

Safety Data Sheet

1. Product and company identification

Product name : Isopentyl acetate
Name of manufacturer : KANTO CHEMICAL CO., INC.
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SDS No. : GE00051

2. Summary of danger and Hazard

GHS classification

Physical and chemical hazard

Flammable liquids : Category 3
Pyrophoric liquids : Out of category

Human health hazard

Acute toxicity(oral) : Out of category
Skin corrosion • Irritation : Category 2
Serious eye damage • Eye irritation : Category 2B
Specific target organ systemic toxicity(single exposure) : Category 3 (respiratory tract irritation) 、 Category 3 (anesthetic action)
Specific target organ systemic toxicity(repeated exposure) : Category 1

Environmental hazard

Hazardous to the aquatic environment-acute hazard : Out of category
Hazardous to the aquatic environment-chronic hazard : Out of category

Pictogram or symbol



Signal word : Danger
Hazard statement : Flammable liquid and vapor
Causes skin irritation
Causes eye irritation
May cause respiratory irritation
May cause drowsiness and dizziness

Causes damage to organs (optic nerve) through prolonged or repeated exposure

Cautions

Safety measurements : Keep away from ignition sources such as heat, sparks, or open flame.
Keep containers tightly closed.
Ground container and receiving equipment in case of transport and stirring.
Use explosion-proof apparatus.
Use only non-sparking tools.
Do not breathe dust, mist, and vapor.
Use only in a well-ventilated area.
Do not eat, drink or smoke when using this product.
Wear appropriate protective gloves, glasses, clothing, face shield, or mask.
Wash protective equipment thoroughly after use.
Wash hands thoroughly after handling.

First-aid measures : If inhaled : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical treatment if you feel unwell.

If in eyes : Rinse cautiously with water for several minutes. Get medical treatment.

If on skin : Remove contaminated clothing and the substance. Get medical treatment, if you feel unwell.

Wash hands thoroughly after handling.

Get medical treatment, if you feel unwell.

Storage : Tightly container closed and store in a well-ventilated area.
Store locked up.

Disposal : Dispose of contents and containers appropriately in accordance with related regulations.

3. Composition/Information on ingredients

Substance/Mixture : Substance

Chemical name or commercial name

: Isopentyl acetate

Ingredients and composition

: Isopentyl acetate min. 99.0%

Chemical formula : $\text{CH}_3\text{COOCH}_2\text{CH}_2\text{CH}(\text{CH}_3)_2$

CAS No. : 123-92-2

TSCA Inventory : Registered

EINECS No. : 2046623

Dangerous and hazardous ingredients

: Isopentyl acetate

4. First aid measures

Inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.

Skin contact : Wash the affected areas under running water.

Eye contact : Wash the affected areas under running water for at least 15 minutes. If necessary, get medical treatment.

Ingestion : Give the victim water or salt water and make him vomit. Get medical attention.

Protection for first aid person

: Saviors wear proper protective equipment like rubber gloves, goggles.

5. Fire fighting measures

Extinguishing media : Dry chemical powder, carbon dioxide, dry sand, foam

Prohibited extinguishing media

: Water spray

Particular fire fighting : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.

Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Foam extinguisher is effective for a large scale fire.

Protection for firefighters

: Wear breathing apparatus.

6. Accidental release measures

Cautions for personnel : Wear proper equipment and avoid contact with skin and inhalation of vapor. Keep personnel removed from and upwind of fire. Shut off all sources of ignition. Keep away personnel except for authorized ones from spillage area by stretching ropes.

Cautions for environment : Attention should be given not to cause damage to the environment by flowing of spillage to rivers. In case of the dilution of copious water, do not cause damage to the environment by untreated wastewater.

Removal measure : Absorb spill with inert material (e.g., diatomaceous earth, sand) and flush residual area with copious amounts of water.

Prevention of second accident

: Remove nearby sources of ignition and prepare extinguishing media.

7. Cautions of handling and storage

Handling

Engineering measures : Wear proper equipment not to contact with skin or inhale the vapor. Fire is strictly prohibited.

Ventilate well at working places.

Cautions for safety handling

: Use with an enclosed system or a local exhaust ventilation.

Cautions

: Do not contact with oxidizing substances.

Storage

Adequate storage condition

: Store in a dark, cool place and tightly closed.

Safety adequate container materials

: Glass, fluorine resin, stainless steel

Do not use vinyl chloride resin, acrylic resin, polystyrene etc.

8. Exposure control/Personal protection

Engineering measures : Use only with adequate ventilation and in closed systems.

