

Material Safety Data Sheet

2,2,4-Trimethylpentane, reagent ACS, spectro grade

ACC# 96687

Section 1 - Chemical Product and Company Identification

MSDS Name: 2,2,4-Trimethylpentane, reagent ACS, spectro grade

Catalog Numbers: AC421980000, AC421980040, AC421985000

Synonyms: Isooctane; Isobutyltrimethylmethane

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
540-84-1	2,2,4-Trimethylpentane, reagent ACS, spectro grade		208-759-1

Hazard Symbols: XN F N

Risk Phrases: 11 38 50/53 65 67

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Not available. Appearance: APHA: 10 max clear liquid. Flash Point: -12 deg C. Not available.

Target Organs: Kidneys, central nervous system, respiratory system, eyes, skin.

Potential Health Effects

Eye: May cause eye irritation. Causes redness and pain.

Skin: Causes skin irritation. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis.

Ingestion: Aspiration hazard. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. May cause lung damage.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. May cause narcotic effects in high concentration.

Chronic: Not available.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

Antidote: None reported.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Vapor may cause flash fire. Containers may explode in the heat of a fire. Liquid will float and may reignite on the surface of water. Flammable liquid and vapor.

Extinguishing Media: Use water spray to cool fire-exposed containers. This material is lighter than water and insoluble in water. The fire could easily be spread by the use of water in an area where the water cannot be contained. Use dry chemical, carbon dioxide, or alcohol-resistant foam.

Flash Point: -12 deg C (10.40 deg F)

Autoignition Temperature: 417 deg C (782.60 deg F)

Explosion Limits, Lower: 1.10 vol %

Upper: 6.00 vol %

NFPA Rating: (estimated) Health: 1; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

Section 7 - Handling and Storage

Handling: Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Take precautionary measures against static discharges. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Ventilation fans and other electrical service must be non-sparking and have an explosion-proof design.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
2,2,4-Trimethylpentane, reagent ACS, spectro grade	none listed	none listed	none listed

OSHA Vacated PELs: 2,2,4-Trimethylpentane, reagent ACS, spectro grade: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Not available.

Skin: Wear impervious gloves.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A NIOSH/MSHA approved or European Standard EN 149 air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid

Appearance: colorless - APHA: 10 max

Odor: gasoline-like

pH: Not available.

Vapor Pressure: 52 mbar @ 20 deg C

Vapor Density: 3.94 (air=1)

Evaporation Rate: < 1 (ether=1)

Viscosity: mPas 22 deg C

Boiling Point: 98 - 99 deg C @ 760.00mm Hg

Freezing/Melting Point: -107 deg C

Decomposition Temperature: Not available.

Solubility: insoluble

Specific Gravity/Density: .6920g/cm³

Molecular Formula: (CH₃)₃CCCH₂CH(CH₃)₂

Molecular Weight: 114.23

Section 10 - Stability and Reactivity

Chemical Stability: Stable.

Conditions to Avoid: Incompatible materials, ignition sources, excess heat, electrical sparks.

Incompatibilities with Other Materials: Strong oxidizing agents, reducing agents, strong acids, strong bases, oxygen.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 540-84-1: SA3320000

LD50/LC50:

Not available.

Carcinogenicity:

CAS# 540-84-1: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Neurotoxicity: No data available.

Mutagenicity: Mutation & EPA: see RTECS

Other Studies: The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: see "The dictionary of substances and their effects" for complete information (editor : M.L.Richardson)

Physical: No information available.

Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	OCTANES				No information available.
Hazard Class:	3				
UN Number:	UN1262				
Packing Group:	II				

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 540-84-1 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS# 540-84-1: Effective Date: 6/1/87; Sunset Date: 12/19/95

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

CERCLA Hazardous Substances and corresponding RQs

CAS# 540-84-1: 1000 lb final RQ; 454 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 540-84-1: acute, flammable.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

CAS# 540-84-1 is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 540-84-1 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN F N

Risk Phrases:

R 11 Highly flammable.

R 38 Irritating to skin.

R 50/53 Very toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

R 65 Harmful: may cause lung damage if swallowed.

R 67 Vapors may cause drowsiness and dizziness.

Safety Phrases:

S 16 Keep away from sources of ignition - No

smoking.
S 29 Do not empty into drains.
S 33 Take precautionary measures against static discharges.
S 9 Keep container in a well-ventilated place.
S 60 This material and/or its container must be disposed of as hazardous waste.
S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets.
S 62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)

CAS# 540-84-1: No information available.

Canada - DSL/NDSL

CAS# 540-84-1 is listed on Canada's DSL List.

Canada - WHMIS

This product does not have a WHMIS classification.

Canadian Ingredient Disclosure List

Exposure Limits

Section 16 - Additional Information

MSDS Creation Date: 6/22/1998

Revision #3 Date: 6/24/2003

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.