Safety Data Sheet
(SDS)

Enacted data : 1993/7/12
Revised date : 2024/8/1

1. Product and Corporate Information

Reference number	:5G-001
Product name	:FULLON MASK MA-1
Company name	:FURUTO INDUSTRIAL CO., LTD
Address	:12-1 YOSHIMA INDUSTRIAL PARK, IWAKI City, FUKUSHIMA Prefecture 970-1144 JAPAN
Charge section	:Sales Planning Department or Sales Department
Telephone number	:+81-246-36-4001
FAX number	:+81-246-36-7157
Urgent information contact	:Iwaki Yoshima Plant Technology Department
Telephone number	:+81-246-36-7154
Expected application and precautions	:Recommended for masking applications Please refer to 7. HANDLING AND STORAGE and 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION.

2. Hazards Identification

【GHS classification】

Physical and Chemical Hazards

Explosives	:Cannot be classified
Flammable gases	:Not applicable
Aerosol	:Not applicable
Oxidizing gases	:Not applicable
High pressure gases	:Not applicable
Flammable liquids	:Category2
Flammable solids	:Not applicable
Self-reactive chemicals	:Cannot be classified
Spontaneous combustion liquids	:Cannot be classified
Spontaneous combustion solids	:Not applicable
Self-heating chemicals	:Cannot be classified
Chemicals which in contact with water emits flammable gases	:Cannot be classified
Oxidizing liquids	:Cannot be classified
Oxidizing solids	:Not applicable
Organic peroxide	:Cannot be classified
Metal corrosive substances	:Cannot be classified
Desensitized explosives	:Cannot be classified

Health Hazards

Acute toxicity (Oral)	:Not applicable
Acute toxicity (Skin)	:Not applicable
Acute toxicity (Inhalation: Gas)	:Not applicable
Acute toxicity (Inhalation: Vapor)	:Category4
Acute toxicity (Inhalation: Dust, mist)	:Cannot be classified
Skin corrosive / Irritation	:Category2
Serious eyes damage /Eyes irritation	:Category2
Respiratory organs sensitization	:Cannot be classified
Skin sensitization	:Cannot be classified
Germ cell mutagenicity	:Cannot be classified
Carcinogenicity	:Category1B
Reproduction toxicity	:Category1A
Reproduction toxicity/Breastfeeding effect	:Additional category
Specific target organ toxicity-single exposur	:Category1(Central nerve system) Category2(Kidney) Category3(Respiratory tract irritation, anesthetic action)
Specific target organ toxicity-repeated expo	:Category1(Nervous system, kidney)
Aspiration hazard	:Cannot be classified

Environmental hazards

Aquatic environmental toxicity-acute	:Category2
Aquatic environmental toxicity-chronic	:Category2
Hazardous to the ozone layer	:Cannot be classified

【GHS label element】
Pictorial indication:

Signal word	:DANGER
Hazards statement	:Highly flammable liquids and vapors
	:Skin irritation
	:Serious eye irritation
	:Harmful if inhaled
	:May cause respiratory irritation
	:May cause drowsiness or dizziness
	:Risk of cancer
	:May cause harm to reproductive or fetus
	:May cause harm to breast-fed children
	:Cause damage to central nervous system
	:May cause damage to the kidneys
	:Damage to the nervous system and kidneys through prolonged or repeated exposure
	:Toxic to aquatic life
	:Toxic to aquatic life with long-lasting effects
Cautions	
Precautionary statement	:Obtain the instruction manual before use
	:Keep away from heat, hot surfaces, sparks, open flames and other sources of ignition/No smoking
	:Keep the container closed well
	:Do not breathe dust /fume /gas /mist /vapors /spray
	:Avoid contact during pregnancy / nursing
	:Wear protective gloves/ protective clothing/ protective glasses/ protective surface.
First aid measures	:If exposed or suspected to be exposed, contact a doctor
	:If exposed or suspected to be exposed, seek medical attention /treatment.
	:If skin irritation occurs, seek medical attention /treatment.
	:In case of fire, use dry chemicals, water-soluble liquid foam, carbon dioxide, etc. to extinguish the fire.
Storage	:Store in a well-ventilated place/Keep in a cool place
Disposal	:The contents/containers must be outsourced to a professional waste disposal company licensed by the prefectural governor

