

## SAFETY DATA SHEET

SDS: A5211-0000\_E001

Date Prepared: 2016/08/25

Date Revised: 2023/01/10

Product Name: **ISOPROPYL GLYCOL**

### 1. Identification of the substance/mixture and of the company/undertaking

Product name:	ISOPROPYL GLYCOL
Identification of the supplier:	Nippon Nyukazai Co., Ltd.
Address:	No.4-1.Nihonbashi Kobuna-cho, Chuo-ku, Tokyo 103-0024, Japan
Charge section:	Business Operation Department (TEL:+81-3-5651-5640,FAX:+81-3-5651-5646)
Emergency telephone number:	Business Operation Department (TEL:+81-3-5651-5640,FAX:+81-3-5651-5646)
Recommend use:	diluent , deposition aid , reaction solvent
Restrictions on use:	Seek expert judgment when using for purposes other than those recommended.

### 2. Hazards identification

#### Hazard category

Flammable liquids	Category 3
Acute toxicity (dermal)	Category 4
Acute toxicity(vapour)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B
Specific target organ systemic toxicity following single exposure	Category 1
Specific target organ systemic toxicity following single exposure	Category 2
Specific target organ systemic toxicity following repeated exposure	Category 1

#### Label elements

Hazard pictograms:



Signal word:

Danger

Hazard statements:

H226 Flammable liquid and vapour.  
 H312 Harmful in contact with skin.  
 H332 Harmful if inhaled.  
 H315 Causes skin irritation.  
 H320 Causes eye irritation  
 H370 Causes damage to organs (blood systems,kidney,liver,spleen).  
 H371 May cause damage to organs (central nerve system).  
 H372 Causes damage to organs (blood systems) through prolonged or repeated exposure.

## SAFETY DATA SHEET

SDS: A5211-0000\_E001

Date Prepared: 2016/08/25

Date Revised: 2023/01/10

Product Name: **ISOPROPYL GLYCOL**

---

## 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.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash hands and face thoroughly after handling.  
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.

Response P312 Call a POISON CENTRE/doctor/healthcare professionals under the supervision of a doctor if you feel unwell.  
P314 Get medical advice/attention if you feel unwell.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P302+P352 IF ON SKIN: Wash with plenty of water/or shower.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor/healthcare professionals under the supervision of a doctor.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P370+P378 In case of fire : Use appropriate extinguishing media for extinction.

Storage P405 Store locked up.  
P403+P235 Store in a well ventilated place. Keep cool.

Disposal P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

---

## SAFETY DATA SHEET

SDS: A5211-0000\_E001

Date Prepared: 2016/08/25

Date Revised: 2023/01/10

Product Name: **ISOPROPYL GLYCOL****3. Composition/information on ingredients****3.1. Substances**

## Ingredients and Concentration

Ingredient Name	Concentration wt. %	CAS RN®	Existing and New Chemical Substances (JAPAN)	Industrial Safety and Health Law Substances (JAPAN)	Industrial Safety and Health Law (JAPAN)	Pollutant Release Transfer Register Law (JAPAN)	Poisonous and Deleterious Substances Control Act (JAPAN)
			Gazette notice reference number	Gazette notice reference number	Notifiable Substances	Specified Substances	Poisonous and Deleterious Substances
Ethylene glycol monoisopropyl ether	99-100	109-59-1	2-410, 2- 2424, 7-97	Public	Applicable	Not applicable	Not applicable

**3.2. Mixtures**

Not Applicable

**4. First aid measures**

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is stopped, lie on your back and perform cardiopulmonary respiration. Get medical advice/attention.
Skin contact:	Take off contaminated clothing and wash before reuse. Wash with plenty of soap and water. If skin irritation or a rash occurs: Get medical advice/attention.
Eye contact:	Immediately flush eye with plenty of clean water for at least 15 minutes. (If easy to do, remove contact lenses, if worn.) Get medical attention immediately.
Ingestion:	After having swallowed it, Drink a large quantity of water when consciousness becomes clear and receive treatment for the doctor immediately. A mouth must not give a person without the consciousness a thing.
Protection for first aid person:	The rescuer wears a tool for appropriate protection depending on the situation.

