Safety Data Sheet (SDS)

Created on: January 20, 2015
Revised on: December 17, 2021

1. Chemicals, etc. and Corporate Information

Product Name	Skill Writer MS Blue
Company Name	SHINWA Co., Ltd.
Address	2-9-3, Naeshiro, Moriyama, Nagoya, Aichi, Japan
Responsible section	Joining Technical Center
Telephone number:	+81-52-739-1101
Emergency contact	+81-52-796-2533
FAX number	+81-52-739-1102
E-mail address	ml-jtc-sds@shinwa-jpn.co.jp
Recommended uses and restrictions on use	Writing and marking ink for oil-smeared steel plate surface

2. Hazard summary

Most important hazard
Danger: Fire Service Act, Hazardous Material Class 4, Petroleum Group 1, Danger rating II
GHS classification
Physicochemical hazards:

Explosives	: Not subject to classification
Combustible and flammable gases	: Not subject to classification
Combustible and flammable	: Not subject to classification
Combustion supporting or oxidizing gases	: Not subject to classification
High pressure gases	: Not subject to classification
Flammable liquids	: Category 2
Combustible solids	: Not subject to classification
Self-reactive chemicals	: Not classifiable
Pyrophoric liquids	: Not included in any category
Pyrophoric solids	: Not subject to classification
Self-heating chemicals	: Not classifiable
Water-reactive combustible	: Not classifiable
Oxidizing liquids	: Not classifiable
Oxidizing solids	: Not subject to classification
Organic peroxides	: Not classifiable
Metal-corrosive substances	: Not classifiable

Health hazards

Acute toxicity (oral)	: Not included in any category
Acute toxicity (dermal)	: Not included in any category
Acute toxicity (inhalation: gases)	: Not subject to classification
Acute toxicity (inhalation: vapors)	: Not classifiable
Acute toxicity (inhalation: particles or mist)	: Not classifiable
Skin corrosion and irritation	: Category 2
Serious eye damage and irritation	: Category 2
Respiratory sensitization	: Not classifiable
Skin sensitization	: Not classifiable
Germ cell mutagenicity	: Category 1
Carcinogenicity	: Not classifiable
Reproductive toxicity	: Category 1
Specific target organ and systemic toxicity (Single exposure)	: Category 2 (Central nerve, lever, and systemic toxicity) : Category 3 (Respiratory tract irritation and narcosis)
Specific target organ and systemic toxicity (Repeated exposure)	: Category 1 (Lever) : Category 2 (Blood system, central nerve system, blood vessels, and spleen)
Aspiration hazards	: Not classifiable

Environmental hazards

Aquatic environmental acute	: Not classifiable
Aquatic environmental chronic	: Not classifiable
Ozone layer hazards	: Not classifiable

GHS label elements
Pictograms or symbols

Precautionary statements : Danger
Hazard information : Highly flammable liquids and solids
: Skin irritation
: Strong eye irritation
: Risk of hereditary
: Risk of adverse effects on germ cells or fetuses
: Risk of central nerve, lever and systemic toxicity hazards
: Risk of respiratory irritation and of sleepiness or dizziness
: Lever disorders due to long or repeated exposure
: Risk of blood system, central nerve system, blood vessel, lever and spleen disorders due to long or repeated exposure

Cautionary statements

[Safety measures]
Keep away from heat, hot objects, sparks, naked flames and other ignition sources. Do not smoke.

Keep the container tightly closed.
Connect a grounding wire to the container.
Use explosion-proof equipment.
Use tools that will never cause sparks.
Take preventive measures against electrostatic discharges.
Wear protective gloves, protective clothing, safety goggles and a protective mask.
Wash well your hands after handling.
Get the instruction manual before use.
Do not handle until you read and understand the all safety notices.
Do not inhale smoke, gas, mist, vapor or spray.
Do not eat or drink or smoke while using this product.
Get a diagnosis/treatment by a doctor if you feel ill.
[First aid]
In case of adhesion to the skin or hair: Immediately get off the contaminated clothing. Wash the skin with running water or a shower.

In case of a fire: Use a dry powder/carbon dioxide gas/foam fire extinguisher or dry sand for fire extinction.

