@Lubrizol.com ; Europe: EMEAICustomerAssistance@Lubrizol.com ; Asia: APCustomerAssistance@Lubrizol.com

US State Regulations

US. 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.

Diethanolamine	0.2%

Inventory Status

Australia (AICS)

All components are in compliance with chemical notification requirements in Australia.

Canada (DSL/NDSL)

All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.

China (IECSC)

All components of this product are listed on the Inventory of Existing Chemical Substances in China.

European Union (REACh)

Japan (ENCS)

All components are in compliance with the Chemical Substances Control Law of Japan.

Korea (ECL)

All components are in compliance in Korea.

New Zealand (NZIoC)

All components are in compliance with chemical notification requirements in New Zealand.

Philippines (PICCS)

All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).

Switzerland (SWISS)
All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.

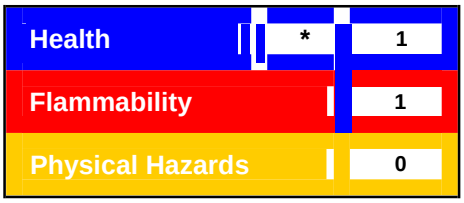
Taiwan (TCSCA)
All components of this product are listed on the Taiwan inventory.

United States (TSCA)
All components of this material are on the US TSCA Inventory.

The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in Section 3.

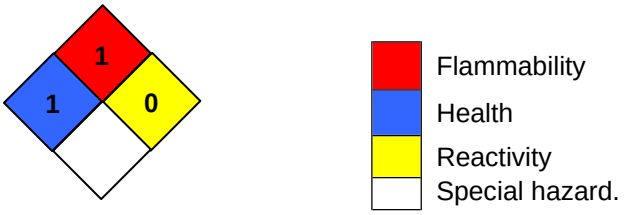
16.Other information, including date of preparation or last revision

HMIS Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date:	01/1/2019
Version #:	1
Source of information:	Internal company data and other publically available resources.
Further Information:	Contact supplier (see Section 1)
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