## SAFETY DATA SHEET

SDS: A5211-0000\_E001

Date Prepared: 2016/08/25

Date Revised: 2023/01/10

Product Name: **ISOPROPYL GLYCOL**

---

### 5. Firefighting measures

Suitable extinguishing media:	Use water spray(fog), foam, dry chemical or CO2.
Extinguishing media to avoid:	Straight stream water.
Specific hazards arising from the chemical:	At the time of fire, hazardous gases (carbon monoxide and others) can be generated.
Fire fighting:	Keep upwind of fire. Eliminate all ignition sources if safe to do so. In case of fire in the surroundings, move the content/container to the safety place. If it is not possible to move, cool the content/container with water spray.
Special protective equipment and precautions for fire fighters:	Gloves, protection glasses, wear fire, flame resistant, retardant clothing, air respiratory organs wear a tool for appropriate protection.

---

### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Promptly remove possible ignition sources from the vicinity. Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
Environmental precautions:	To environment (area of the sea, the soil) must not release it.
Methods and materials for containment and cleaning up:	Absorb this product with inactive materials (example: dry sand, earth) and recover it into a waste material container. In the case of large amount, stop leakage with earth/sand to begin with, and, then, recover it. In the case of a small quantity, I adsorb it in the earth and sand, a waste and collect it in empty container which I can seal up after having removed it.

---

### 7. Handling and storage

Handling	
Technical measures:	During handling, be sure to wear proper protective equipment (refer to the section 8). This product can be charged with static electricity. Take countermeasures for static electricity removal (grounding, others). Wear antistatic clothes and antistatic shoes to prevent human body electrification. Use explosion-proof electrical/ventilating/lighting equipment.
Ventilation requirements:	Use the ventilation equipment described in Section 8.
Precautions for safe handling:	Not especially.

## SAFETY DATA SHEET

SDS: A5211-0000\_E001

Date Prepared: 2016/08/25

Date Revised: 2023/01/10

Product Name: **ISOPROPYL GLYCOL**

### Storage

Storage conditions: Store the containers avoiding direct sunlight. Store in less than 40°C in a well-ventilated room.

Safety adequate container materials: Use the container specified by the Fire Service ACT and the United Nations Transport Regulations.

## 8. Exposure controls/personal protection

Appropriate engineering controls: Use local ventilation equipment.  
Install eye and body washing facilities near the handling place.  
Display the position of equipment clearly.

### Control parameters

Ingredient Name	Industrial Safety and Health Law (JAPAN)	Japan Society for Occupational Health	ACGIH-TLV	
	Administrative Control Levels	Occupational Exposure Limits	TWA	STEL
Ethylene glycol monoisopropyl ether	Not established	Not established	25ppm Skin, -mg/m <sup>3</sup>	Not established

### Personal protective equipment

Respiratory protection: Use a gas mask for organic gases, air-supplied respirator, self-contained compressed air breathing apparatus on the situation.

Hand protection: Organic solvent impermeable protective gloves (Antistatic ones are desirable.)

Eye/face protection: Protective glasses, goggle, protective face shield.

Skin/body protection: Wear long-sleeved working clothes and protective shoes.(Antistatic ones are desirable.)

Use an oiliness apron-resistant, boots depending on the situation.

Hygiene measures: Wash with soap and water after handling.

