



Material Safety Data Sheet

MSDS has been prepared in accordance with EC Directive 93/112/EEC

Section 1 Chemical Product and Company Identification

Name 2,2,4 Trimethylpentane		
Synonyms: iso octane	Product type: Liquid density certified reference material	Date revised: Oct 2002 Previous: Apr 1998
Manufacturer: H & D Fitzgerald Ltd. Cefn Du, Tremeirchion, St Asaph, Clwyd, LL17 0US UK		
Prepared by: Denis Fitzgerald		
Chemical family: Branched alkane		
Poison schedule number: None allocated		
Chemical Formula: (CH ₃) ₂ C.CH ₂ .CH(CH ₃) ₃		

Section 2 Composition / Information on ingredients

Substance name	C.A.S. No.	EINECS No.	% weight	HSCN (Tariff#)
2,2,4 Trimethylpentane	540-84-1	2087591	>99.7%	29011090

Section 3 Hazards identification

Emergency overview Colourless liquid with hydrocarbon odour. Supplied sealed in a 10ml glass ampoule. Caution: Flammable liquid and vapour. Vapour might cause a flash fire. Potential environmental effects: None in the quantity supplied in an ampoule.
Potential health effects Eyes: Irritant Skin: Irritant Ingestion: Difficulty in breathing, lung congestion Chronic: Kidney damage. This material is not listed as carcinogenic.

Section 4 First Aid measures

Eyes: Wash eyes with water or normal saline. If symptoms develop, seek medical attention.
Skin: Remove contaminated clothing and wash with soap & water. If symptoms develop, seek medical attention. Clean and dry contaminated clothing before reuse.
Ingestion: Do not induce vomiting. Seek medical attention without delay.

Section 5 Fire fighting measures		
Extinguishing media: CO ₂ , Dry powder, Foam		
Unsuitable media: None		
Lower explosive limit: 1.1%	Upper explosive limit: 6.0%	Flash point: -12°C
Flammability classification: Highly flammable OSHA 1B	Flame propagation: no data	Ignition in air: Autoignition temperature 415°C
Combustion hazards: Highly flammable		
Protective equipment: None needed		
Unusual fire hazards: None in 10ml quantity supplied in an ampoule.		
Static charge effects: Do not filter without earth bonding		

Section 6 Spillage measures
Spill cleanup: Mop up and dispose of as flammable waste.
Environmental precautions: None needed for the quantity supplied in an ampoule.

Section 7 Handling and storage
Handling precautions: None in quantity supplied
Storage precautions: Store ampoule in package until ready to use. Store in a cool place if possible (less than 25°C)

Section 8 Exposure controls and personal protection
Exposure guidelines: TWA 350 mg/m ³ (10 hours). Ceiling 1800 mg/m ³ (15 minutes)
Personal protective equipment
Eye/Face protection: Safety glasses are recommended to minimise eye contact.
Hands: Wash hands with soap before eating or drinking.

Section 9 Physical and chemical properties		
Physical state: Liquid	Colour: Colourless	Odour: Hydrocarbon
pH: none	Freezing point: -107°C	Boiling point: 99°C
Miscibility with water: immiscible with water	Density of liquid: ≈690 kgm ⁻³	
Vapour pressure: 55 mbar at 21°C	Molecular weight: 114.23	

Section 10 Stability and reactivity
Conditions to avoid: Avoid heat, flames, sparks, and sources of ignition
Incompatible materials: Oxidising materials
Reactivity: Stable at normal temperatures and pressures
Hazardous decomposition: Thermal decomposition gives oxides of carbon
Hazardous polymerisation: None known.

Section 11 Toxicological information

Acute effects	
Acute inhalation:	Not tested. Irritant
Acute ingestion:	LD ₅₀ (rat): >5000 mg/kg. May cause lung damage if swallowed
Acute skin:	Not tested
Eye irritation:	May cause irritation
Skin irritation:	May cause slight irritation
Chronic effects	
Chronic inhalation:	May cause kidney damage. May cause temporary depression of CNS
Chronic eye:	Not tested
Chronic skin:	Not tested
Mutagenic effects:	None found to date
Reproductive effects:	None found to date
Sensitisation	Not tested

Section 12 Ecological information

Persistence / degradability: No information available
Ecotoxicity: Toxic to aquatic organisms. Unlikely to present any ecological risk in the quantity supplied in an ampoule.

Section 13 Disposal

For small quantities: Mop up and dispose of as flammable waste.
Observe all national and local environmental regulations.

Section 14 Transport information

UN Number 1262	UN shipping name Octanes	UN class 1262
RID /ADR Octanes Code 3 (3B)	IMDG shipping name Octanes	ICAO / IATA: Hazard class 3 Packing group II

Section 15 Regulatory information

European classification:
Xn, F, N. Harmful, Highly flammable, Dangerous for the environment

Section 16 Other information

Reason for revision: changed to 93/112/EEC format

Disclaimer: H&D Fitzgerald believes that data given here is accurate. It is derived from published information about trimethylpentane. No warranty, expressed or implied, is intended. The data is provided for your information and consideration when using trimethylpentane as a certified reference material for the calibration of density meters. H&D Fitzgerald assumes no legal responsibility for its use.