Date of issue: 12/09/2013
revised date 09/12/2015

Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: 2,2,4-Trimethylpentane

Product code(SDS NO): 49740jis_J_E1-2

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-Cho, Koshigaya, Saitama 343-0844, Japan

Division: Quality Assurance Department

Telephone number: +81-48-986-6161

FAX: +81-48-989-2787

e-mail address: shiyaku-t@junsei.co.jp

2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

PHYSICAL HAZARDS

Flammable liquids: Category 2

HEALTH HAZARDS

Skin corrosion/irritation: Category 2

Specific target organ toxicity - single exposure: Narcosis Category 3

Aspiration hazard: Category 1

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment - acute hazard : Category 1

Hazardous to the aquatic environment - long-term hazard : Category 1

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

Label elements

Signal word : Danger

HAZARD STATEMENT

Highly flammable liquid and vapor

Causes skin irritation

May cause drowsiness or dizziness

May be fatal if swallowed and enters airways

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.

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.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wash contaminated parts thoroughly after handling.
Wear protective gloves/eye protection/face protection.

Response

In case of fire: Use appropriate media.
Collect spillage.
Call a POISON CENTER or doctor/physician if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN: Wash with plenty of soap and 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.
Take off contaminated clothing and wash it before reuse.
IF SWALLOWED: Do NOT induce vomiting.Immediately call a POISON CENTER or doctor/physician.

Storage

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

Disposal

Dispose of contents/container in accordance with local/national regulation.

Physical and Chemical hazards

Highly flammable liquid. Vapor/air mixture may explode.

3. Composition/information on ingredients

Substance/Mixture:

Mixture

Common name, synonyms: Isooctane

Ingredient name:2,2,4-Trimethylpentane
Content(%):99.0 <
Chemical formula:C8H18
Chemicals No, Japan:2-8
CAS No.:540-84-1
MW:114.23
ECNO:208-759-1

4. First-aid measures

Descriptions of first-aid measures

General measures

Call a POISON CENTER or doctor/physician if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN(or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
If skin irritation occurs: Get medical advice/attention.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth. Do NOT induce vomiting.

Immediately call a POISON CENTER or doctor/physician.
Call a POISON CENTER or doctor/physician if you feel unwell.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use foam, dry powder, CO2.

Specific hazards arising from the substance or mixture

Containers may explode when heated.
Fire may produce irritating, corrosive and/or toxic gases.
Runoff from fire control or dilution water may cause pollution.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.
Cool container with water spray.
Combat fire from a sheltered position.

Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.
Wear protective gloves/protective clothing/eye protection/face protection.
Firefighters should wear self-contained breathing apparatus with full face peace operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area after material pick up is complete.
Wear proper protective equipment.

Environmental precautions

Avoid release to the rivers, lakes, ocean, groundwater.

Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

Collect spillage.

7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

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

(Protective measures against fire & explosion)

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.

Exhaust/ventilator

Exhaust/ventilator should be available.

Safety treatments

Avoid contact with skin.
Avoid contact with eyes.
Avoid breathing dust, vapor, mist, or gas.

Safety Measures/Incompatibility

Use only outdoors or in a well-ventilated area.
Wear protective gloves, protective clothing or face protection.
Wear protective gloves and face protection.
Use personal protective equipment as required.
When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

Recommendation for storage

Store in a well-ventilated place. Keep container tightly closed.
Keep cool. Protect from sunlight.
Store locked up.

8. Exposure controls/personal protection

Control parameters

Adopted value

ACGIH(1979) TWA: 300ppm (URT irr)

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.
Eye wash station should be available.
Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Safety and Health measures

Wash ... thoroughly after handling.
Take off contaminated clothing and wash it before reuse.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Liquid
Color: Colorless
Odor: Characteristic odor
pH data N.A.

Phase change temperature

Initial Boiling Point/Boiling point: 99℃
Melting point/Freezing point: -107℃
Decomposition temperature data N.A.
Flash point: (O.C.) 4.5℃
Auto-ignition temperature: 417℃
Explosive properties: Flammability or explosive limit

lower limit: 1.1 vol %
upper limit: 6.0 vol %

Vapor pressure: 5.1 kPa (20℃)
Relative Vapor Density (Air=1): 3.9
Specific gravity/Density: 0.690～0.693g/ml (20℃)
Solubility

Solubility in water: none

Solubility in solvent: Sol in ethanol, diethyl ether.
n-Octanol /water partition coefficient data N.A.

10. Stability and Reactivity

Chemical stability

Stable under normal storage/handling conditions.
Highly flammable.

Possibility of hazardous reactions

The vapour is heavier than air and may travel along the ground; distant ignition possible.
As a result of flow, agitation, etc., electrostatic charges can be generated.
Heating may cause violent combustion or explosion.
Reacts with strong oxidants.

Conditions to avoid

Contact with incompatible materials.
Open flames. Heat.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]
rat LD50 >5g/kg (SIDS, 2010)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]
rabbit LD50 >3160 mg/kg (SIDS, 2010)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]
Members of the C7-C9 Aliphatic Hydrocarbon Solvents Category are moderate skin irritants at high concentrations (SIDS, 2010).

Serious eye damage /irritation

[GHS Cat. Japan, base data]
(C7-C9 Aliphatic Hydrocarbon Solvents Category) rabbits : No eye irritation (SIDS, 2010)

No Allergenic and sensitizing effects data available
No Mutagenic effects data available

Carcinogenicity

EPA ; Inadequate information to assess carcinogenic potential<Oral Route>(2005)

No Teratogenic effects data available
No reproductive toxicity data available
No STOT-single/repeated exposure data available
No Aspiration hazard data available

12. Ecological Information

Toxicity

Aquatic toxicity

Very toxic to aquatic life
Very toxic to aquatic life with long lasting effects

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

Crustacea(Daphnia magna) LC50=0.98mg/L/48hr (SIDS, 2010)

Water solubility

none (ICSC, 1999)

Persistence and degradability

BOD_Degradation : 0% (Registered chemicals data check & review, Japan)

Bioaccumulative potential

BCF(conc. : 1 ug/L)=520 (Registered chemicals data check & review);

BCF(conc. : 10 ug/L)=540 (Registered chemicals data check & review)

13. Disposal considerations

Waste treatment methods

Avoid release to the environment (- if this is not the intended use).

Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No, UN CLASS

UN number: 1262

UN proper shipping name:OCTANES

Transport hazard class(es): 3

Packing group: II

ERG GUIDE NO.: 128

15. Regulatory Information

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

US major regulations

TSCA

2,2,4-Trimethylpentane

Other regulatory information

We are not able to check up the regulatory information in regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility. Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

GHS classification and labelling

Flam. Liq. 2: H225 Highly flammable liquid and vapor

Skin Irrit. 2: H315 Causes skin irritation

STOT SE 3: H336 May cause drowsiness or dizziness

Asp. Tox. 1: H304 May be fatal if swallowed and enters airways

Aquatic Acute 1: H400 Very toxic to aquatic life

Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 18th edit., 2013 UN Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012) 2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2015 TLVs and BEIs. (ACGIH)

http://monographs.iarc.fr/ENG/Classification/index.php

Supplier's data/information

Chemical Risk Information Platform (CHRIP)(NITE) http://www.safe.nite.go.jp/japan/db.html

GHS Classification Guidance for Enterprises 2013 Revised Edition （August, 2013,METI)

General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data.