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Safety Data Sheet

1. Chemical product and company identification

Product name : ISOPENTYL ACETATE

Company information

Name of manufacturer	:	KANTO CHEMICAL CO., INC.
Address	:	2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, Japan
Name of section	:	Electronic materials division technical department
Telephone number	:	+81-3-6214-1080
Facsimile number	:	+81-3-3241-1043
Mail address	:	el-info@kanto.co.jp
Reference No	:	GE00051 1.1
Recommended uses and restrictions	:	Electronic chemicals

2. Hazards identification

GHS classification

Physical hazards	Flammable liquids	Category 3
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity (single exposure)	Category 3 (narcosis)
	Specific target organ toxicity (single exposure)	Category 3 (respiratory tract irritation.)
	Specific target organ toxicity (repeated exposure)	Category 1 (optic nerve)

Hazard pictograms

Signal word : Danger

Hazard statements : Flammable liquid and vapor
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation
May cause drowsiness or dizziness
Causes damage to organs (optic nerve) through prolonged or repeated exposure

Precautionary statements

Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take action to prevent static discharges.

		Do not breathe mist/vapors. Wash hands, forearms and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
Response	:	IF ON SKIN: Wash with plenty of water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor if you feel unwell. Get medical advice/attention if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Storage	:	Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	:	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

3. Composition/information on ingredients

Distinction of substance or mixture : Substance

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Isopentyl acetate	min. 99.0	CH3COOCH2CH2CH(CH3)2	Listed	204-662-3	123-92-2

4. First aid measures

First aid measures

First-aid measures after inhalation	:	Remove the victim to fresh air, and make him blow his nose and gargle.
First-aid measures after skin contact	:	Wash the affected areas under running water.
First-aid measures after eye contact	:	Wash the affected areas under running water for at least 15 minutes. If necessary, get medical treatment.
First-aid measures after ingestion	:	The chemical is volatile. Do not induce vomiting because it increases the risk of aspiration into the lungs. Get medical attention immediately. If necessary, rinse mouth with water.
Personal Protection in First Aid and Measures	:	Rescuers should wear proper protective equipment like rubber gloves, goggles.

5. Fire fighting measures

Suitable extinguishing media : Dry chemical, CO2, dry sand, or alcohol-resistant foam

Unsuitable extinguishing media	:	Water spray, Foam extinguisher
Firefighting instructions	:	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. Fight fire from windward. Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Alcohol-resistant foam extinguisher is effective for a large scale fire.
Personal protection (Emergency response)	:	Wear breathing apparatus.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

General measures	:	Wear proper protective equipment and avoid contact with skin and inhalation of vapor. Conduct operations from upwind and evacuate people downwind. Remove all sources of ignition. Keep away personnel except for authorized ones from spillage area by stretching ropes.

Environmental precautions

Environmental precautions	:	Attention should be given to avoid damage to the environment by flowing of spillage to rivers.

Methods and Equipment for Containment and Cleaning up

For containment	:	Absorb spill with inert material (e.g, diatomaceous earth, sand) and flush spillage area with copious amounts of water.
Prevention Measures for Secondary Accidents	:	Remove nearby sources of ignition and prepare extinguishing media.

7. Handling and storage

Handling

Technical measures	:	Wear proper protective equipment to avoid contact with skin or inhalation of vapor. Fire is strictly prohibited. Ventilate well at working places. Prevent build-up of electrostatic charges (e.g. by grounding) .
Precautions for safe handling	:	Use with an enclosed system or a local exhaust ventilation. Use in well-ventilated areas. Do not allow contact with oxidizing substances.

Storage

Storage conditions	:	Store in a dark, cool place and tightly closed.
Material used in packaging/containers	:	Glass, fluorine resin, stainless steel. Do not use vinyl chloride resin, acrylic resin, polystyrene etc.

8. Exposure controls / Personal protection equipment

ACGIH TWA	50 ppm
ACGIH STEL	100 ppm

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

Protective equipment

Respiratory protection	:	If necessary, wear chemical cartridge respirator with an organic vapor cartage
Hand protection	:	Impervious protective gloves
Eye protection	:	Safety goggles
Skin and body protection	:	Protective clothing, protective boots

9. Physical and chemical properties

Physical state	:	Liquid
Color	:	Colorless.
Odor	:	Banana like odor
pH	:	No data available
Melting point	:	-78.5 ° C
Freezing point	:	No data available
Boiling point	:	142 ° C
Flash point	:	25 ° C (C.C.)
Auto-ignition temperature	:	379.4 ° C
Decomposition temperature	:	700 ° C
Flammability	:	Flammable
Vapor pressure	:	6 hPa (20℃)
Relative density	:	No data available
Density	:	0.872 g/cm^3 (20℃)
Relative gas density	:	4.5
Solubility	:	Organic solvents: Soluble in ethanol, diethyl ether, ketone, etc. Water: 0.2 % (20℃)
Partition coefficient n-octanol/water (log Pow)	:	2.13
Explosive limits (vol %)	:	1 - 7.5 vol %
Viscosity, kinematic:	:	1 mm^2/s (20℃)
Particle characteristics	:	No data available

10. Stability and reactivity

Reactivity	:	May react with oxidizing substances.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Stable under normal conditions of use.
Conditions to avoid	:	Light, heat.
Incompatible materials	:	Oxidizing substances.
Hazardous decomposition products	:	Carbon monoxide.

