

G.J. CHEMICAL COMPANY, INC. SAFETY DATA SHEET

1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME:-----> **Trimethylolpropane**

PRODUCT NUMBER(S):-----> 289865

TRADE NAMES/SYNONYMS---> 1, 3-propanediol -2-Ethyl-2-(hydroxymethyl)
TMP; Propylidynetrimehanol,
1, 1, 1-Tri (hydroxymethyl) propane

CAS-No: 77-99-6

CHEMICAL FAMILY: Alkane

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

RECOMMENDED USE: Trimethylolpropane is used as a raw material in manufacturing polyesters, alkyd and urethane resins. It is also used in lubricating oils and plasticizers as well as in radiation curing monomers or oligomers, Grinding aid, Used in polishes and waxes, Used in coatings and inks, Used in lubricants, grease and metal working fluids, Used in adhesives and sealants.

USES ADVISED AGAINST: No information available

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: **G.J. CHEMICAL CO., INC.**

Address: **40 VERONICA AVENUE
SOMERSET, NJ 08873**

Telephone: **1-973-589-1450**

Fax: **1-973-589-3072**

1.4 Emergency Telephone Number

Emergency Phone: **1-800-424-9300 (CHEMTREC)**

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29CFR 1910 (OSHA HCS)

Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements

Pictogram None

Signal word None

Hazard statement(s)

Not a hazardous substance or mixture.

Precautionary statement(s)

Not a hazardous substance or mixture.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. INGREDIENTS

3.1 SUBSTANCE:

Ingredient	CAS No.	% by WT. Range	CLASSIFICATION
Trimethylolpropane	77-99-6 EC-No. 201-074-9 Reg.-No. 01-2119486799-10-XXXX	90- 100	Not a hazardous substance or mixture. No ingredients are hazardous according to OSHA criteria.

3.2 MIXTURE: Not applicable.

4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

INHALATION: TRIMETHYLOLPROPANE

****FIRST AID- Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. If breathing is difficult if necessary give oxygen. Keep person warm and at rest. Treat symptomatically and supportively. Consult with a physician.**

SKIN CONTACT: TRIMETHYLOLPROPANE

****FIRST AID- Immediately remove contaminated clothing. Use a safety shower flush skin thoroughly for 15 minutes. Wash affected area with soap and water. Consult with a physician if irritation**

persists.

EYE CONTACT: TRIMETHYLOLPROPANE

****FIRST AID- Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15-20 minutes). Remove contact lenses, if worn, after initial flush. Get medical attention immediately.**

INGESTION: TRIMETHYLOLPROPANE

****FIRST AID- Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if irritation or symptoms occur.**

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

Eye: May cause eye irritation;

Skin: May cause mild skin irritation.

Inhalation: May cause irritation of the respiratory system.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Chronic: None Known

Medical Conditions Aggravated by Exposure: None known

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Specific details on antidote: No recommendation given.

5. FIRE FIGHTING MEASURES

Flash Point: 180°C (356°F) Closed Cup

Auto-ignition Temperature: N.D.

LEL %: N.D.

UEL %: N.D.

5.1 SUITABLE EXTINGUISHING MEDIA: Foam--> x CO2--> x Dry Chemical-->
x Water-fog--> x Other-->

Unsuitable extinguishing media: Do not use waterjet.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR

MIXTURE: Thermal decomposition: Pyrolysis can form irritating and toxic vapors, e.g.CO and CO2.

CONDITIONS OF FLAMMABILITY: Not flammable or combustible.

HAZARDOUS COMBUSTION PRODUCTS: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides and other unidentified organic compounds evolve when this material undergoes combustion.

5.3 ADVICE FOR FIREFIGHTERS: Shut off source. Isolate hazard area and deny entry. Move container from fire area if you can do it without risk. Water fog may be used to cool closed containers to prevent pressure build up and possible auto-ignition or explosion when exposed to extreme heat. Do not spray pool fires directly. For small fire use CO₂ or Dry Chemical, for large fires use Alcohol Foam or water. Where exposure to vapors exist, wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus (SCBA) and full fire-fighting protective gear. If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Prevent contact with eyes and skin. Eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory equipment and fire resistant protective clothing during cleanup operations.

6.2 ENVIRONMENTAL PRECAUTIONS:

Keep out of water sources, drains and sewers. Do not flush into surface water or sanitary sewer system.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

Methods for cleanup and containment:

Avoid dust formation. Avoid breathing vapors, mist or gas. Shut off valves, contain spill. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority. Forms smooth, slippery surfaces on floors, posing an accident risk. Minimize skin contact, ventilate confined areas, open all windows and doors.