3. Composition / information on ingredients

Mixture /Substance selection :Mixture
Chemical name /general name (Another nam :None
Ingredient and concentration

Ingredient name	CAS No.	Content(%)	Remarks
Toluene	108-88-3	21-22	
Methyl-ethyl-ketone	78-93-3	48-49	Another name: MEK
Methyl isobutyl ketone	108-10-1	6.0-7.0	Another name: MIBK

Listed only if applicable to the Industrial Safety and Health Act, Chemical Substances Control Law, (PRTR Act) or the Poisonous and Deleterious Substances Control Act

4. First aid measures

If in eyes	:Rinse cautiously with water for several minutes. Remove contact lenses, remove it out if easy. Continue rinsing
	:If eye irritation persists, get medical advice/attention
If on skin	:If it gets on skin or hair, remove all contaminated clothing immediately and wash with plenty of running water/shower
	:If contact skin, wash with plenty of water and soap
	:If contact skin and feel unwell, contact a doctor
	:If skin irritation or rash occurs, seek medical advice and treatment
If inhaled	:Remove person to fresh air and keep comfortable for breathing
	:Call a doctor if inhaled
	:If feel unwell, contact the doctor and get medical advice/attention
	:If breathing stops or becomes difficult, loosen clothing, secure airway, administer artificial respiration, and seek medical attention
If swallowed	:Do not force to vomit.
	:If feel unwell, contact the doctor
	:If swallowed, rinse mouth

5. Fire-fighting measures

Specific hazards	:Extremely flammable/Can be easily ignited by heat, sparks or flame
	:Container may explode if heated
	:Fire may produce irritating, toxic, or corrosive gases
	:Highly flammable liquid and vapour
Extinguishing media	:Powder, carbon dioxide, dry sand, fire foam
Fire extinguishers should not be used	:Water
	:Do not use water jets to extinguish fires
Specific fire fighting metho	:When extinguishing a fire, wear appropriate protective equipment and work from upwind to avoid contact with harmful gases, etc
	:In the event of a large fire in the vicinity, spray water or foam extinguishing agents from a distance to the surrounding area
	:Avoid spraying water in a straight line
Protective equipment for fire fighters	:Wear appropriate protective equipment (gloves, glasses, mask, etc.)

6. Accidental release measures

	If indoors, provide sufficient ventilation until treatment is complete
Personal precautions, protective equipment and emergency procedures:	Prevent non-involved personnel from entering the area around the leakage site by erecting ropes, etc.
	If there is a large amount, evacuate people safely
	Work from upwind and evacuate people downwind
	When working, wear appropriate protective equipment to avoid getting droplets on skin or inhaling gas
	Prepare fire extinguishing equipment in case a fire ignites. Be careful as the spilled area can be slippery
Environmental Precautions:	Be careful not to discharge spilled products into rivers or other bodies of water, thereby causing an impact on the environment
	Do not allow spills to enter rivers or sewer systems directly
Methods and materials for containment and cleaning up:	When evaporating or dispersing, be careful of fire and ventilation
	If the amount is small, absorb it with dry sand, soil, etc. and collect it in a sealable container
	If there is a large amount, surround it with embankments to prevent it from flowing out, guide it to a safe place, and then dispose of it
	If the oil spills onto water, use absorbent materials (oil absorption mats, etc.) to recover the oil

7. Handling and storage

Handling (Technical measures, safety precautions, hygiene measures)	:Obtain the instruction manual before use and do not handle until all safety precautions have been read and understood
	:Wear appropriate protective equipment (safety glasses, mask, gloves) and handle in a well-ventilated area
	:Do not handle the container by tipping it over, dropping it, or subjecting it to impact
	:Do not eat, drink or smoke when using this product
	:Wash hands thoroughly after handling
	:Avoid release to the environment
Storage	:Seal the container and store indoors away from direct sunlight and moisture
Safe condition	:Store in a cool, well-ventilated place
	:Make sure there are no leaks in the container and ensure that it does not tip over, fall, or collapse
	:Store away from oxidizing agents and do not store near open flames or high heat sources
	:Lock and keep it safe

8. Exposure control/ personal protection

Control parameters

(The data of this product is not set. Component data are shown for reference.)

Ingredient name	Adopted value(ppm)
Toluene	20
Methyl-ethyl-ketone	200
Methyl-isobutyl-ketone	20

Occupational Exposure Limits

(The data of this product is not set. Component data are shown for reference.)

