

DESIGN REPORT OF SAFETY DATA SHEET

No.: 220100320412033E

Date: Mar.9,2022

Name of the sample	Isoamyl alcohol		
Applicant	Dakings Chemical (Shandong) Co., Ltd.		
Supplier	Dakings Chemical (Shandong) Co., Ltd.		
Composition of the sample	Isoamyl alcohol: 99%		
Warranty of Design	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) Ninth revised edition		
Design Result of SDS please see next page.			
Designer		Approver	

Notes: This SDS is valid before the implementation of the Tenth revised edition GHS.

Section 1 Product and Company Identification**> Product Identifier**

Product Name	Isoamyl alcohol
Synonyms	-
CAS No.	123-51-3
EC No.	204-633-5
Molecular Formula	C ₅ H ₁₂ O

> Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Uses	Please consult manufacturer.
Uses Advised Against	Please consult manufacturer.

> Details of the Supplier of the Safety Data Sheet

Applicant Name	Dakings Chemical (Shandong) Co., Ltd.
Application Address	Qingdao Qianwan Bonded Port Area, Shandong Pilot Free Trade Zone, China
Applicant Post Code	266400
Applicant Telephone	+86-533-6292708
Applicant Fax	+86-533-6292708
Applicant E-mail	sales@dakingschem.com
Supplier Name	Dakings Chemical (Shandong) Co., Ltd.
Supplier Address	Qingdao Qianwan Bonded Port Area, Shandong Pilot Free Trade Zone, China
Supplier Post Code	266400
Supplier Telephone	+86-533-6292708
Supplier Fax	+86-533-6292708
Supplier E-mail	sales@dakingschem.com

> Emergency Phone Number

Emergency Phone Number	+86-533-6292708
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Section 2 Hazards Identification

Hazard class and label elements of the product according to GHS (the ninth revised edition):

> GHS Hazard Class

Flammable Liquids	Category 3
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Acute Toxicity – Oral	Category 4
Acute Toxicity – Dermal	Category 5
Skin Corrosion/Irritation	Category 2
Eye Damage/Irritation	Category 1
Acute Toxicity – Inhalation	Category 4
Specific Target Organ Toxicity (Single Exposure)	Category 3

> GHS Label Elements

Pictogram



Signal Word

Danger**> Hazard Statements**

H226	Flammable liquid and vapour
H302	Harmful if swallowed
H313	May be harmful in contact with skin
H315	Causes skin irritation
H318	Causes serious eye damage
H332	Harmful if inhaled
H335	May cause respiratory irritation

> Precautionary Statements**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.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264+P265	Wash hands and other contact area thoroughly after handling. Do not touch eyes.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.

P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
Response	
P317	Get medical help.
P319	Get medical help if you feel unwell.
P321	Specific treatment (see measures on this label).
P330	Rinse mouth.
P301+P317	IF SWALLOWED: Get medical help.
P302+P317	IF ON SKIN: Get medical help.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P317	If skin irritation occurs; Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use suitable extinguishing medium to extinguish.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P305+P354+P338	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
Disposal	
P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

Section 3 Composition/Information on Ingredients

Component	CAS No.	EC No.	Concentration (weight percent, %)
Isoamyl alcohol	123-51-3	204-633-5	99

Section 4 First Aid Measures

> Description of First Aid Measures

General Advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
Skin Contact	Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
Ingestion	Do not induce vomiting. Never give anything by mouth to an unconscious person. Call

a physician or Poison Control Center immediately.

Inhalation

Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.

Protecting of First-aiders

Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

> Most Important Symptoms and Effects, both Acute and Delayed

- 1 Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

> Indication of Any Immediate Medical Attention and Special Treatment Needed

- 1 Treat symptomatically.
- 2 Symptoms may be delayed.

Section 5 Fire Fighting Measures**> Extinguishing Media****Suitable Extinguishing Media**

Dry chemical, carbon dioxide or alcohol-resistant foam.

Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter or spread fire.

> Specific Hazards Arising from the Substance or Mixture

- 1 Will form explosive mixtures with air.
- 2 Fire exposed containers may vent contents through pressure relief valves thereby increasing fire intensity and/or vapour concentration.
- 3 Vapours may travel to source of ignition and flash back.
- 4 Liquid and vapour are flammable.
- 5 Containers may explode when heated.
- 6 Fire exposed containers may vent contents through pressure relief valves.
- 7 May expansion or decompose explosively when heated or involved in fire.

> Advice for Firefighters

- 1 As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
- 2 Fight fire from a safe distance, with adequate cover.
- 3 Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6 Accidental Release Measure

> Personal Precautions, Protective Equipment and Emergency Procedures

- 1 Avoid breathing vapors and contacting with skin and eye.
- 2 Beware of vapours accumulating to form explosive concentrations.
- 3 Vapours can accumulate in low areas.
- 4 Emergency personnel wear positive pressure self-contained breathing apparatus. Wear protective and anti-static clothing. Wear chemical impermeable gloves.
- 5 Ensure adequate ventilation. Remove all sources of ignition.
- 6 Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
- 7 Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

> Environmental Precautions

- 1 Prevent further leakage or spillage if safe to do so.
- 2 Discharge into the environment must be avoided.

> Methods and Materials for Containment and Cleaning Up

- 1 Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
- 2 Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
- 3 Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

Section 7 Handling and Storage**> Precautions for Handling**

- 1 Avoid inhalation of vapors.
- 2 Use only non-sparking tools.
- 3 To prevent fire caused by electrostatic discharge steam, equipment on all metal parts should be grounded.
- 4 Use explosion proof equipment.
- 5 Handling is performed in a well ventilated place.
- 6 Wear suitable protective equipment.
- 7 Avoid contact with skin and eyes.
- 8 Keep away from heat/sparks/open flames/ hot surfaces.
- 9 Take precautionary measures against static discharges.

> Precautions for Storage

- 1 Keep containers tightly closed.
- 2 Keep containers in a dry, cool and well-ventilated place.
- 3 Keep away from heat/sparks/open flames/ hot surfaces.
- 4 Store away from incompatible materials and foodstuff containers.

Section 8 Exposure Controls/Personal Protection**> Control Parameters****Occupational Exposure Limit Values**

Component	Country/Region	Limit Value - Eight Hours		Limit Value - Short Term	
		ppm	mg/m ³	ppm	mg/m ³
Isoamyl alcohol 123-51-3	USA - OSHA	100	360	-	-
	South Korea	100	360	125	450
	Ireland	100	360	125	450
	Germany (DFG)	20	73	80	292
	Denmark	100	360	200	720
	Australia	100	361	125	452

Biological Limit Values

No information available

Monitoring Methods

- 1 EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
- 2 GBZ/T 160 Determination of toxic substances in workplace air(Series effective standard)and GBZ/T 300 Determination of toxic substances in workplace air(Series standard).

> Engineering Controls

- 1 Ensure adequate ventilation, especially in confined areas.
- 2 Ensure that eyewash stations and safety showers are close to the workstation location.
- 3 Use explosion-proof electrical/ventilating/lighting/equipment.
- 4 Set up emergency exit and necessary risk-elimination area.

> Personal Protection Equipment

Eye Protection	Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US).
Hand Protection	Wear protective gloves (such as butyl rubber) , passing the tests according to EN 374(EU),US F739 or AS/NZS 2161.1 standard.
Respiratory protection	If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.
Skin and Body Protection	Wear fire/flare resistant/retardant clothing and antistatic boots.