11. Toxicological information

Acute toxicity (oral)	:	No classification rat LD50=16600mg/kg
Acute toxicity (dermal)	:	Classification not possible
Acute toxicity (inhalation)	:	No classification (gas) Classification not possible (vapor) Classification not possible (dust, mist)

Skin corrosion/irritation	:	Causes skin irritation Since there is a description that all amyl acetate compounds including this substance were irritating to the skin, it was classified into category 2. Besides, there is a report that after repeated occlusive application of a 20% solution of this substance to 197 human subjects, no irritation was observed. In addition, there is a report that slight irritation was observed after application of an isomer mixture containing this substance to the ears of rabbits, and there is a description that after a 4-hour non-occlusive application of 0.5 mL of an isomer mixture to rabbits, moderate erythema and slight edema were observed, and slight desquamation was observed 7 days after application.
Serious eye damage/irritation	:	Causes serious eye irritation Although there was no specific data, there are descriptions that this substance was irritating to the eyes, and that isomers of this substance were irritating to the eyes. From the above results, it was classified into category 2A.
Respiratory sensitization	:	Classification not possible
Skin sensitization	:	Classification not possible
Germ cell mutagenicity	:	Classification not possible There was no in vivo data. As for in vitro, it was negative in bacterial reverse mutation tests, a mouse lymphoma assay and a chromosomal aberration test with cultured mammalian cells.
Carcinogenicity	:	Classification not possible
Reproductive toxicity	:	Classification not possible
STOT-single exposure	:	May cause drowsiness or dizziness May cause respiratory irritation This substance was irritating to the respiratory tract. In humans, on inhalation exposure, headache, weakness and central nervous system depression, and at the high concentration unconsciousness were observed, and as for experimental animals, on exposure to this substance or the isomer mixtures, central nervous system depression such as narcotic effects, labored breathing, ataxia and loss of righting reflex in rats and mice, etc. were observed. From the above, it was classified into category 3 (respiratory tract irritation, narcosis).

STOT-repeated exposure	:	Causes damage to organs (optic nerve) through prolonged or repeated exposure Although there are no reports in either humans or experimental animals in which the effects by repeated exposure to this substance itself were made clear, there were the following findings regarding the effects by exposure to isomer mixtures containing this substance. In humans, there is a report that irritation to the eyes and photophobia were observed in workers exposed to pentyl acetate (details unknown) for 1 month-30 years. In addition, 30 workers who engaged in film production and were exposed to pentyl acetate mixtures (details unknown) at concentrations of 3,700-14,800 ppm, complained of sensitivity to light, conjunctival irritation and lacrimation at work, and in 4 of them who engaged for 4-9 years, the symptoms were severe, and narrowing of the field of vision and atrophic changes of the visual nerve were observed. As for experimental animals, there is a description that degeneration of the optic nerve was observed in a test in which rabbits were exposed by inhalation to a pentyl acetate mixture (details unknown) at 7,500 ppm for 60 days, therefore, it was considered a finding that supported effect on the optic nerve in humans. From the above, this substance was also classified into category 1 (optic nerve) as well as other isomers since disorder of the optic nerve was observed in pentyl acetate mixtures.
Aspiration hazard	:	Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	:	No classification Daphmia magna EC50=205mg/L/24h
Aquatic chronic	:	No classification

Persistence and degradability

No additional information available

Bioaccumulative potential

Low bioconcentration
log Pow : 2.13

Mobility in soil

High mobility
Koc : 130

Hazardous to the ozone layer

Ozone	:	Classification not possible

13. Disposal considerations

Ecological waste information	:	Burn in a chemical incinerator equipped with an afterburner and a scrubber. Or entrust approved waste disposal companies with the disposal.
Contaminated container and packaging	:	In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

International Regulations

Transport by sea(IMDG)

UN-No. (IMDG)	:	1104
Proper Shipping Name (IMDG)	:	AMYL ACETATES
Packing group (IMDG)	:	III
Transport hazard class(es) (IMDG)	:	3

Air transport(IATA)

UN-No. (IATA)	:	1104
Proper Shipping Name (IATA)	:	Amyl acetates
Packing group (IATA)	:	III
Transport hazard class(es) (IATA)	:	3
Marine pollutant	:	Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Pollutant category	:	Y
MFAG-No	:	129

15. Regulatory information

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

16. Other information

Data sources : Solvents Handbook, T, Asahara el, Kodansha Scientific Ltd. (1976) .
Handbook of Dangerous Substances Springer-Verlag Tokyo (1991) .
Handbook of 17322 Chemical Products, The Chemical Daily Co. (2022) .
NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.

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.