Ingredient	ACGIH		Japanese Society of Occupational Health	
	TWA*(ppm)	STEL**(ppm)	(ppm)	(mg/m^3)
Toluene	20	–	50	188
Methyl ethyl ketone	200	300	200	590
Methyl isobutyl ketone	20	75	50	200

*TWA(Time Weighted Average)
Airborne concentrations of chemicals that most workers can be exposed to repeatedly every day without causing harmful health effects
**STEL(Short Term Exposure Limit)
A 15-minute time-weighted average value above which workers should not be exposed at any given time during their work even if the TWA is within the acceptable range.

Equipment Measures :No fires
:Properly install general ventilation and local exhaust ventilation systems
:Install hand washing and eye washing facilities near the handling area and indicate their locations
:Use explosion-proof electrical equipment, ventilation equipment, and lighting equipment
:Ground container. Take precautions against static discharge

Protective equipment :Wear appropriate personal respiratory protection, protective gloves, eye protection and clothing as required
(Reference MIBK Protective Equipment):
Respiratory protective equipment:Consider wearing respiratory protective equipment (gas mask, etc.) if workers are exposed to gas or vapor
When handling high concentrations of chemical substances consider wearing an air-supplied respirator (JIS T8153). When selecting a gas mask, keep the following points in mind
・Do not use in locations where the oxygen concentration is less than 18%. If the oxygen concentration is less than 18%, consider wearing an air-supplied mask, air respirator, or oxygen respirator
・When workers use gas masks in environments where they are exposed to dust, they should use canisters with dust protection

・Gas masks must conform to the Japanese Industrial Standards (JIS T8152) and have performance and structure appropriate for the work
Refer to the data in the instruction manual, etc.
・Because working while wearing a gas mask puts more strain on the respiratory system than usual, those with respiratory diseases should consult a doctor to see if it is appropriate for them to work while wearing a gas mask
Hand protection:If protective gloves are considered effective, consider wearing impermeable gloves. When selecting protective gloves, keep the following points in mind
・Refer to the permeation resistance class listed in the instruction manual, set a sufficient usage time for the work, and use protective gloves within that time
Eye and face protection:Protective glasses (goggles)
Skin and body protection: Protective boots (antistatic, oil-resistant) protective clothing (antistatic), protective apron

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9. Physical and chemical properties

Appearance	:Liquid
Color	:Red
Odor	:Solvent odor
Melting point/freezing point	:No knowledge(Reference value MEK melting point: -86℃)
Boiling point, initial boiling point and boiling range	:No knowledge(Reference value MEK boiling point: 80℃)
Flammability	:No knowledge
Lower and upper explosion limits /flammability limits	:No knowledge(Reference value MEK:1.8～11.5vol%)
Flash point	:No knowledge(Reference value MEK:-9℃ closed)
Spontaneous ignition point	:No knowledge(Reference value MEK: 505℃)
Decomposition temperature	:No knowledge
pH	:No knowledge
Dynamic Viscosity	:No knowledge
Solubility	:Soluble in toluene, ethyl acetate, acetone, etc.
n-Octanol partition coefficient	:No knowledge
Vapor pressure	:No knowledge
Density and/or relative density	:No knowledge(Reference value MEK:0.80)
Relative Gas Density	:No knowledge
Particle Characteristics	:No knowledge

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10. Stability and Reactivity

Stability	: Stable under normal storage / handling condition
Possibility of hazardous reaction	: May react with strong oxidants, inorganic acids, basic substances, and reducing agents and cause fire
Condition to avoid	: Heating and contact with incompatible materials
Hazardous materials	: Strong oxidizing agents, strong acids, bases, reducing agents
Hazardous decomposition produc	: Carbon monoxide, carbon dioxide, etc. are produced by thermal decomposition