## SAFETY DATA SHEET

SDS: A5211-0000\_E001

Date Prepared: 2016/08/25

Date Revised: 2023/01/10

Product Name: **ISOPROPYL GLYCOL**

---

**9. Physical and chemical properties**

## Product

Form:	Liquid (20°C)
Color:	Colorless transparent
Odor:	Peculiar odor
Melting point/freezing point:	≤ -70(°C)
Initial boiling point and boiling range:	141.8(°C)
Flammability (solid, gas):	No data
Upper/lower flammability or explosive limits:	1.7–20(%)
Flash point:	46.0(°C)
Auto-ignition temperature:	320(°C)
Decomposition temperature:	No data
pH:	No data
Kinematic viscosity:	No data
Solubility:	water : Soluble.
Partition coefficient: n-octanol/water:	0.05
Vapour pressure:	306.6(Pa)(20°C)
Specific Gravity:	0.905(20°C)
Vapour density:	3.6
Particle characteristics:	No data

---

**10. Stability and reactivity**

Chemical stability:	Stable under normal temperatures and pressures.
Possibility of hazardous reactions:	It may react with the oxidizing agent and generate heat.
Conditions to avoid:	Avoid heat, flames, sparks and ignition sources.
Incompatible materials:	Acid, Oxidizing agents.
Hazardous decomposition products:	No data available

---

## SAFETY DATA SHEET

SDS: A5211-0000\_E001

Date Prepared: 2016/08/25

Date Revised: 2023/01/10

Product Name: **ISOPROPYL GLYCOL**

---

### 11. Toxicological information

#### Product

Acute toxicity (oral):	No Classification
Acute toxicity (dermal):	Category 4
Acute toxicity (inhalation):	Exempt classification (Gas) Category 4 (Vapour) Classification not possible (Dust/Mist)
Skin corrosion/irritation:	Category 2
Serious eye damage/irritation:	Category 2B
Respiratory sensitization:	Classification not possible
Skin sensitization:	No Classification
Mutagenicity:	Classification not possible
Carcinogenicity:	Classification not possible
Reproductive toxicity:	Classification not possible
Target organ effect/Single exposure:	Category 1(blood systems,kidney,liver,spleen) Category 2(central nerve system)
Target organ effect/Multi exposure:	Category 1(blood systems)
Respiratory toxic:	Classification not possible

#### Ingredient

##### Ethylene glycol monoisopropyl ether

Acute toxicity (oral):	No Classification LD50: 500-5600 mg/kg[rat]
Acute toxicity (dermal):	Category 4 LD50: 1080-2370 mg/kg[rabbit]
Acute toxicity (inhalation):	Exempt classification (Gas) Category 4 (Vapour) LC50: 4000 ppm[rat] Classification not possible (Dust/Mist)
Skin corrosion/irritation:	Category 2 Moderate [rabbit] Effect on animals : There is a report that irritation was observed in a skin irritation test (EEC test method) in which this substance was applied to rabbits for 4 hours (SIDS (2011), ECETOC TR95 (2005)). In addition, skin primary irritation score, PII, by the Draize test method was 4.8 (24-hour application) (SIDS (2011), ECETOC TR 95 (2005)). From the above results, it was classified in Category 2.

## SAFETY DATA SHEET

SDS: A5211-0000\_E001

Date Prepared: 2016/08/25

Date Revised: 2023/01/10

Product Name: **ISOPROPYL GLYCOL**

---

Serious eye damage/irritation:	Category 2B Effect on animals : Based on a report that in an eye irritation test with rabbits, although conjunctivitis, iritis and corneal damage were observed after application of this substance (undiluted), they resolved within 7 days (SIDS (2011), ECETOC TR95 (2005), DFGOT vol. 5 (1993)), it was classified in Category 2B. Besides, this substance was classified in "Xi; R36" in the EU DSD classification, and in "Eye Irrit. 2" in the EU CLP classification.
Respiratory sensitization:	Classification not possible Effect on person : Classification not possible due to lack of data.
Skin sensitization:	No Classification Effect on animals : There is a report that no sensitization was observed in a maximization test with guinea pigs (ECETOC TR95 (2005)). In addition, there is a description that this substance did not show sensitization (PATY (6th, 2012)). From the above, it was classified as "Not classified."
Mutagenicity:	Classification not possible Classification not possible due to lack of data. There were no in vivo data. As for in vitro, it was negative in bacterial reverse mutation tests and a chromosomal aberration test with cultured mammalian cells (JECDB (Access on June 2014), SIDS (2011), PATY (6th, 2012)).
Carcinogenicity:	Classification not possible Classification not possible due to lack of data.



