

Safety Data Sheet
According to Hazard Communication Standard (29 CFR 1910.1200)

Iso octane(2.2.4 trimethylpentane)

Version 1.0

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SDS record number: CSSS-TCO-010- 120589

1. Product and Company Identification

Material name Iso octane(2.2.4 trimethylpentane)
CAS # See section 3
Product code -
Product use Solvent.
Manufacturer/Supplier
Supplier(Manufacturer): Northeast Pharm Liaohua Petrochem Co.,Ltd.
Address: Liaoyang,Liaoning, China 111200
Contact person(E-mail): info@nepfarm.com
Telephone: 0086-24-25807953
Fax: 0086-24-22724536

Emergency telephone Number:

2. Hazards identification

GHS classification

Physical hazards	Flammable liquids	Category 2
Health hazards	Aspiration toxicity	Category 1
	Skin corrosion/irritation	Category 2
	Specific target organ toxicity after single exposure	Category 3
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category1
	Hazardous to the aquatic environment, long-term hazard	Category1

GHS label elements

Hazard Pictograms



Signal word

Danger

Hazard statement

Highly flammable liquid and vapour.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause drowsiness or dizziness.
Very toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention

Avoid breathing dust/fume/ gas/mist/vapors/spray.

Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Use only outdoors or in a well-ventilated area.

Take precautionary measures against static discharge.

Wash hands thoroughly after handling.

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

Response

If swallowed: Immediately call a poison center /doctor.

If on skin: Wash with plenty of water.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If skin irritation occurs: Get medical advice/attention.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

Call a poison center /doctor if you feel unwell.

In case of fire: Use foam, water fog, dry chemical powder, carbon dioxide, other inert gases, sand or earth for extinction.

Do NOT induce vomiting.

Take off contaminated clothing and wash it before reuse.

Collect spillage.

Storage

Store in a well-ventilated place. Keep cool.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Disposal

Dispose of contents/container in according with local regulation.

3. Composition / Information on Ingredients

Components	CAS#	Percent
Iso octane (2.2.4 trimethylpentane)	540-84-1/26635-64-3	99%

4. First Aid Measures

First aid procedures

Eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Skin contact

Flush contaminated skin with plenty of water. Get medical attention if irritation occurs.

Inhalation

Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest

occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion

Wash out mouth with water. Remove dentures if any. Keep person warm and at rest. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Notes to physician

Treat symptoms.

5. Fire Fighting Measure

Flammable properties

Highly flammable liquid and vapour.

Extinguishing media

Suitable extinguishing media

Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media

Do not use water jet.

Firefighting equipment/instructions

Highly flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. This material is very toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products

In combustion emits toxic fumes.

6. Accidental Release Measures

Personal precautions

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental

pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods for cleaning up

Stop leak if without risk. Move containers from spill area. Absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilt product. Dispose of via a licensed waste disposal contractor.

7. Handling and Storage

Handling

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Refer to special instructions/safety data sheet. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous.

Storage

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Iso octane (2.2.4 trimethylpentane) (CAS540-84-1/26635-64-3)	PEL	2350 mg/m ³
		500ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
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Iso octane (2.2.4 trimethylpentane) (CAS540-84-1/26635-64-3)	Ceiling	1800 mg/m ³
		385ppm
	TWA	350 mg/m ³
		75ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Individual protection measures, such as personal protective equipment:

Eye / face protection

Safety glasses with side-shields.

Skin protection

Impermeable gloves. Impermeable protective clothing.

Respiratory protection

Self-contained breathing apparatus must be available in case of emergency.