In case of adhesion to the skin: Wash with a plenty of water and soap.
In case of skin irritation: See a doctor for diagnosis/treatment.
Take off the contaminated clothing, and wash it if it is to be reused.
In case of contact with eye: Cautiously rinse with water for several minutes. If you wear contact lenses which can be taken off easily, do so. Continue rinsing after that.
In case of lasting eye irritation: See a doctor for diagnosis/treatment.
In case of exposure or possibility of exposure:See a doctor for diagnosis/treatment.
In case of exposure or possibility of exposure: Contact a doctor.
See a doctor for diagnosis/treatment if you feel ill.
[Storage]
Avoid contamination by foreign material and direct sunlight. Close the container tightly, store it in a well ventilated cool and dark place in a locker.
[Disposal]
Dispose of the contents and container as industrial waste according to the regulations of the nation, prefecture, and municipality.

3. Composition and ingredient information

Distinction between single product and mixture : Mixture

Ingredients and their contents (Describe the hazardous ingredients only.)

Ingredient name	Proportion (%)	MITI number	CAS number
Normal butyl alcohol	5 to 15	Listed	Listed
Ethyl alcohol	50 to 70	Listed	Listed
Propyl alcohol	5 to 20	Listed	Listed

4. First-aid measures

In case of adhesion on skin : Wash well using soapy water and apply a skin protective cream or the like.

In case of contact with eye : Rinse well with tap water (for more than 15 minutes) and then receive treatment by an ophthalmologist

In case of exposure or concern about exposure : See a doctor for diagnosis and treatment.

In case of inhalation : Move to a place of fresh air, keep the body warm and, if necessary, receive treatment by a doctor.

In case of swallowing : Do not force to vomit, but receive treatment by a doctor. If the mouth is contaminated, rinse well with water. If you feel ill, see a doctor for diagnosis or treatment.

5. Fire-fighting measures

Fire extinguishing method : Cut off the combustion sources to the origin of fire and use a fire
: Do not use a stream of water.
: Wear protective gear and extinguish the fire from the windward.

Fire extinguishing agent : Carbon dioxide gas, foam (alcohol resistant foam), etc.

6. Measures in case of leakage

Keep ignition sources away. In the case of a small amount of leak, absorb it in waste cloth, saw dust, sand or the like, and in the case of a large amount of leak, try to prevent the leak from spreading by earth or the like and recover it by an organic solvent pump or the like.

7. Precautions for handling and storage

Handling:

Keep away from heat, hot objects, sparks, naked flames and other ignition sources. Do not smoke.

Keep the container tightly closed.

Connect a grounding wire to the container.

Use explosion-proof equipment.

Use tools that will never cause sparks.

Take preventive measures against electrostatic discharges.

Wear protective gloves, protective clothing, safety goggles and a protective mask.

Use only outdoor or in a well ventilated place.

Wash well your hands after handling.

Do not inhale smoke, gas, mist, vapor or spray.

When you feel ill, see a doctor for diagnosis/treatment.

Storage:

Avoid contamination by foreign material and direct sunlight, and close the container tightly, store it in a well ventilated cool and dark place in a locker. Avoid contact with an oxidant or storage in the same place.

8. Exposure prevention and protective measures

	Control limit of concentration	Allowable concentration
Normal butyl alcohol	25 ppm	TWA 20 ppm (ACGIH2008)
Ethyl alcohol	1000 ppm	TWA 1000 ppm (ACGIH1996)
Normal propyl alcohol	To be determined	TLV-TWA 200 ppm (skin) (ACGIH2005)
Isopropyl alcohol	200 ppm	TLV-TWA 200 ppm A4 (ACGIH2005)

Measures to take at facilities: Install local exhaust equipment, or general ventilation equipment in a large place.
Protective gear: It is recommended to wear.
Hygiene measures: Do not eat, drink or smoke while using this product.
After handling, wash well the hands.

9. Physical and chemical properties

Appearance : Colored liquid
Odor : Specific aromatic odor
pH : No data available
Melting and freezing points : No data available
Boiling point : No data available
Initial boiling point : 78ºC or over
Flash point : 16ºC
Ignition point : No data available
Volatile : Yes
Combustible : Yes
Flammable or explosive range : No data available
Vapor pressure : No data available
Vapor density : No data available
Density : 0.83 g/cm^3 (15ºC)
Soluble : Soluble in water
Octanol-water partition coefficient : No data available
Decomposition temperature : No data available

10. Stability and reactivity

Stable : Stable in usual handling and storage
Reactive : Stable in usual handling and storage
: Forms a combustible mixed gas phase if it is in mist form or at the flash point or over.
Avoid contact with an oxidant.
Can form carbon monoxide while burning.