Section 9 Physical and Chemical Properties**Appearance:** colourless transparent liquid**Odor:** No information available**Odor Threshold:** No information available**pH:** No information available

Melting Point/Freezing Point (°C): -147**Flash Point (°C)(Closed Cup):** 42**Flammability:** Not applicable**Vapor Pressure (KPa):** 3hpa (20°C)**Relative Density(Water=1):** 0.81**n-Octanol/Water Partition Coefficient:** 1.28**Decomposition Temperature (°C):** No information available**Particle characteristics:** Not applicable**Initial Boiling Point and Boiling Range (°C):** 131**Evaporation Rate:** No information available**Upper/lower explosive limits[% (v/v)]:** Upper limit: 10.5;
Lower limit: 1.2**Relative Vapour Density(Air=1):** 3.0**Solubility:** Partly miscible with water**Auto-Ignition Temperature(°C):** 350**Kinematic Viscosity (mm²/s):** No information available**Section 10 Stability and Reactivity**

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical Stability	Stable under proper operation and storage conditions.
Possibility of Hazardous Reactions	No information available
Conditions to Avoid	Incompatible materials, heat, flame and spark.
Incompatible Materials	No information available
Hazardous Decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11 Toxicological Information**> Acute Toxicity**

Component	CAS No.	LD ₅₀ (Oral)	LD ₅₀ (Dermal)	LC ₅₀ (Inhalation, 4h)
Isoamyl alcohol	123-51-3	1300mg/kg(Rat)	3210mg/kg(Rabbit)	No information available

> Skin Corrosion/Irritation

Causes skin irritation(Category 2)(Isoamyl alcohol)

> Serious Eye Damage/Irritation

Causes serious eye damage(Category 1)(Isoamyl alcohol)

> Skin Sensitization

Isoamyl alcohol

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No information available

> Respiratory Sensitization

No information available

> Germ Cell Mutagenicity

No information available

> Carcinogenicity

ID	CAS No.	Component	IARC	NTP
1	123-51-3	Isoamyl alcohol	Not Listed	Not Listed

> Reproductive Toxicity

No information available

> Reproductive Toxicity (Additional)

No information available

> STOT-Single Exposure

May cause respiratory irritation(Category 3)(Isoamyl alcohol)

> STOT-Repeated Exposure

No information available

> Aspiration Hazard

No information available

Section 12 Ecological Information

> Acute Aquatic Toxicity

No information available

> Chronic Aquatic Toxicity

No information available

> Others

Persistence and Degradability No information available

Bioaccumulative Potential No information available

Mobility in Soil	No information available
Results of PBT and vPvB Assessment	Isoamyl alcohol does not meet the criteria for PBT and vPvB according to Regulation (EC) No 1907/2006, annex XIII.

Section 13 Disposal Considerations

Waste Chemicals Contaminated Packaging Disposal Recommendations	Before disposal should refer to the relevant national and local laws and regulation. Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible. Refer to Waste chemicals and Contaminated packaging.
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Section 14 Transport Information

Transporting Label


Marine pollutant	No
UN Number	1105
UN Proper Shipping Name	PENTANOLS
Transport Hazard Class	3
Transport Subsidiary Hazard Class	NONE
Packing Group	III

Section 15 Regulatory Information

> International Chemical Inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS	ENCS
Isoamyl alcohol	√	√	√	√	√	√	√	√	√

[EINECS] European Inventory of Existing Commercial Chemical Substances.

[TSCA] United States Toxic Substances Control Act Inventory.

[DSL] Canadian Domestic Substances List.

[IECSC] China Inventory of Existing Chemical Substances.

[NZIoC] New Zealand Inventory of Chemicals.

[PICCS] Philippines Inventory of Chemicals and Chemical Substances.

[KECI] Existing and Evaluated Chemical Substances.

[AICS] Australia Inventory of Chemical Substances.

[ENCS] Existing And New Chemical Substances.

Isoamyl alcohol

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Note

“√” Indicates that the substance included in the regulations

“x” That no data or included in the regulations

Section 16 Additional Information

Creation Date	Mar.9,2022
Revision Date	Mar.9,2022
Reason for Revision	-

> Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 9th revised edition). The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

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