Methods for disposal:

Sweep up, shovel and put spilled solid in a convenient waste disposal container. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations.

6.4 REFERENCE TO OTHER SECTIONS: See Sections 8 and 13.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING: Avoid breathing dust in top of shipping container. Avoid formation of dust and aerosols. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not take internally. If ingested, seek medical advice immediately and show the container label. Keep away from incompatible chemicals. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Avoid work practices that may release volatile components in the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Follow maximum allowed pile heights specified in the BOCA codes or the NFPA manual. Local fire authorities should be notified for storage of this material in any quantity. Local permits are required for storage in warehouse quantities. Do not store above 25°C (77°F). Keep away from heat. Keep away from sources of ignition. Store large quantities only in cool, dry areas in buildings designed to comply with OSHA 1910.106. Keep containers tight and upright to prevent leakage. Do not contact with oxidizing materials. Keep containers closed when not in use. Hygroscopic. Do not consume food, drink or use tobacco products in areas where they may become contaminated with this material. Storage class (TRGS 510): Non Combustible Solids

CONTAINER WARNINGS: Metal containers should be Bonded and Grounded. Empty containers release residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, or expose such containers to heat, sparks, static electricity or other sources of ignition. Do not attempt to clean.

7.3 SPECIFIC END USES: Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. EXPOSURE CONTROL (PERSONAL PROTECTION)

8.1 CONTROL PARAMETERS:

Ingredient	CAS No.	% by WT. Range	Exposure Limits
Trimethylolpropane	77-99-6 EC-No. 201-074-9 Reg.-No. 01-2119486799-10-XXXX	90-100	N.E.

Key: (PEL) = Permissible Exposure Limit OSHA
(TLV) = Threshold Limit Value OSHA & ACGIH

(STEL) = Short Term Exposure Limit ACGIH
(WEEL) = USA. Workplace Environmental Exposure Levels
(TWA) = Time Weighted Average
CAS = Chemical Abstracts Registry Number
IDLH = Immediate Danger to Life and Health
N.E. =None Established

8.2 EXPOSURE CONTROLS

EXPOSURE GUIDELINES: Consider the potential hazards of this material (Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.

ENGINEERING CONTROLS: Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits. All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910. Explosion proof motors should be used in mechanical ventilation.

RESPIRATORY PROTECTION: The specific respirator selected must be based on contamination levels found in the work place, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA):

For known vapor concentrations use a NIOSH/MSHA approved respirator with dust filters and a full face shield. For unknown dust concentrations or in a confined space, wear a NIOSH/MHSA approved self-contained supplied air respirator (SCBA).

BODY CLOTHING: Use chemical resistant apron or other impervious clothing. Remove and wash contaminated clothing before reuse. Users should determine acceptable performance characteristics of protective clothing.

SKIN PROTECTION: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

HYGIENE: Use good personal hygiene practices, wash hands before eating, drinking, smoking or using toilet facilities.

EYE/FACE PROTECTION> Use safety eyewear with splash guards or face shield.

A safety shower and eyewash should be easily accessible to the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

Trimethylolpropane 77-99-6

Appearance-----> Solid flake
Color-----> White
Odor-----> Mild odor
Odor Threshold-----> No data available
pH-----> No data available
Molecular weight-----> 134.17amu
Melting/Freezing Point-----> 56 - 58°C (133 - 136°F)
Boiling Range (°F)-----> 159 - 161°C (318 - 322°F) at 2 mmHg
Specific Gravity-----> No data available
Vapor Pressure-----> 50 mmHg at 210°C (410°F)
Vapor Density (air=1)-----> No data available
Water solubility-----> Complete
Partition Coefficient N-Octanol/water-----> log Pow: -0.47 @ 26°C (79°F)
Evaporation Rate (Butyl Acetate=1)-----> No data available
Flash Point-----> 180°C (356°F) - closed cup
Upper Flammability Limit-----> No data available
Lower Flammability Limit-----> No data available
Auto-ignition Temperature-----> No data available
Decomposition Temperature-----> No data available
Viscosity-----> No data available
Explosive Properties-----> No data available
Oxidizing Properties-----> No data available

10. STABILITY AND REACTIVITY INFORMATION

10.1 REACTIVITY: No data available.

10.2 CHEMICAL STABILITY: Unstable () Stable (X)

10.3 POSSIBILITY OF HAZARDOUS REACTIONS: No data available

HAZARDOUS POLYMERIZATION: May occur () Will not occur (X)

10.4 CONDITIONS TO AVOID: --> Heat, Sparks, Pilot Lights, Static Electricity, and Open Flame. At elevated temperatures explosive decomposition (Pyrolysis) may occur.