11. Hazard information (including human cases and epidemiological information)

(On normal butyl alcohol)

Acute toxicity	Oral	: Rat LD50 4360 mg/kg
	Dermal	: Rabbit LD50 4200 mg/kg
	Inhalation (vapor)	: Rat LC50 > 24.2 mg/L (4h)
Skin corrosion/irritation		: A moderate influence was observed on the skin though it was reversible.
Serious eye damage/irritation		: A moderate influence was observed on the eye though it was reversible.
Respiratory/skin sensitization		
	Respiratory sensitization	: No data available
	Skin sensitization	: No data available
Germ cell mutagenicity		: No data available
Carcinogenicity		: No data available
Reproductive toxicity		: No data available
Specific target organ and systemic toxicity - Single exposure		: Respiratory tract irritation and narcosis
Specific target organ and systemic toxicity - Repeated exposure		: Blood system
Aspiration hazards		: No data available

(On ethyl alcohol)

Acute toxicity	Oral	: Rat LD50 7060 mg/kg
	Dermal	: No data available
	Inhalation	: Rat LC50 20000 ppm/10 h
Skin corrosion/irritation		: Skin, Rabbit 400 mg open, Symptom: Mild 1
Serious eye damage/irritation		: Classified as “moderate” by a test according to OECD TG405 and the Draize test method.
Respiratory/skin sensitization		
	Respiratory sensitization	: No data available
	Skin sensitization	: No significant skin sensitization was observed in animal tests.
Germ cell mutagenicity		: There are reports of dominant lethality in rat and mouse and reports of aneuploidy induction in mouse germ cells.
Carcinogenicity		: ACGIH classifies ethanol, as a hazard factor mainly in work environments, as A4 (substances that can not be classified as human-carcinogenic)
Reproductive toxicity		: Many reports say that a high habitual alcohol intake has teratogenic or other adverse effects on the human fetus.
Specific target organ and systemic toxicity - Single exposure		: In humans, an oral ethanol intake has such effects on the central nerve system as headache, fatigue and a decrease in concentration. Acute intoxication can result in a death.
Specific target organ and systemic toxicity - Repeated exposure		: In humans, a high and long alcohol intake causes disorders in most all organs, and the target organ influenced most adversely is the lever. The disorders begin with a fatty change and result in liver cirrhosis through necrosis and fibrosis.
Aspiration hazards		: No data available

(On normal propyl alcohol)

Acute toxicity	Oral	: Rat LD50 2695 mg/kg
	Dermal	: No data available
	Inhalation	: No data available
Skin corrosion/irritation		: There is the description of very slight irritation on the rabbit skin.
Serious eye damage/irritation		: A test applied to the rabbit eye observed serious conjunctivitis, iritis, corneal opacity and ulceration.
Respiratory/skin sensitization		
	Respiratory sensitization	: No data available
	Skin sensitization	: No data available
Germ cell mutagenicity		: No data available
Carcinogenicity		: Classified as A3 in ACGIH.
Reproductive toxicity		: In a test on pregnant rats subjected to inhalation exposures, an increase of malformations was observed at the dose level at which general toxicity was observed in the mother animals.
Specific target organ and systemic toxicity - Single exposure		: Narcosis was observed in an inhalation exposure or oral administration test on rats, mice or rabbits.
Specific target organ and systemic toxicity - Repeated exposure		: No data available
Aspiration hazards		: No data

(On isopropyl alcohol)