Control parameters

ACGIH(2009) : 50ppm(TLV-TWA)
100ppm (TLV-STEL)

Protective equipment

Respiration protective equipment

: If necessary, wear chemical cartridge respirator with an organic vapor cartage

Hands protective equipment

: Impervious protective gloves

Eyes protective equipment

: Safety goggles

Skin and body protective equipment

: Protective clothing, protective boots

9. Physical and chemical properties

Appearance : Liquid

Color : Colorless

Odor : Banana like odor

Boiling point : 142°C

Melting point : -78.5°C

Flash point : 25°C

Auto-ignition point : 379.4°C

Explosion characteristics

Explosion limit : upper : 7.5vol% lower : 1.0vol%

Vapor pressure : 6.0hPa(20°C)

Vapor density : 4.5

Specific gravity : 0.872g/cm³ (20°C)

Solubility

Solubility in solvents : Water ; 0.2%(20°C)

Organic solvents ; Soluble in ethanol, diethyl ether, ketone, etc.

Other data : Viscosity : 0.872cP(20°C)

10. Stability and reactivity

Stability : Stable under normal usage.

Reactivity : May react with oxidizing substances.

Incompatible conditions : Light, heat

Incompatible materials : Oxidizing substances

Hazardous decomposition products

: Carbon monoxide

11. Toxicological information

Acute toxicity : Oral : Out of category

Dermal : Not possible to classify because of insufficient data.

Inhalation(vapor) : Not possible to classify because of insufficient data.

Inhalation(dust, mist) : Not possible to classify because of insufficient data.

rat oral LD50=16600mg/kg

Skin corrosiveness : Causes skin irritation(category 2)

There is the description that all amyl acetate compounds including this substance cause irritation to the skin, it was classified into category 2.

Irritation to skin, eyes : Causes eye irritation(category 2B)

In humans, there is the reported that causes irritation to the eyes or conjunctiva by inhalation exposure of this substance or a mixture of isomers. So it was classified into category 2B.

Respiratory sensitization or Skin sensitization

: Respiratory sensitization : Not possible to classify because of insufficient data.

Skin sensitization : Not possible to classify because of insufficient data.

Mutagenicity : Not possible to classify because of insufficient data.

Carcinogenic effects : Not possible to classify because of insufficient data

Effects on the reproductive system

: Not possible to classify because of insufficient data.

Specific target organ systemic toxicity single exposure

: May cause respiratory irritation(category 3) - May cause drowsiness and dizziness(category 3)

By this product or inhalation of a isomer mixture exposure, in humans, the upper respiratory conditions, such as nose, pharynx, respiratory tract, etc. is mainly reported, and there is also description that it have strong irritation especially an respiratory tract, and respiratory irritation was suggested. Furthermore, the anesthetic actions was observed in rat, and moderate central nerve inhibition in cat, and drowsiness in dog was reported. So it was classified into category 3 (respiratory irritation, anesthetic actions).

Specific target organ systemic toxicity repeated exposure

: Cause damage to organs (optic nerve) through prolonged or repeated exposure(category 1)

There is a statement that visual field constriction is reported by part of humans who received occupation exposure of the isomer mixtures and also neurotoxicity is occurred. Moreover, the histologically degeneration of the optic nerve is acknowledged in repeated exposure to the rabbit. It was classified into category 1 (optic nerve) according to these knowledge.

Aspiration hazard : Not possible to classify because of insufficient data.

12. Ecological information

Ecotoxicity

Fish toxicity : Acute aquatic toxicity : Out of category

Chronic aquatic toxicity : Out of category

Crustacea(daphnia magna) EC50=205mg/L/24H

Rediualbility and degradability

: Not available

Ecorediualbility : Not available

13. Disposal consideration

Residual disposal : Burn in a chemical incinerator equipped with an afterburner and a scrubber. Or entrust approved waste disposal companies with the disposal.

Containers : In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

UN class : Class 3(Flammable liquids) P. G. III

UN number : 1104

Marine regulation information

UN No. : 1104

Proper shipping name : AMYL ACETATES

Class : 3

Sub risk : -

Packing group : III

Marine pollutant : Not applicable

Aviation regulation information

UN No. : 1104

Proper shipping name : Amyl acetates

Class : 3

Sub risk : -

Packing group : III

15. Regulatory information

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

16. Other information

References
 Dictionary of Organic Compounds, The society of Synthetic Organic Chemistry, Kodansha Ltd. (1985)
 Solvents Handbook, T, Asahara et al, Kodansha Scientific Ltd. (1976)
 Dangerous Properties of Industrial Materials, 6th ed. N. I. Sax Van Nostrand Reinhold Company (1984)
 Handbook of Dangerous Substances Springer-Verlag Tokyo (1991)
 Handbook of 15710 Chemical Products, The Chemical Daily Co. (2010)

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information, and it does not represent a guarantee the properties of the product. The Safety Data Sheet (SDS) is prepared based on JIS Z7253, and it has the same required elements on the Material Safety Data Sheet (MSDS) which is prepared based on JIS Z7250:2010.