General hygiene considerations

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

9. Physical & Chemical Properties

Appearance

Physical state	Liquid
Form	Liquid
Color	Colourless
Odor	Not available
Odor threshold	Not available
pH	Not available
Vapor pressure	Not available
Vapor density	Not available
Boiling point	99.2 °C(CAS#540-84-1)
Melting point/Freezing point	Not available
Solubility (water)	Slightly soluble
Specific gravity	Not available
Density	0.69 g/cm ³ (15 °C) (CAS#540-84-1)
Flash point	-12 °C(CAS#540-84-1)
Partition coefficient	log Pow=4.08(CAS#540-84-1)
Upper/lower flammability/explosive limits:	Not available
Auto-ignition temperature	418 °C (CAS#540-84-1)
VOC	Not available
Percent volatile	Not available
Molecular Formula	C ₈ H ₁₈
Molecular Weight	114.23
Other data	
Viscosity	0.38 mPa s (dynamic) (40 °C) (CAS#540-84-1)

Dissociation constant Not available
Surface tension 18.77 mN/m (20 °C) (CAS#540-84-1)

10. Chemical Stability & Reactivity Information

Reactivity The substance is stable under normal storage and handling conditions.
Chemical stability Material is stable under normal conditions.
Conditions to avoid Incompatible materials. Heat, flames and sparks; extremes of temperature and direct sunlight.
Incompatible materials Strong oxidizers.
Hazardous decomposition products When heated to decomposition it emits smoke and fumes.
Possibility of hazardous reactions No hazardous reactions known.

11. Toxicological Information

Toxicokinetics, metabolism and distribution:

Non-human toxicological data: Not available

Information on toxicological effects:

Acute toxicity:

2,2,4-trimethylpentane (CAS#540-84-1):

LD50(Oral, Rat): > 5000 mg/kg bw
LD50(Dermal, Rabbit): > 2000 mg/kg bw
LC50(Inhalation, Rat): > 33.52 mg/L air (nominal) 4h
Skin corrosion/Irritation: Causes skin irritation.
Serious eye damage/irritation: Not classified
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
STOT- single exposure: May cause drowsiness or dizziness.
STOT-repeated exposure: Not classified
Aspiration hazard: May be fatal if swallowed and enters airways.

12. Ecological Information

Toxicity:

2,2,4-trimethylpentane (CAS#540-84-1):

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	0.11 mg/L	96h	Fish	OECD 203	N/A	N/A
EC50	0.4 mg/L	48h	Daphnia	OECD 202	N/A	N/A
EC50	N/A	72h	Algae	OECD 201	N/A	N/A

Persistence and degradability: 2,2,4-trimethylpentane (CAS#540-84-1): inherently biodegradable.

Bioaccumulative potential: 2,2,4-trimethylpentane (CAS#540-84-1): BCF=231.

Mobility in soil: 2,2,4-trimethylpentane (CAS#540-84-1):log Koc=2.38

Results of PBT&vPvB assessment:

The substance is not PBT / vPvB.

Other adverse effects:

Very toxic to aquatic life with long lasting effects.

13. Disposal Considerations

Disposal instructions

Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT

Basic shipping requirements:

UN number	1262
Proper shipping name	OCTANES
Hazard class	3
Packing group	II
Environmental hazards	Yes

IATA

UN number	1262
UN proper shipping name	OCTANES
Transport hazard class(es)	3
Packing group	II
Environmental hazards	Yes

IMDG

UN number	1262
UN proper shipping name	OCTANES
Transport hazard class(es)	3
Packing group	II
Environmental hazards	Yes

15. Regulatory Information

US federal regulations

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Iso octane (2.2.4 trimethylpentane) Listed.

(CAS540-84-1/26635-64-3)

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting) Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

2.2.4-trimethylpentane (CAS 540-84-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd.(a))

2.2.4-trimethylpentane (CAS 540-84-1)

US. Massachusetts RTK - Substance List

2.2.4-trimethylpentane (CAS 540-84-1)

US. New Jersey Worker and Community Right-to-Know Act

2.2.4-trimethylpentane (CAS 540-84-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Iso octane (2.2.4 trimethylpentane) (CAS540-84-1/26635-64-3)

US. Rhode Island RTK

2.2.4-trimethylpentane (CAS 540-84-1)

US. California Proposition 65

Not listed.

16. Other Information

HMIS® ratings Health: 4 Flammability: 3 Physical hazard: 0

NFPA ratings Health: 4 Flammability: 3 Instability: 0

Disclaimer The information in the sheet was written based on the best knowledge and experience

currently available.

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