11. Toxicological information

Acute toxicity (Oral)	: Not applicable
Acute toxicity (Skin)	: Not applicable
Acute toxicity (Inhalation: Gas)	: Not applicable
Acute toxicity (Inhalation: Vapor)	: Based on the GHS classification criteria for mixtures, it was classified into Category4
Acute toxicity (Inhalation: Dust)	: Cannot be classified
Acute toxicity (Inhalation: Mist)	: Cannot be classified
Skin corrosive / Irritation	: Based on the GHS classification criteria for mixtures, it was classified into Category2
Serious eyes damage /Eyes irritation	: Based on the GHS classification criteria for mixtures, it was classified into Category2
Respiratory organs sensitization	: Cannot be classified
Skin sensitization	: Cannot be classified
Germ cell mutagenicity	: Cannot be classified
Carcinogenicity	: Based on the GHS classification criteria for mixtures, it was classified into Category1B
Reproduction toxicity	: Based on the GHS classification criteria for mixtures, it was classified into Category1A
Reproduction toxicity/Breastfeeding effect	: Based on the GHS classification criteria for mixtures, it was classified into additional category
Specific target organ toxicity-single exposur	: Based on the GHS classification criteria for mixtures, it was classified into Category1(Central nerve system) : Based on the GHS classification criteria for mixtures, it was classified into Category2(Kidney) : Based on the GHS classification criteria for mixtures, it was classified into Category3(Respiratory tract irritation, anesthetic action)
Specific target organ toxicity-repeated expo	: Based on the GHS classification criteria for mixtures, it was classified into Category1(Nervous system, kidney)
Aspiration hazard	: Cannot be classified

12. Environmental impact information

Aquatic environmental hazards (acute)	: Based on the GHS classification criteria for mixtures, it was classified into Category2
Aquatic environmental hazards (chronic)	: Based on the GHS classification criteria for mixtures, it was classified into Category2
Persistence and degradability	: No data
Bioaccumulation	: No data
Mobility in soil	: No data
Harm to the ozone layer	: No data

13. Disposal considerations

: When disposing of this product, follow the relevant laws and regulations as well as local government standards
: The contents and containers will be outsourced to specialized waste disposal companies authorized by the prefectural governor
: When burned, harmful gases such as Carbon monoxide, carbon dioxide are generated, so incinerate with an incinerator equipped with an exhaust gas treatment device.
: When treating wastewater containing this product, perform a toxicity test on activated sludge before treating the wastewater.
: In addition to the precautions described in section, observe the general precautions for highly flammable hazardous liquid.

14 Transport information

International Regulations

UN class	: Class 3(flammable liquid), Container group II
UN No.	: 1993 (Medium flash point flammable liquid with no other hazards)
Product name	: Not applicable

Special safety measures :Make sure that the container is free of leaks during transport, and load it up so that it does not fall or damage, and ensure prevention of load collapse
:In addition to the precautions described in section, observe the general precautions for highly flammable hazardous liquid.
:Avoid to carry with peroxides and oxidants.

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15 Regulatory information

Fire Service Act	:Class 4, 1st petroleum (water-insoluble liquid)	Toluen, MEK, MIBK
Industrial Safety and Health Act	:Dangerous Substance (Flammable)	Toluen, MEK, MIBK
	:Organic Solvent Poisoning Prevention Regulations (Organic Solvent Regulations)	
	Second class organic solvent	Toluen, MEK
	:Specific Chemical Substances Hazard Prevention Regulations (Specific Chemical Substances Regulations)	
	Specified chemical substances Class 2, special organic solvents, ∈	MIBK
	:Article 57-2: Substances subject to the obligation to label and notify	
	Substances subject to notification	Toluen, MEK, MIBK
	Substances subject to display	Toluen, MEK, MIBK
	:Article 594-2 Chemical substances that cause skin irritation	Toluen, MEK
Chemical Substances Control Law* (PRTR Law)	:Class 1 designated chemical substances	Toluen, MIBK
Poisonous and Deleterious Substances Control Act	:Not applicable	
Ship Safety Act	:Medium flash point flammable liquid	Toluen, MEK, MIBK

*Law concerning the identification of emissions of specific chemical substances into the environment and the promotion of improvements in their management

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16. Other information

References
- ・Raw material SDS
- ・GHS Classification Results Database by National Institute of Technology and Evaluation

i The "Safety Data Sheet" is a brief summary of the precautions for safe use of our products, and assumes normal handling.
ii The "safety data sheet" is based on the findings up to the present and does not guarantee the completeness of the information, and may be revised as needed. Please be aware in advance.
iii The information contained in the "Safety Data Sheet" does not guarantee the product specification or quality.
Please refer to the "Safety Data Sheet" etc. for the conditions under which this product is used and consider at the user's responsibility.