



TOKYO CHEMICAL INDUSTRY CO., LTD.

1-Pentanol

Revision 2
number:

Revision date: 03/05/2023

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SAFETY DATA SHEET

1. IDENTIFICATION

Product name: 1-Pentanol
Product code: P0055
Company: TOKYO CHEMICAL INDUSTRY CO., LTD.
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Revision number: 2

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

PHYSICAL HAZARDS

Flammable liquids

Category 3

HEALTH HAZARDS

Acute toxicity (Oral)

Category 4

Acute toxicity (Inhalation)

Category 4

Skin corrosion/irritation

Category 2

Serious eye damage/eye irritation

Category 2A

Specific target organ toxicity

Central nervous system

- Single exposure [Category 2]

Specific target organ toxicity

Respiratory tract irritation

- Single exposure [Category 3]

ENVIRONMENTAL HAZARDS

Not classified

Label elements

Pictograms or hazard symbols



Signal word

Warning

Hazard statements

Flammable liquid and vapour

Harmful if swallowed or if inhaled.

Causes skin irritation

Causes serious eye irritation

May cause damage to organs : Central nervous system

May cause respiratory irritation

Precautionary statements

[Prevention]

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 and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Do not breathe mist, vapors or spray.

Use only outdoors or in a well-ventilated area.

Do not eat, drink or smoke when using this product.

Wash hands and face thoroughly after handling.

Wear protective gloves, eye protection.

[Response]

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.

IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.

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

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 or attention.

If exposed or concerned: Call a POISON CENTER or doctor.

In case of fire: Use dry chemical, dry sand or foam to extinguish.

[Storage]

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

Store locked up.

[Disposal]

Dispose of contents and container in accordance with local, regional, national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Substance
Components:	1-Pentanol
Percent:	>99.0%(GC)
CAS RN:	71-41-0
Synonyms:	Amyl Alcohol , Pentyl Alcohol
Chemical Formula:	C ₅ H ₁₂ O
Notice Through Official Gazettes Reference Number	
ENCS:	(2)-217
ISHL:	Official announcement chemistry substance.

4. FIRST-AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Call a POISON CENTER or doctor/physician.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Call a POISON CENTER or doctor/physician.
Ingestion:	Call a POISON CENTER or doctor/physician. Rinse mouth.
Protection of first-aiders:	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Dry chemical, foam, carbon dioxide.
Unsuitable extinguishing media:	Water (It may scatter and spread fire.)
Precautions for firefighters:	Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so.
Special protective equipment for firefighters:	When extinguishing fire, be sure to wear personal protective equipment

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
Environmental precautions:	Prevent product from entering drains.
Methods and materials for containment and cleaning up:	Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
Prevention of secondary hazards:	Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical measures: Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling.
Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated.

Advice on safe handling: Avoid contact with skin, eyes and clothing.

Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store locked up.
Store away from incompatible materials such as oxidizing agents.

Packaging material: Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Install a closed system or local exhaust. Also install safety shower and eye bath.

Control parameters: Not set up

Personal protective equipment

Respiratory protection: Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.

Hand protection: Impervious gloves.

Eye protection: Safety goggles. A face-shield, if the situation requires.

Skin and body protection: Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C): Liquid
Form: Clear
Colour: Colorless - Almost colorless
Odour: Characteristic
Melting point/freezing point: -79°C
Boiling point/range: 137°C
Flammability(solid, gas): No data available
Flash point: 43°C
Autoignition temperature: 300°C
Flammability or explosive limits:
Lower: 1.2%
Upper: 10.5%
pH: No data available
Kinematic viscosity: No data available
Vapour pressure: 0.13kPa/20°C
Solubility(ies):
[Water] Slightly soluble (2.7g/100mL, 22°C)
[Other solvents]
Miscible: Ether, Alcohols, Many organic solvents
Log Pow: 1.51
Relative density: 0.82
Vapour density: 3
Particle characteristics: No data available

10. STABILITY AND REACTIVITY

Reactivity: No data available
Chemical stability: Stable under proper conditions.
Possibility of hazardous reactions: No special reactivity has been reported.
Conditions to avoid: Spark, Open flame, Static discharge
Incompatible materials: Oxidizing agents
Hazardous decomposition products: Carbon dioxide, Carbon monoxide

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	orl-rat LD50:370 mg/kg skn-rbt LD50:2830 uL/kg ihl-rat LCLo:14000 mg/m ³ /6H orl-hmn LDLo:142.8 mg/kg
Skin corrosion/irritation:	skn-rbt 3200 mg/24H SEV
Serious eye damage/irritation:	eye-rbt 5 uL/24H SEV
Germ cell mutagenicity:	mmo-esc 7000 ppm (-S9) sln-ham-Ing 25 mmol/L
Carcinogenicity:	
IARC =	No data available
NTP =	No data available
Reproductive toxicity:	No data available
STOT-single exposure:	No data available
STOT-repeated exposure:	No data available
Aspiration hazard:	No data available
RTECS Number:	SB9800000

12. ECOLOGICAL INFORMATION

Ecotoxicity:	
Fish:	48h LC50:540 mg/L (Oryzias latipes) 96h LC50:400 mg/L (Oncorhynchus mykiss)
Crustacea:	24h EC50:423 mg/L (Daphnia magna)
Algae:	24h EC50:1100 mg/L (Chlorococcales)
Persistence / degradability:	87 - 95 % (by BOD) , 98 - 100 % (by TOC) , 100 % (by GC) *The substance was determined as "Ready biodegradability" under the Chemical Substances Control Law.
Bioaccumulative potential(BCF):	3
Mobility in soil	
Log Pow:	1.51
Soil adsorption (Koc):	160
Henry's Law (PaM³/mol):	1.3
Other adverse effects:	No data available

13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION

UN-No:	1105
Proper shipping name:	Pentanol
Hazards Class:	3: Flammable liquid.
Packing group:	III
Specific precautionary transport measures and conditions:	

15. JAPANESE REGULATORY INFORMATION

Fire Defense Law:	Class-4 No.2 petroleum	Dangerous grade 3	Not water-soluble fluid
ISHL(Enforcement Order of the Industrial Safety and Health Act Appended Table 1):	Inflammable Substances		
Law for safety of vessels:	Hazardous materials notification, Schedule form No.1 Flammable liquid		

16. OTHER INFORMATION**The reference company name of written contents**

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This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.