

## 2,2,4-Trimethylpentane

258776-2.5L

Version 1.4

Revision Date 17.12.2022

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name : 2,2,4-Trimethylpentane  
SDS-number : 000000020374  
Type of product : Substance  
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.  
Chemical name : 2,2,4-trimethylpentane  
Index-No. : 601-009-00-8  
REACH Registration Number : no data available

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

Use of the Substance/Mixture : Laboratory chemicals  
Uses advised against : none

#### 1.3. Details of the supplier of the safety data sheet

Company : Honeywell International Inc.      Honeywell International, Inc.  
115 Tabor Road      115 Tabor Road  
07950-2546 Morris Plains      Morris Plains, NJ 07950-2546  
USA      USA  
Telephone :  
For further information, please contact: : SafetyDataSheet@Honeywell.com

#### 1.4. Emergency telephone number

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)  
+1-303-389-1414 (Medical)  
Country based Poison Control Center : see chapter 15.1

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### SECTION 2: Hazards identification


#### 2.1. Classification of the substance or mixture

##### REGULATION (EC) No 1272/2008

Flammable liquids Category 2  
H225 Highly flammable liquid and vapour.  
Aspiration hazard Category 1  
H304 May be fatal if swallowed and enters airways.  
Skin irritation Category 2  
H315 Causes skin irritation.  
Specific target organ toxicity - single exposure Category 3 - Central nervous system  
H336 May cause drowsiness or dizziness.  
Short-term (acute) aquatic hazard Category 1  
H400 Very toxic to aquatic life.  
Long-term (chronic) aquatic hazard Category 1  
H410 Very toxic to aquatic life with long lasting effects.

#### 2.2. Label elements

##### REGULATION (EC) No 1272/2008

Hazard pictograms : 

Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H336 May cause drowsiness or dizziness.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P280 Wear protective gloves/ eye protection/ face protection.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do

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P304 + P340 NOT induce vomiting.  
IF INHALED: Remove person to fresh  
air and keep comfortable for breathing.  
P308 + P313 IF exposed or concerned: Get medical  
advice/ attention.

### 2.3. Other hazards

Take measures to prevent the build up of electrostatic charge. Results of PBT and vPvB assessment, see chapter 12.5.

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
2,2,4-trimethylpentane	540-84-1 601-009-00-8 208-759-1	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Corr. 2; H315 STOT SE 3; H336 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	100 %	

### 3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.  
For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

*General advice:*

First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

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*Inhalation:*

If inhaled, remove to fresh air. Call a physician if irritation develops or persists.

*Skin contact:*

Wash off immediately with plenty of water for at least 15 minutes. Call a physician if irritation develops or persists.

*Eye contact:*

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

*Ingestion:*

When swallowed, allow water to be drunk. Do NOT induce vomiting. Call a physician immediately.

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

No data available

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

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

*Suitable extinguishing media:*

Water spray  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder

*Extinguishing media which shall not be used for safety reasons:*

High volume water jet

#### 5.2. Special hazards arising from the substance or mixture

Vapours may form explosive mixtures with air.  
Fire may cause evolution of:  
Carbon oxides

#### 5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away.

#### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

#### 6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material.  
Pick for disposal in tightly closed containers

#### 6.4. Reference to other sections

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For personal protection see section 8.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

*Advice on safe handling:*

Exhaust ventilation at the object is necessary.

*Advice on protection against fire and explosion:*

Use only in explosion-proof areas. Take precautionary measures against static discharges. Keep away from heat and sources of ignition. The heavy vapours can overcome a considerable distance up to the source of ignition. Vapours may form explosive mixture with air.

*Hygiene measures:*

Take off all contaminated clothing immediately. Remove and wash contaminated clothing before re-use. Keep working clothes separately. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

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

*Further information on storage conditions:*

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.

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

no additional data available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

##### DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
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2,2,4-trimethylpentane	Workers / Long-term systemic effects		2035 mg/m <sup>3</sup>	Inhalation	
2,2,4-trimethylpentane	Workers / Long-term systemic effects		773mg/kg bw/d	Skin contact	
2,2,4-trimethylpentane	Consumers / Long-term systemic effects		608 mg/m <sup>3</sup>	Inhalation	
2,2,4-trimethylpentane	Consumers / Long-term systemic effects		699mg/kg bw/d	Skin contact	
2,2,4-trimethylpentane	Consumers / Long-term systemic effects		699mg/kg bw/d	Ingestion	

No PNEC data available.

