Chemical Safety Data Sheet MSDS / SDS

Isopentyl acetate SDS

Revision Date:2024-04-25 Revision Number:1

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

Product identifier

Product name: Isopentyl acetate

CAS: 123-92-2

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: For R&D use only. Not for medicinal, household or other use.

Uses advised against: none

Company Identification

Company: Chemicalbook.in

Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090

Telephone: +91 9550333722

SECTION 2: Hazards identification

Classification of the substance or mixture

Flammable liquids, Category 3

GHS label elements, including precautionary statements

Pictogram(s)

Signal word Warning

Hazard statement(s)

H226 Flammable liquid and vapour

Precautionary statement(s)

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Response

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P370+P378 In case of fire: Use ... to extinguish.

Storage

P403+P235 Store in a well-ventilated place. Keep cool.

Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

Substance

Chemical name:	Isopentyl acetate
Common names and synonyms:	Isopentyl acetate
CAS number:	123-92-2
EC number:	204-662-3
Concentration:	100%

SECTION 4: First aid measures

Description of necessary first-aid measures

If inhaled

Fresh air, rest. Refer for medical attention.

Following skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower.

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

Most important symptoms/effects, acute and delayed

VAPOR: Irritating to eyes, nose and throat. If inhaled, will cause nausea, headache or dizziness. LIQUID: Irritating to skin and eyes. Harmful if swallowed. (USCG, 1999)

Indication of immediate medical attention and special treatment needed, if necessary

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Esters and related compounds

SECTION 5: Firefighting measures

Suitable extinguishing media

use alcohol foam, carbon dioxide, dry chemical.

Specific hazards arising from the chemical

FLAMMABLE. Flashback along vapor trail may occur. Vapor may explode if ignited in an enclosed area. When heated emits acrid fumes. When exposed to flames can react vigorously with reducing materials. (USCG, 1999)

Special protective actions for fire-fighters

Use alcohol-resistant foam, powder, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

Environmental precautions

Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

Methods and materials for containment and cleaning up

Prevent leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided... Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

SECTION 7: Handling and storage

Precautions for safe handling

NO open flames, NO sparks and NO smoking. Above 25°C use a closed system, ventilation and explosion-proof electrical equipment. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

Conditions for safe storage, including any incompatibilities

Fireproof. Separated from strong oxidants.Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

TLV: 50 ppm as TWA; 100 ppm as STEL.MAK: 270 mg/m3, 50 ppm; peak limitation category: I(1); pregnancy risk group: D.EU-OEL: 270 mg/m3, 50 ppm as TWA; 540 mg/m3, 100 ppm as STEL

Biological limit values

no data available

Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear safety goggles.

Skin protection

Protective gloves.

Respiratory protection

Use ventilation, local exhaust or breathing protection.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	Iso-amyl acetate is an oily liquid; colorless; banana odor. Floats and mixes with water. Flammable, irritating vapor is produced . (USCG, 1999)
Colour:	Colorless neutral liquid
Odour:	Pear-like odor
Melting point/freezing point:	205°C(dec.)(lit.)
Boiling point or initial boiling point and boiling range:	142°C/756mmHg(lit.)
Flammability:	Class IC Flammable Liquid: Fl.P. at or above 73°F and below 100°F.
Lower and upper explosion limit/flammability limit:	In air % by vol: lower 1.0 at 212 deg F; upper 7.5
Flash point:	25°C
Auto-ignition temperature:	680°F
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	1.030 cP at 8.97 deg C; 0.872 cP at 19.91 deg C.
Solubility:	less than 1 mg/mL at 66° F (NTP, 1992)
Partition coefficient n-octanol/water:	log Kow = 2.25
Vapour pressure:	5 mm Hg (25 °C)

Density and/or relative density:	0.876g/mLat 25°C(lit.)
Relative vapour density:	4.5 (vs air)
Particle characteristics:	no data available

SECTION 10: Stability and reactivity

Reactivity

Reacts violently with strong oxidants. This generates fire and explosion hazard. Attacks some forms of resins.

Chemical stability

no data available

Possibility of hazardous reactions

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.ISO-AMYL ACETATE is an ester. Esters react with acids to liberate heat along with alcohols and acids. Strong oxidizing acids may cause a vigorous reaction that is sufficiently exothermic to ignite the reaction products. Heat is also generated by the interaction of esters with caustic solutions. Flammable hydrogen is generated by mixing esters with alkali metals and hydrides. This compound can react violently with oxidizing materials, nitrates, strong alkalis and strong acids. (NTP, 1992)

Conditions to avoid

no data available

Incompatible materials

can react vigorously with reducing materials.

Hazardous decomposition products

Special hazards arising from the substance or mixture: Carbon oxides.

SECTION 11: Toxicological information

Acute toxicity

Oral: LD50 Rabbit oral 7422 mg/kg

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

The vapour is irritating to the eyes and respiratory tract. Exposure to high concentrations of vapour could cause unconsciousness.

STOT-repeated exposure

The substance defats the skin, which may cause dryness or cracking.

Aspiration hazard

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

SECTION 12: Ecological information

Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

Persistence and degradability

AEROBIC: Biodegradation studies with isoamyl acetate were not available(SRC, 2015). Structurally similar compounds such as butyl acetate and isopropyl acetate have achieved 50.7 and 40.0%, respectively, of their theoretical BODs after 10 days in mineralized water and settled sanitary sewage at 20 deg C(1). Butyl acetate present at 100 mg/L, reached 86% of its theoretical BOD in 2 weeks using an activated sludge inoculum in the Japanese MITI test(2). Isobutyl acetate, methyl amyl acetate, and other alkyl acetates have achieved between 69-81% of their theoretical BODs after 20 days in fresh water tests with non-acclimated sludge(3). These data suggest that biodegradation of isoamyl acetate may be an important environmental fate process(SRC).

Bioaccumulative potential

An estimated BCF of 14 was calculated in fish for isoamyl acetate(SRC), using a log Kow of 2.25(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

Mobility in soil

The Koc of isoamyl acetate is estimated as 130(SRC), using a log Kow of 2.25(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that isoamyl is expected to have high mobility in soil.

Other adverse effects

no data available

SECTION 13: Disposal considerations

Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information

UN Number

ADR/RID: UN1104 (For reference only, please check.)
IMDG: UN1104 (For reference only, please check.)
IATA: UN1104 (For reference only, please check.)

UN Proper Shipping Name

ADR/RID: AMYL ACETATES (For reference only, please check.)
IMDG: AMYL ACETATES (For reference only, please check.)
IATA: AMYL ACETATES (For reference only, please check.)

Transport hazard class(es)

ADR/RID: 3 (For reference only, please check.)
IMDG: 3 (For reference only, please check.)
IATA: 3 (For reference only, please check.)

Packing group, if applicable

ADR/RID: III (For reference only, please check.)
IMDG: III (For reference only, please check.)
IATA: III (For reference only, please check.)

Environmental hazards

ADR/RID: No
IMDG: No
IATA: No

Special precautions for user

no data available

Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)

Listed.

EC Inventory

Listed.

United States Toxic Substances Control Act (TSCA) Inventory

Listed.

China Catalog of Hazardous chemicals 2015

Listed.

New Zealand Inventory of Chemicals (NZIoC)

Listed.

(PICCS)

Listed.

Vietnam National Chemical Inventory

Listed.

IECSC)

Listed.

Korea Existing Chemicals List (KECL)

Listed.

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

References

IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home

HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm

IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg

Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp

ECHA - European Chemicals Agency, website: https://echa.europa.eu/