

SAFETY DATA SHEET  
Trimethylolpropane

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name	Trimethylolpropane
Chemical name	Propylidynetrimethanol
Synonyms, Trade Names	Trimethylolpropane TMP
REACH Registration number	01-2119486799-10-0014
CAS-No.	77-99-6
EC No.	201-074-9

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

Identified uses	Chemical intermediate. Monomer. Component of the paint.
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1.3. Details of the supplier of the safety data sheet

Supplier	Only Representative not supplier of products Cambridge Environmental Assessments ADAS UK Ltd Battlegate Road, Boxworth Cambridge CB23 4NN United Kingdom Tel +44 (0) 1954 268200 Fax +44 (0) 1954 267659
Contact Person	peter.godfrey@cea-res.co.uk
Manufacturer	MITSUBISHI GAS CHEMICAL COMPANY, INC. MITSUBISHI Building, 5-2, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8324, Japan +81-3-3283-4749 msdsnc@mgc.co.jp

1.4. Emergency telephone number

+44 (0) 1263 834806 (8.30am to 5pm, UK time)

## SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Not classified.
Human health	Not classified.
Environment	Not classified.

Classification (67/548/EEC) Not classified.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

2.2. Label elements

EC No.	201-074-9
Label In Accordance With (EC) No. 1272/2008	
No pictogram required.	

2.3. Other hazards

Not Classified as PBT/vPvB by current EU criteria.

## Trimethylolpropane

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Product name	Trimethylolpropane
REACH Registration number	01-2119486799-10-0014
CAS-No.	77-99-6
EC No.	201-074-9
Composition Comments	>99%

## SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

## Inhalation

Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

## Ingestion

Immediately rinse mouth and drink plenty of water (200-300 ml). Induce vomiting, if person is conscious. Get medical attention.

## Skin contact

Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

## Eye contact

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

## General information

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

No specific recommendations.

## SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

## Extinguishing media

Use: Water spray, fog or mist. Carbon dioxide or dry powder.

5.2. Special hazards arising from the substance or mixture

## Hazardous combustion products

When heated, toxic and corrosive vapours/gases may be formed.

## Unusual Fire &amp; Explosion Hazards

Dust may form explosive mixture with air.

5.3. Advice for firefighters

## Special Fire Fighting Procedures

Keep up-wind to avoid fumes. Containers close to fire should be removed or cooled with water.

## Protective equipment for fire-fighters

Use protective equipment appropriate for surrounding materials.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Wear protective clothing as described in Section 8 of this safety data sheet.

**6.2. Environmental precautions**

Do not allow ANY environmental contamination. Avoid discharge into water courses or onto the ground.

**6.3. Methods and material for containment and cleaning up**

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Ground container and transfer equipment to eliminate static electric sparks. Stop leak if possible without risk. Avoid generation and spreading of dust. Collect in containers and seal securely. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer.

**6.4. Reference to other sections**

For waste disposal, see section 13.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

Avoid spilling, skin and eye contact. Provide good ventilation. Take precautionary measures against static discharges. Keep away from heat, sparks and open flame. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site. The molten product can cause serious burns. (90 °C)

**7.2. Conditions for safe storage, including any incompatibilities**

Avoid Moisture. Avoid exposure to high temperatures or direct sunlight. Keep away from heat, sparks and open flame. Avoid contact with oxidising agents. Store in tightly closed original container in a dry, cool and well-ventilated place. Keep in original container.

**7.3. Specific end use(s)**

The identified uses for this product are detailed in Section 1.2.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters**

Ingredient Comments

No exposure limits noted for ingredient(s).

**8.2. Exposure controls**

Protective equipment



Process conditions

Provide eyewash, quick drench.

Engineering measures

Provide adequate ventilation. Explosion-proof general and local exhaust ventilation. Use explosion proof electric equipment.

Respiratory equipment

Use specified dust masks.

Hand protection

Use protective gloves made of: Rubber (natural, latex). For molten, heat-resistant gloves

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### Eye protection

Wear splash-proof eye goggles to prevent any possibility of eye contact.

### Other Protection

Wear appropriate clothing to prevent any possibility of skin contact. Anti-static boots. Anti-static suit.