2,2,4-trimethylpentane	:	No data available
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### 8.2. Exposure controls

#### Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Do not breathe vapours or spray mist.

#### Engineering measures

Local exhaust

Use explosion-proof equipment.

#### Personal protective equipment

*Respiratory protection:*

In the case of vapour formation use a respirator with an approved filter.

*Hand protection:*

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Glove material: Nitrile rubber  
Break through time: > 480 min  
Glove thickness: 0,4 mm  
Camatril® 730  
Gloves must be inspected prior to use.  
Replace when worn.

Remarks: Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions ( e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer´s directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

*Eye protection:*  
Safety goggles

*Skin and body protection:*  
Protective suit

### Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

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## SECTION 9: Physical and chemical properties

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

Physical state	:	liquid
Colour	:	colourless
Odour	:	characteristic
molecular weight	:	114,23 g/mol
Melting point/range	:	-107 °C
Boiling point/boiling range	:	99 °C



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	at 1.013 hPa
Upper explosion limit	: 6 %(V)
Lower explosion limit	: 1,1 %(V)
Flash point	: -12 °C
Auto-ignition temperature	: 410 °C
Decomposition temperature	: No decomposition if used as directed.
pH	: No data available
pH	: No data available
Viscosity, kinematic	: No data available
Viscosity, kinematic	: No data available
Water solubility	: 0,002 g/l at 25 °C
Partition coefficient: n- octanol/water	: log Pow 4,08
Vapour pressure	: 55 hPa at 21 °C
Vapour pressure	: 117 hPa at 38 °C
Density	: 0,69 g/cm <sup>3</sup> at 20 °C
Relative vapour density	: No data available
Relative vapour density	: No data available

### 9.2 Other Information

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Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Evaporation rate	:	No data available
Evaporation rate	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, dynamic	:	No data available

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Stable under recommended storage conditions.

#### 10.2. Chemical stability

No decomposition if used as directed.

#### 10.3. Possibility of hazardous reactions

Vapours may form explosive mixture with air.

#### 10.4. Conditions to avoid

Heat, flames and sparks.

#### 10.5. Incompatible materials

Strong oxidizing agents

#### 10.6. Hazardous decomposition products

Carbon oxides

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

*Acute oral toxicity:*

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### LD50

Species: Rat

Value: > 5.000 mg/kg

Method: OECD Test Guideline 401

### *Acute dermal toxicity:*

#### LD50

Species: Rabbit

Value: > 2.000 mg/kg

Method: OECD Test Guideline 402

### *Acute inhalation toxicity:*

#### LC50

Species: Rat

Value: > 33,5 mg/l

Exposure time: 4 h

Method: OECD Test Guideline 403

### *Skin irritation:*

Species: Rabbit

Result: irritating

Method: OECD Test Guideline 404

### *Eye irritation:*

Species: Rabbit

Result: slight irritation

Method: OECD Test Guideline 405

According to the classification criteria of the European Union, the product is not considered as being an eye irritant.

### *Respiratory or skin sensitisation:*

Species: Guinea pig

Result: non-sensitizing

Method: OECD Test Guideline 406

### *Repeated dose toxicity:*

Species: Rat

Application Route: inhalation (vapour)

NOAEC: 6646

Test substance: REACH dossier "read-across"

Method: OECD 413

Note: Subchronic toxicity

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### *Carcinogenicity:*

Species: not specified

Note: No data available

### *Germ cell mutagenicity:*

Test Method: Ames test

Metabolic activation: with and without metabolic activation

Result: negative

Method: OECD Test Guideline 471

Test Method: In vitro gene mutation study in mammalian cells

Metabolic activation: with and without metabolic activation

Result: negative

Method: OECD Test Guideline 476

Test Method: Unscheduled DNA synthesis

Species: Rat

Method: OECD Test Guideline 486

Result: negative

### *Reproductive toxicity:*

Method: OECD Test Guideline 416

Species: Rat

Route of Application: Inhalation

General Toxicity F1: NOAEL: 3.000 ppm

Remarks: REACH dossier "read-across"

Method: OECD Test Guideline 414

Species: Rabbit

Route of Application: inhalation (vapour)

General Toxicity Maternal: NOAEC: > 7.000 ppm

Developmental Toxicity: NOAEC: > 7.000 ppm

Remarks: REACH dossier "read-across"

### *Aspiration hazard:*

May be fatal if swallowed and enters airways.