10.5 INCOMPATIBLE MATERIALS: Strong oxidants such as liquid chlorine, oxygen, sodium hypochlorite, inorganic acids e.g. hydrochloric acid hydrogen peroxide. Also brass and copper.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS: Fumes, Smoke, Carbon Monoxide, Carbon Dioxide, Aldehydes and other decomposition products where combustion is not complete.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x Eye--> x

ACUTE HEALTH EFFECTS:

Effects of overexposure:

Eye> May cause eye irritation;

Skin> May cause mild skin irritation.

Inhalation> May cause irritation of the respiratory system.

Ingestion> May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Chronic: None Known

Medical Conditions Aggravated by Exposure> None known

ACUTE TOXICITY:

The effects of overexposure shown in Section II are based on acute toxicity profiles. Typical values are:

Ingredient	Oral LD50 (Rat)	Skin LD50 (Rabbit)	Inhalation LC50
Trimethylol-propane	14700mg/kg	>10000mg/kg	0.85mg/L/4h

SKIN CORROSION/IRRITATION: Skin - Rabbit Result: No skin irritation - 24 h

SERIOUS EYE DAMAGE/EYE IRRITATION: Eyes - Rabbit Result: No eye irritation

RESPIRATORY OR SKIN SENSITIZATION: Result: Did not cause sensitization on laboratory animals. (OECD Test Guideline 429)

MUTAGENIC EFFECTS: In vitro mammalian cell gene mutation test Chinese hamster fibroblasts Result: negative

CARCINOGEN STATUS:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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.

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.

REPRODUCTIVE TOXICITY: No data available

Specific target organ toxicity (STOT-SE)- single exposure (Globally Harmonized System): no data available

Specific target organ toxicity (STOT-RE) - repeated exposure (Globally Harmonized System): no data available

ASPIRATION HAZARD: No data available

11.2 ADDITIONAL INFORMATION: Repeated dose toxicity Rat - male and female -

Oral - NOAEL: 67 mg/kg

RTECS: TY6470000

12. ECOLOGICAL INFORMATION

12.1 AQUATIC TOXICITY:

Toxicity to fish:

LC50 - *Alburnus alburnus* - > 1,000 mg/l - 96 h static test

Toxicity to daphnia and other aquatic invertebrates:

EC50 - *Daphnia magna* (Water flea) - 13,000 mg/l - 48 h

Toxicity to algae:

EC50 - *Pseudokirchneriella subcapitata* - > 1,000 mg/l - 72 h

12.2 PERSISTANCE AND DEGRADABILITY: Result: 6 % - Not readily biodegradable.

Biological Oxygen Demand (BOD): No data available

Chemical Oxygen Demand (COD): 1620mg/g

12.3 BIOACCUMULATIVE POTENTIAL: log Pow -0.47; This product does not accumulate in organisms.

Bio-concentration factor (BCF): < 17 (OECD Test Guideline 305C)

12.4 MOBILITY IN SOIL: No data available

12.5 RESULTS OF PBT AND vPvB:

PBT assessment results: This substance is not classified as PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS: No data available

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS: Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly it is the responsibility of the user to determine the proper storage, transportation, treatment and or disposal methodologies for spent materials and residues at time of disposition. Dispose in accordance with all applicable disposal regulations. Incinerate under controlled conditions in a permitted facility.

CONTAMINATED PACKAGING: Dispose of as unused product.

Trimethylolpropane is a non hazardous waste as defined by RCRA (40 CFR 261). **DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 48 CFR 262**

14. TRANSPORT INFORMATION

Land Transport (DOT)

- 14.1 USDOT ID Number-----> N/A
- 14.2 USDOT Shipping Name-----> Not DOT Regulated
Not Dangerous Goods
- 14.3 USDOT Hazard Classification-----> N/A
USDOT Label Codes-----> N/A
- 14.4 USDOT Package Code-----> N/A
- 14.5 Environmental hazard-----> No
- 14.6 Special precautions for user-----> None

Sea Transport (IMDG)

- 14.1 UN Number:-----> N/A
- 14.2 Proper Shipping Name-----> Not Dangerous Goods
- 14.3 Hazard Class:-----> N/A
USDOT Label Codes-----> N/A
- 14.4 Packing Group:-----> N/A
- 14.5 Environmental hazard-----> No

Air Transport (IATA)