Acute toxicity	Oral	: Rat LD50 5280 mg/kg
	Dermal	: Rabbit LD50 12870 mg/kg
	Inhalation (vapor)	: Rat LC50 72865 mg/m^3
Skin corrosion/irritation		: A rabbit skin irritation test reports no irritation or slight irritation.
Serious eye damage/irritation		: In a rabbit eye irritation test, there is a description that there are reports of mild to severe irritation; however, serious damages are not described.
Respiratory/skin sensitization		
	Respiratory sensitization	: No data available
	Skin sensitization	: No data available
Germ cell mutagenicity		: Negative in an in vivo micronucleus test using mouse marrow cells.
Carcinogenicity		: IARC Group 3 (Cannot be classified as to carcinogenicity in humans)
Reproductive toxicity		: In a two-generation rat reproduction test by administration in drinking water, there was no influence on the reproductive power and the development of born young. On the other hand, in a rat developmental toxicity and teratogenicity test, no teratogenicity was present; however, a decrease in pregnancy rate, increase in respiration rate, increase in fatal mortality and other forms of reproductive toxicity were observed at the dose level at which the parent animals showed a retarded weight increase, narcosis and other forms of toxicity.
Specific target organ and systemic toxicity - Single exposure		: There is the description of a decrease in rat activity by inhalation exposures; and in a human acute intoxication by oral intake, digestive tract irritation, decreases in blood pressure, body temperature, etc., central nerve symptoms and kidney disorders are observed. Thus, the central nerve system, kidney and systemic toxicity were taken as the target organs. In humans, nose and throat irritation are observed and there is respiration tract irritation.
Specific target organ and systemic toxicity - Repeated exposure		: In an 86-day or 4-month inhalation exposure test, there is the description that an influence was observed on blood vessel, liver and spleen. Thus, blood vessel, liver and spleen ware taken as the target organs.
Aspiration hazards		: No information is available on humans; however, an intratracheal administration to rats observed deaths due to cardiopulmonary arrest within 24 hours and the kinematic viscosity coefficient is 1.6 or so. Thus, it was judged that there are aspiration hazards.

12. Environmental impact information

On normal butyl alcohol

Ecotoxicity	: Himedaka, or an orange strain of medaka LC50 (96H) > 100 mg/L
Persistence/degradability	: Reported to be good at biodegradability
Bioaccumulation	: No data
Mobility in soil	: No data

On ethyl alcohol

Ecotoxicity	: Trout larva LC50 (24H) 11.2 g/L
Persistence/degradability	: BOD, 40 to 80% of theoretical oxygen demand
Bioaccumulation	: No data
Mobility in soil	: No data

On normal propyl alcohol

Ecotoxicity	: Crustacea (Daphnia) LC50 (48H) 3025 mg/L
Persistence/degradability	: No data available
Bioaccumulation	: Not poorly water-soluble (solubility in water = 1.00 × 106 mg/L) and low in rapid degradability
Mobility in soil	: No data

On isopropyl alcohol

Ecotoxicity	: Himedaka, or an orange strain of medaka LC50 (96H) > 100 mg/L
Persistence/degradability	: No data available
Bioaccumulation	: Not poorly water-soluble (solubility in water = 1.00 × 106 mg/L) and low in rapid toxin
Mobility in soil	: No data

13. Disposal precautions

Treat by yourself or by commissioning to a licensed industrial waste disposal company. Do not dispose of untreated. Absorb into diatomite or the like in a safe place and incinerate little by little in an open-type incinerator.
For landfill disposal of combustion residue, it must be confirmed that the heavy metals and other materials are less than the standards set by the Cabinet Office Ordinance.

14. Transport precautions

International regulations

UN classification and UN number	Class 3 (Flammable liquids, PG II) 1993

Domestic regulations

Fire Service Act	: Dangerous material Class 4, Petroleum Group 1, Danger rating II

Verify that there is no leak in the container, and load it at normal temperature and pressure in such a manner that avoids overturning, falling or damaging.
If a dangerous material more than the specified quantity is to be transported on vehicles, attach the sign provided by the Ministry of Home Affairs ordinance to the vehicles concerned.

15. Applicable Laws

Law concerning Pollutant Release and Transfer Register (PRTR)	: Not applicable
Industrial Safety and Health Act	
Substances subject to notification	: Yes (Normal butyl alcohol, ethyl alcohol, normal propyl alcohol, isopropyl alcohol)
Substance subject to labeling	: Yes (Normal butyl alcohol, ethyl alcohol, normal propyl alcohol, isopropyl alcohol)
Ordinance on Prevention of Organic Solvents Poisoning	: Falling under Class 2 (normal butyl alcohol)
Poisonous and Deleterious Substance Control Act	: Not applicable
Fire Service Act	: Dangerous material Class 4, Petroleum Group 1, Danger rating II
Act on Prevention of Marine Pollution and Maritime Disaster	: Falling under marine pollutants
Waste Management and Public Cleansing Act	: Industrial Waste Regulations (prohibition of spread and spill)

16. Others (contact for inquiry on the contents of description, cited literature, etc.)

Contact for inquiry	Given on the first page

The product safety data sheet is intended to provide reference information to ensure safety handling, so it does not promise safety guarantee. The handling company should refer to this to handle appropriately on its own responsibility.
This data sheet is subject to change by new findings without prior notice.