TLS/FAA-03A

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Ref.: B-15M0038B

Safety Data Sheet

Date of issue: 30 November, 2009
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1. Product and company identification

Product Identifier	: FAA-03A
General Use	: Adhesive Material for assembly of optical fiber
Product Description	: Adhesive Material
Name of manufacturer	: Fujikura Ltd.
Address	: 1440,Mutsuzaki,Sakura,Chiba 285-8550,Japan
Emergency	
Telephone number	: +81-43-484-3963
E-mail	: optfsm@jp.fujikura.com

2. Summary of danger and Hazard

GHS Symbol

hazard class DANGER

Chemical hazard : Highly flammable liquid and vapor.

Human health hazard : Causes serious eye irritation.
May cause genetic defects.
May damage fertility or the unborn child.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to liver and nerve (organs) through prolonged or repeated exposure.

3. Composition/Information on ingredients

Substance/Mixture : Mixture

UN classification or UN Dangerous Goods No.

UN class	: Class 3 (Flammable liquids)
UN number	: 1133
Packing Group	: Ⅱ

Ingredients and composition

	Ethanol	2-Propanol	1-Propanol	Vinyl butyral polymers
wt%	68.0%	3.92%	8.08%	20%
CAS No.	64-17-5	67-63-0	71-23-8	63148-65-2
TOSCA Inventory	Registered	Registered	Registered	Registered
EINECS No.	2005786	2006617	2007469	Registered

4. First aid measures

Inhalation	: Move the victim to fresh air, and make him blow his nose and gargle with clean water.
Skin contact	: Wash the affected areas under running water.
Eye contact	: Wash the affected areas under running water for at least 15 minutes. If necessary, get medical treatment.
Ingestion	: Give the victim one or two glasses of water or sodium chloride water solution to induce vomiting. Do not give an unconscious victim anything to drink. Get medical treatment.

5. Fire fighting measures

Extinguishing media : Dry chemical powder, carbon dioxide, dry sand

Prohibited extinguishing media
: Foam extinguisher

Particular fire fighting : 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.
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.

Protection for firefighters : Water breathing apparatus.

6. Accidental release measures

Cautions for personnel : Wear proper equipment and avoid contact with skin and inhalation of vapor.
Keep personnel away from fire and direction of smoke.
Shut off all sources of ignition.
Except for authorized individuals, keep personnel away from spillage area by cordoning with ropes.

Cautions for environment
: Attention should be given not to cause damage to the environment by spillage flowing into rivers. In case of the required disposal of untreated wastewater, do not cause damage to the environment and dispose properly.

Removal measure : Absorb spill with inert material (e.g., diatomaceous earth, sand) and flush residual area with copious amounts of water.

7. Cautions of handling and storage

Handling : Engineering measures
Wear proper equipment that will prevent contact with skin or vapor inhalation.
Fire is strictly prohibited.
Ventilate well in all work areas.
Prevent build-up of electrostatic charges (e.g. by grounding).
: Cautions for safety handling
Use with an enclosed system or a local exhaust ventilation.
: Cautions
Do not contact with oxidizing substances.

Storage : Adequate storage condition
Store in a dark, cool place and close tightly
Do not use polyvinyl chloride resin, polystyrene.

8. Exposure control/Personal protection

	Ethanol	2-Propanol	1-Propanol	Vinyl butyral polymers
Control parameters (TWA)ACGIH	1,000ppm	400ppm	200ppm	None established

Engineering measures : Use only with adequate ventilation and in closed systems.

Protective equipment

- ・Respiration protective equipment : Chemical cartridge respirator with an organic vapor cartage or airline respirator.
- ・Hands protective equipment : Impervious protective gloves.
- ・Eyes protective equipment : Safety goggles.
- ・Skin and body protective equipment : Protective clothing. Protective boots.

9. Physical and chemical properties

Flash point : 14.5℃

Appearance : Light yellow, Liquid

Odor : Aromatic odor

Solubility : Miscible with many kinds of organic solvents like diethyl ether, chloroform.

10. Stability and reactivity

Stability : Stable under normal usage.
Reactivity : May react with strong oxidizing substances.
Incompatible conditions : Light, heat
Incompatible materials : Oxidizing substances
Hazardous decomposition products
: Carbon monoxide