- 14.1 UN Number:-----> N/A
- 14.2 Proper Shipping Name:-----> Not Dangerous goods
- 14.3 Hazard Class:-----> N/A
USDOT Label Codes-----> N/A
- 14.4 Packing Group:-----> N/A
- 14.5 Environmental hazard-----> No

15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE:

SARA TITLE III (Superfund Amendment and Reauthorization Act)

SECTION 302 AND 304: Extremely Hazardous Substance List (40 CFR 355) - Not Listed

SECTION 313: Toxic Chemicals Listing (40 CFR 372.65) - Not Listed

SECTION 311/312: Hazard Categorization (40 CFR 370) – No SARA Hazards.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Not Listed
Reportable Quantity - None

SECTION 101(14) Reportable Quantity: None

Listed in the following state Right to Know Hazardous Material Lists:

Massachusetts Right to Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right to Know Components

Propylidynetrimechanol CAS-No. 77-99-6

New Jersey Right to Know Components

Propylidynetrimechanol CAS-No. 77-99-6

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA (Toxic Substance Control Act)

Propylidynetrimechanol CAS-No. 77-99-6 is listed on the TSCA Inventory.

International Inventories:

<u>Country or Region</u>	<u>Inventory Name</u>	<u>On inventory yes/no</u>
<u>Australia</u>	Australian Inventory of Chemical Substances (AICS)	Yes
<u>Canada</u>	Domestic Substances List (DSL)	Yes
<u>Canada</u>	Non-Domestic Substances List (NDSL)	No
<u>China</u>	Inventory of Existing Chemical Substances in China (IECSC)	Yes
<u>Europe</u>	European Inventory of Existing Commercial Chemicals	Yes

	Substances (EINECS)	
<u>Europe</u>	European List of Notified Chemical Substances (ELINCS)	No
<u>Japan</u>	Inventory of Existing and New Chemical Substances (ENCS)	Yes
<u>Japan</u>	Industrial Safety & Health Law Inventory (ISHL)	Yes
<u>Korea</u>	Existing Chemicals List (ECL)	Yes
<u>Mexico</u>	National Inventory of Chemical Substances (INSQ)	Yes
<u>New Zealand</u>	New Zealand Inventory	Yes
<u>Philippines</u>	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
<u>Switzerland</u>	Inventory of Notified New Substances (CHINV)	Yes
<u>Taiwan</u>	National Existing Chemical Inventory (NECI)	Yes
<u>United States & Puerto Rico</u>	Toxic Substances Control Act Inventory	Yes

15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has been carried out for this substance.

16. OTHER INFORMATION:

HMIS (Hazardous Materials Identification System)

Hazard Rating:

4-Extreme

3-High

2-Moderate

1-Slight

0-Insignificant

NFPA RATINGS (SCALE 0-4): Health=0 Fire=1 Reactivity=0
HMIS RATINGS (SCALE 0-4): Health=0 Fire=1 Reactivity=0 PPE=E

Text of hazard statement codes in Section 2 and 3:
Not a hazardous substance or mixture.

Date of preparation-----> January 28, 1994

Revision Number-----> 1.4

Revision Content-----> General update all sections

Revision Date-----> December 7, 2018

Prepared by-----> T.G. Fenstermaker, Jr.

Acronyms:

ACGIH	-	American Conference of Governmental Industrial Hygienists
AIHA	-	American Industrial Hygiene Association
ANSI	-	American National Standards Institute
API	-	American Petroleum Institute
CERCLA	-	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	-	U.S. Department of Transportation
EPA	-	U.S. Environmental Protection Agency
HMIS	-	Hazardous Materials Information System
IARC	-	International Agency For Research On Cancer
MSHA	-	Mine Safety and Health Administration
NFPA	-	National Fire Protection Association
NIOSH	-	National Institute of Occupational Safety and Health
NOIC	-	Notice of Intended Change (Proposed change to ACGIH TLV)

NTP	-	National Toxicology Program
OPA	-	Oil Pollution Act of 1990
OSHA	-	U.S. Occupational Safety & Health Administration
PEL	-	Permissible Exposure Limit (OSHA)
RCRA	-	Resource Conservation and Recovery Act
REL	-	Recommended Exposure Limit (NIOSH)
SARA	-	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	-	Self-Contained Breathing Apparatus
STEL	-	Short-Term Exposure Limit (generally 15 minutes)
TLV	-	Threshold Limit Value
TSCA	-	Toxic Substances Control Act
TWA	-	Time Weighted Average (8hr.)
WHMIS	-	Canadian Workplace Hazardous Materials Information System

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