### Hygiene measures

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke. Eye wash facilities and emergency shower must be available when handling this product.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Appearance	Solid. Crystalline powder.
Colour	White.
Odour	Odourless.
Solubility	Soluble in water. Soluble in: Alcohol Aceton
Initial boiling point and boiling range (°C)	292 °C
Melting point (°C)	61 °C
Relative density	1.1758 @20 °C, 1.1628 @30 °C
Vapour density (air=1)	4.63
Vapour pressure	2 x 10 <sup>-5</sup> kPa @25 °C
Evaporation rate	Not available.
pH-Value, Conc. Solution	Not available.
pH-Value, Diluted Solution	Not available.
Viscosity	Not available.
Solubility Value (G/100G H <sub>2</sub> O@20°C)	> 100g/L
Decomposition temperature (°C)	Not available.
Odour Threshold, Lower	Not available.
Odour Threshold, Upper	Not available.
Flash point (°C)	177.9 °C Sh CC (Setaflash closed cup).
Auto Ignition Temperature (°C)	375 °C
Flammability Limit - Lower(%)	2.0 vol %
Flammability Limit - Upper(%)	11.8 vol %

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Partition Coefficient (N-Octanol/Water)	log Pow- 0.47 @26 °C
Explosive properties	Not available.
Other Flammability	Flammable/combustible material. Low risk of fire.
Oxidising properties	Not available.

9.2. Other information

Not available.

**SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity

Stable under normal temperature conditions.

10.2. Chemical stability

Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Not known.

10.5. Incompatible materials

Materials To Avoid

Strong acids. Strong alkalis. Organic compounds. Heavy metals.

10.6. Hazardous decomposition products

Fire creates: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

**SECTION 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effectsAcute toxicity:

Acute Toxicity (Oral LD <sub>50</sub> )	ca. 14700 mg/kg Rat
Acute Toxicity (Dermal LD <sub>50</sub> )	> 10000 mg/kg Rabbit (occlusive)
Acute Toxicity (Inhalation LC <sub>50</sub> 4h)	> 0.85 mg/ml air Rat Aerosol. (Whole-body)

Skin Corrosion/Irritation:

Not irritating. Rabbit (semiocclusive)

Serious eye damage/irritation:

Not Irritating. Rabbit

Respiratory or skin sensitisation:

Respiratory sensitization	Not available.
Skin sensitization	Not Sensitising. Mouse (OECD429)

## Trimethylolpropane

Germ cell mutagenicity:

## Genotoxicity - In Vitro

Bacterial Reverse Mutation Test Negative. (OECD471)

## Mammalian Cell

Gene Mutation Assay Negative. (OECD476)

Chromosome aberration Negative. (OECD473)

Carcinogenicity:

Carcinogenicity Not available.

Reproductive Toxicity:

## Reproductive Toxicity

- Fertility NOAEL 800 mg/kg/day Oral Rat P/F1 (OECD422)

## Reproductive Toxicity

- Development NOAEL 800 mg/kg/day Oral Rat (OECD422)

Specific target organ toxicity - single exposure:

STOT - Single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure:STOT - Repeated exposure NOAEL ca. 67 mg/kg/day Oral Rat (subchronic) Exposure: 90 days  
Not classified as a specific target organ toxicant after repeated exposure.Aspiration hazard:

Not classified.

## SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity There are no data on the ecotoxicity of this product.

12.1. Toxicity

Acute Toxicity – Fish (LC50 96h) &gt; 1000 mg/l Alburnus alburnus

## Acute Toxicity

- Aquatic Invertebrates (EC50 48h) 13000 mg/l Daphnia magna (ASTM Committee)

## Acute Toxicity

- Aquatic Plants (EC50 72h) &gt; 1000 mg/l Selenastrum capricornutum (Algae) (OECD)

## Chronic Toxicity

- Aquatic Invertebrates (NOEC 21d) &gt; 1000 mg/l Daphnia magna (OECD)

12.2. Persistence and degradability

Degradability The product is not readily biodegradable. Inherently biodegradable, fulfilling specific criteria.

12.3. Bioaccumulative potential

Bioaccumulative potential The potential for bioconcentration in fish is low.

## Partition coefficient

log Pow - 0.47 @26 °C

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

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12.6. Other adverse effects

Not known.

## SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

## SECTION 14: TRANSPORT INFORMATION

General

Land transport should be in accordance with local regulations.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant      No.

14.6. Special precautions for user

Not applicable.

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

Not applicable.

## SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Legislation

Dangerous Substance Directive 67/548/EEC.

Dangerous Preparations Directive 1999/45/EC.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.  
(EC) No 1272/2008 (CLP).  
(EU) No 453/2010.

15.2. Chemical Safety Assessment

A chemical safety assessment has been carried out.

## Trimethylolpropane

## SECTION 16: OTHER INFORMATION

Revision Date	08/08/2014
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Revision	1
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Risk Phrases In Full	
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Not classified.	
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Hazard Statements In Full	
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Not classified.	
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## Disclaimer

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