11. Toxicological information

	Ethanol	2-Propanol	1-Propanol	Vinyl butyral polymers
Acute toxicity	rat oral LD50=14g/kg dog oral LD50=5500mg/kg	May be harmful if swallowed. May be harmful if in contact with skin.	May be harmful if swallowed. May be harmful if in contact with skin.	rat oral LD50=5000mg/kg
Acute toxicity	rat inhalation(as vapor) LC50=31600mg/kg rat inhalation(as mist) LC50=63000mg/kg Dense vapor is narcotic and if inhaled vapor, cause nose and throat irritation, nausea, headache, vomiting.	rat oral LD50=3437mg/kg (as calculated value) mouse oral $LD50_{50}$=3600mg/kg rat inhalation LC50=16000ppm/8h mouse inhalation LCL0=12800ppm/3h rabbit skin LD50=4059mg/kg Dense vapor is narcotic and if inhaled vapor, cause nose and throat irritation, nausea, headache, vomiting.	LD50=2695mg/kg (as calculated value) rat inhalation LCL0=4000ppm/4h rabbit skin LD50=4031mg/kg Dense vapor is narcotic and if inhaled vapor, cause nose and throat irritation, nausea, headache, vomiting.	
Skin corrosiveness	There is a mention that this substance has no irritation by test of OECD TG404 and American guidelines.	Rabbits skin irritation tests showed no, or slight irritation, but no skin irritation was observed in human volunteers and alcoholic intoxication patients.	Repeated or long term contact with skin may cause inflammation.	None known
Irritation to skin, eyes	Causes serious skin irritation. There is a mention that this substance is classified as moderate by test of OECD TG404 and Draize can recover for one or two days.	Causes serious skin irritation. Rabbits eyes irritation tests showed mild, or severe irritation, but no severe damage was observed.	If contacted with eyes, may cause irritation and visual disturbance. rabbit skin 500mg open Mild rabbit eyes 4mg Severe	None known
Respiratory sensitization or Skin sensitization	None known	Negative at guinea pig experiment of Buehler method.	None known	None known
Mutagenicity	There is a mention that dominant lethality of rats and mice, aneuploidy induction on mice reproductive cells.	In vivo mouse bone marrow micronucleus assay ; negative	Microorganism ; E. coli ; positive	None known
Carcinogenic effects	ACGIH classifies the group A4 (not classifiable as a human carcinogen).	IARC classifies group 3 (not classifiable as to carcinogenicity in humans).	ACGIH classifies the group A3 (confirmed animal carcinogen with unknown relevance to human).	None known

Effects on the reproductive system	May damage fertility or the unborn child. Many harmful influences are reported that a large dose regular intake of alcohols causes malformed human embryo.	Suspected of damaging fertility or the unborn child. Rats developmental toxicity and teratogenicity tests showed no teratogenicity. Reproductive system effects like the depress of pregnancy rate, increase of absorbed embryo, and embryo lethality were recognized by the amount of the substance caused parent animal to decrease the increase rate of body weight and show anesthetic toxicity.	Suspected of damaging fertility or the unborn child.	None known
Specific target organ systemic toxicity single exposure	May cause respiratory irritation. May cause drowsiness and dizziness.	Cause damage to organs (central nerve system, kidney, systematic toxicity). May cause respiratory irritation.	May cause respiratory irritation. May cause drowsiness and dizziness.	None known
Specific target organ systemic toxicity single exposure	Oral intake of ethanol by human causes the damage of central nerve system, headache, fatigue, and loss of concentration. In case of acute toxicity, may dye. Inhalation of vapor of 5000ppm (9.4mg/l) causes irritation of respiratory tract, stupor, pathologic sleeping.	Rats inhalation tests showed the decrease of activity, human oral intake toxicity showed the irritation of digestive organs, the decrease of blood pressure and body temperature, neutral nervous system manifestation, and kidney damage.	May cause respiratory irritation. May cause drowsiness and dizziness.	None known
Specific target organ systemic toxicity repeated exposure	Cause damage to organs (liver) through prolonged or repeated exposure. May cause damage to organs (nerve) through prolonged or repeated exposure. A large dose prolong intake of alcohols by human causes damage of most organs, but the liver is most negatively affected.	May cause damage to organs (vessel, liver, opleen) through prolonged or repeated exposure. In rats inhalation exposure tests for 86 days or 4 months, effects of blood, liver, and spleen was recognized.	None known	None known
Aspiration hazard	None known	May be harmful if swallowed and enters airways. May cause drowsiness and dizziness.	May be harmful if swallowed and enters airways. May cause drowsiness and dizziness.	None known

12. Ecological information

	Ethanol	2-Propanol	1-Propanol	Vinyl butyral polymers
Fish toxicity	Daphnia magna LC50=5463.9mg/l/48h	Japanese gill fish LC50>100mg/l/96h	Daphnia magna LC50=3025mg/l/48h	None known
Rediualbility and degradability	High biodegrability	High biodegrability	None known	None known

13. Disposal consideration

Residual disposal : Burn in a chemical incinerator equipped with an afterburner and a scrubber. Or entrust approved waste disposal companies with the disposal.

Containers : In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

UN class : Class 3 (Flammable liquids)

UN number : 1133

Packing Group : Ⅱ

Domestic Regulations

Land : Follow the mode of transportation as provided in Fire and Disaster Management Act, Industrial Safety and Health Act, etc.

Sea : Follow the mode of transportation as provided in the Ships Safety Act.

Air : Follow the mode of transportation as provided in the Aviation Law.

Emergency response guideline number : 127

15. Regulatory information

Ensure this material is in compliance with federal requirements and ensure conformity to local regulations.

Other information

References Dangerous Properties pf Industrial Materials, 6th ed. N. I. Sax Van Nostrand Reinhold Company (1984)

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 for 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 of the properties of the product.