## 11.2. Information on other hazards

Endocrine disrupting properties

No data available

### *Other information:*

No data available

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### SECTION 12: Ecological information

#### 12.1. Toxicity

*Toxicity to fish:*

EC50

semi-static test

Species: *Oncorhynchus mykiss* (rainbow trout)

Value: 18,4 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Test substance: REACH dossier "read-across"

*Toxicity to aquatic plants:*

EL50

Species: *Selenastrum capricornutum* (green algae)

Value: 2.943 mg/l

Exposure time: 72 h

*Toxicity to aquatic invertebrates:*

EC50

static test

Species: *Daphnia magna* (Water flea)

Value: 0,4 mg/l

Exposure time: 48 h

Test substance: REACH dossier "read-across"

#### 12.2. Persistence and degradability

*Biodegradability:*

Biodegradation: > 60 %

Exposure time: 14 d

Result: Inherently biodegradable.

Method: OECD Test Guideline 301F

Test substance: REACH dossier "read-across"

#### 12.3. Bioaccumulative potential

Can accumulate in aquatic organisms.

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### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).  
This substance is not considered to be very persistent and very bioaccumulating (vPvB).

### 12.6. Endocrine disrupting properties

No data available

### 12.7. Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

*Product:*

Dispose according to legal requirements.

*Packaging:*

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

*Further information:*

Provisions relating to waste:  
EC Directive 2006/12/EC; 2008/98/EEC  
Regulation No. 1013/2006

For personal protection see section 8.

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID:1262

IMDG:1262

IATA:1262

### 14.2 UN proper shipping name

ADR/RID:OCTANES

IMDG:OCTANES

IATA:Octanes

### 14.3 Transport hazard class(es)

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ADR/RID: 3

IMDG: 3

IATA: 3

**14.4 Packaging group**

ADR/RID: II

IMDG: II

IATA: II

**14.5 Environmental hazards**

ADR/RID: yes

Marine pollutant: yes

**14.6 Special precautions for user**

No data available

**14.7 Maritime transport in bulk according to IMO instruments**

No data available

**SECTION 15: Regulatory information**

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

Basis	Value	Remarks
Directive 2012/18/EC Listed in Regulation : P5c: FLAMMABLE LIQUIDS	<b>Quantity:</b> 5.000.000 kg <b>Quantity:</b> 50.000.000 kg	
Directive 2012/18/EC Listed in Regulation : E1: Hazardous to the aquatic environment	<b>Quantity:</b> 100.000 kg <b>Quantity:</b> 200.000 kg	
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1\%$ (w/w).

**Poison Control Center**

Country	Phone Number
Austria	+4314064343
Belgium	070 245245

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052

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Bulgaria	(+359)29154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	
Latvia	+37167042473

Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

### Other inventory information

US. Toxic Substances Control Act  
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended  
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)  
All components of this product are on the Canadian DSL



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Japan. Kashin-Hou Law List

On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)

On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)

On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)

On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)

On the inventory, or in compliance with the inventory

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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## SECTION 16: Other information

### Text of H-statements referred to under heading 3

2,2,4-trimethylpentane	:	H225	Highly flammable liquid and vapour.
		H304	May be fatal if swallowed and enters airways.
		H315	Causes skin irritation.
		H336	May cause drowsiness or dizziness.
		H400	Very toxic to aquatic life.
		H410	Very toxic to aquatic life with long lasting effects.

### Further information

All directives and regulations refer to amended versions.

Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

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### Abbreviations:

EC European Community

CAS Chemical Abstracts Service

DNEL Derived no effect level

PNEC Predicted no effect level

vPvB Very persistent and very bioaccumulative substance

PBT Persistent, bioaccumulative und toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

This information should not constitute a guarantee for any specific product properties.

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