## SAFETY DATA SHEET

SDS: A5211-0000\_E001

Date Prepared: 2016/08/25

Date Revised: 2023/01/10

Product Name: **ISOPROPYL GLYCOL**

---

## Reproductive toxicity:

Classification not possible

In a reproduction/developmental toxicity screening test (OECD TG 421) with rats by the oral route (gavage), no effects on fertility (estrous cycle, copulation, fertility, gestation period, the status of delivery and lactation, etc.) and on offspring toxicities (survival, body weight and morphological observation of born offspring) were observed even at doses where parental toxicities (extramedullary hematopoiesis of the spleen considered to be caused by hemolysis, increased spleen weight and hematuria) were observed (JECDB (Access on June 2014), SIDS (2011)). In teratogenicity tests with rats and rabbits by the inhalation route, decreased weight of fetuses (rabbits) and delayed development were observed at doses where maternal toxicity (hematuria in rats, and decreased food consumption, decreased body weight gain and hemolytic anemia in rabbits) was observed (ECETOC TR95 (2005)).

From the above, no effects on fertility and teratogenicity were observed. In addition, the effects on fetuses were also slight and were only observed at doses where maternal toxicity was observed. Therefore, although it corresponded to "Not classified," it was classified as "Classification not possible" since information on fertility was obtained from the screening test.

## SAFETY DATA SHEET

SDS: A5211-0000\_E001

Date Prepared: 2016/08/25

Date Revised: 2023/01/10

Product Name: **ISOPROPYL GLYCOL**

Target organ effect/Single exposure: Category 1(blood systems,kidney,liver,spleen)  
Category 2(central nerve system)

The effects of single exposure to this substance were limited to experimental animals data. Excretion of reddish urine and decrease in fecal volume were reported from 3 or 4 hours after administration to the next day on oral administration of 2,000 mg/kg to rats (JECDB (Access on June 2014), SIDS (2011)). In addition, there was a report of large amounts of hematuria (hemoglobinuria) with findings in the liver, kidneys and spleen, and central nervous system depression and dyspnea by oral administration (500-1,000 mg/kg) to rats (PATY (6th, 2012), ECETOC TR95 (2005)).

As for the inhalation route, there were reports of an increase in osmotic fragility of the erythrocytes when rats were exposed to 62 ppm for 4 hours (ACGIH (7th, 2001), DFGOT vol. 5 (1993), ECETOC TR4 (1982), ECETOC TR 95 (2005)), of hemolysis with nephropathy by inhalation exposure of rats, blood urine and kidney injury when rats were exposed to 160 ppm for 4 hours (PATY (6th, 2012)), of hematuria (hemoglobinuria) with associated findings in the kidneys, liver and spleen (DFGOT vol. 5 (1993)), and of the central nervous system depression and dyspnea (exceeding the guidance range of Category 2) (DFGOT vol. 5 (1993)). These effects were mainly observed within the range of guidance values corresponding to Category 1 in the case of inhalation exposure and Category 2 in the case of oral administration.

From the above, it was classified in Category 1 (hemal system, kidney, liver, spleen), Category 2 (central nervous system).

## SAFETY DATA SHEET

SDS: A5211-0000\_E001

Date Prepared: 2016/08/25

Date Revised: 2023/01/10

Product Name: **ISOPROPYL GLYCOL**

---

Target organ effect/Multi exposure:	<p>Category 1(blood systems)</p> <p>In a study in which rats were dosed by gavage for 28 days, changes in the bone marrow myelogram (a decrease in myeloid/erythroid ratio) at or above 30 mg/kg/day (converted guidance value: 9.3 mg/kg/day), anemia-like findings (decreases in red cell count, hematocrit value and hemoglobin content, and an increase in reticulocyte ratio, etc.), enhancement of extramedullary hematopoiesis of the spleen and increased hematopoiesis of erythrocytes of the bone marrow at 125 mg/kg/day (converted guidance value: 38.9 mg/kg/day) were observed (SIDS (2011), JECDB (Access on June 2014)). In the case of the inhalation route, in a study in which rats were exposed by inhalation for 28 days, and in studies in which rats, guinea pigs, rabbits and dogs were exposed by inhalation for 26 weeks, in rats, at concentrations corresponding to Category 1 (0.43 mg/L (converted guidance value: 0.134 mg/L) and 0.1075 mg/L), anemia-like findings (decreases in erythrocyte counts, hemoglobin concentration and packed cell volume (PCV), and increases in MCV) in the 28-day study and osmotic fragility of erythrocytes in the 26-week study were observed (SIDS (2011), ACGIH (7th, 2001), ECETOC TR95 (2005)). Besides, there is a description in SIDS (2011) and ECETOC TR95 (2005) that hemolytic anemia was caused by repeated exposure to this substance, and effects on the spleen and bone marrow were considered to be secondary changes from reactivity associated with anemia. From the above, it was classified in Category 1 (hemal system).</p>
Respiratory toxic:	<p>Classification not possible</p> <p>Effect on person : Classification not possible due to lack of data.</p>

---

## 12. Ecological information

### Product

Ecotoxicity	
Acute toxicity:	No Classification
Chronic toxicity:	No Classification
Persistence and degradability :	No information.
Bioaccumulative potential :	No information.
Mobility in soil:	No information.
Hazardous to the ozone layer:	Classification not possible
Other impact :	No information.

## SAFETY DATA SHEET

SDS: A5211-0000\_E001

Date Prepared: 2016/08/25

Date Revised: 2023/01/10

Product Name: **ISOPROPYL GLYCOL**

### Ingredient

Ethylene glycol monoisopropyl ether

#### Ecotoxicity

Acute toxicity:	No Classification
Fish:	96hrLC50:> 100 mg/L[Oryzias latipes]
Daphnia:	48hrEC50:> 1000 mg/L[Daphnia magna]
Algae:	72hrErC50:> 1000 mg/L[Pseudokirchneriella subcapitata]
Chronic toxicity:	No Classification
Fish:	No data
Daphnia:	21dayNOEC: 98 mg/L[Daphnia magna]
Algae:	No data
Persistence and degradability :	Not rapidly biodegradable
Bioaccumulative potential :	Low bioconcentration
Hazardous to the ozone layer:	Classification not possible

### 13. Disposal considerations

Disposal methods: When waste materials and waste water are to be treated, collect them into specified containers and entrust the disposal to a disposal contractor having an industrial waste disposal contractor permit.

Do not use the used containers for other purposes like filling other substances. Be sure to dispose of them after treating the content according to the above description. In case of recycling the container, return the container as it is after fitting a stopper without filling anything into it.

### 14. Transport information

International UN classification : 3

regulations UN number : 1993

Proper shipping name : FLAMMABLE LIQUID, N.O.S.

Packing : III

Domestic restriction: Transport the material in accordance with the regulations in your country or region.

Specific security precaution and condition of transportation: Load the containers in such a way as not to wet with water, fall down, tumble, or being damaged. Cover the loaded cargo to prevent direct sunlight.

Emergency Response Guide (ERG) Numbers: 127

## SAFETY DATA SHEET

SDS: A5211-0000\_E001

Date Prepared: 2016/08/25

Date Revised: 2023/01/10

Product Name: **ISOPROPYL GLYCOL**

---

**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**

Reference	Information obtained in NITE (National Institute of Technology and Evaluation) and other literature surveys.
Disclaimer	<p>About the description: This SDS was created in accordance with JIS Z 7253 based on the materials and data available at the time of creation.</p> <p>Detailed information such as composition and ingredients corresponding to overseas legal regulation registration confirmation etc. may not be described, so please contact our sales staff separately if necessary.</p> <p>Precautions are for normal handling. In case of special handling, it is the responsibility of the user to take safety measures suitable for the intended use and usage.</p> <p>We have paid close attention to the contents, but we do not guarantee the contents.</p> <p>This product can only be used for industrial purposes. If you want to use it for other purposes, please contact us in advance.</p>