



Hitachi Chemical Co.,Ltd.

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MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

CHEMICAL PRODUCT NAME : TF-4200EB-452
NAME OF MANUFACTURER : Hitachi Chemical Company Ltd. (Yamazaki Works)
ADDRESS : 4-13-1 Higashi-cho,Hitachi,Ibaraki,Japan
NAME OF SECTION : Chemical Products Div. K.Yasu
TELEPHONE NUMBER : 294-23-8915 (Japan)
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294-23-8907 (Japan)
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2. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE/MIXTURE : MIXTURE
INGREDIENTS AND COMPOSITION :

CHEMICAL NAME	COMPOSITION	CHEMICAL FORMURA	CAS NO
Thermoplastic elastomer	20 ~ 30	-	Confidential
Adhesive resin	1 ~ 10	-	Confidential
Butyl acetate	5 ~ 15	CH ₃ COOC ₄ H ₉	123-86-4
Methylcyclohexane	5 ~ 15	C ₇ H ₁₄	108-87-2
Ethylcyclohexane	45 ~ 50	C ₈ H ₁₆	1678-91-7

3. HAZARDS IDENTIFICATION

CLASS NAME OF HAZARDOUS CHEMICALS : Blue and transparent liquid, harmful and flammable.
PHYSICAL AND CHEMICAL HAZARDS : Flammable liquids. May form explosive dust-air mixture of vapors/air exceeding - 1 .
ADVERSE HUMAN HEALTH EFFECTS : Inhalation of high vapor concentrations causes headache, nausea and vomiting. Irritating to eyes, skin and mucous membrane.
ENVIRONMETAL EFFECTS : Not available.

4. FIRST-AID MEASURES

INHALATION : Remove the victim from the contamination immediately to fresh air.
If breathing is weak, irregular or has stopped, open his airway ,loosen his collar and belt and administer artificial respiration. Keep the victim warm and quiet. And refer for medical attention.
SKIN CONTACT : Remove all contaminated clothing, shoes, socks from the affected areas as quickly as possible. Wash the affected areas under tepid running water using a mild soap.
EYE CONTACT : Gently rinse the affected eyes with clean water for at least 15 minutes. Ask the victim to look up, down and side to side as you rinse in order to better reach all parts of eyes.
Arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.
INGESTION : Do not induce vomiting. Arrange for transport to the nearest medical Facility for examination and treatment by a physician as soon as possible.
Do not give an unconscious person anything to drink.

5. FIRE-FIGHTING MEASURES

- FLAMMABLE PROPERTIES : Flash point / - 1 (product).
EXTINGUISHING MEDIA : Dry chemical powder, carbon dioxide, foam, dry sand.
SPECIFIC HAZARDS WITH REGARD TO FIRE-FIGHTING MEASURES:
- Dry chemical powder, carbon dioxide or dry sand should be used for small-fires.
 - Large fires are best controlled by foam.
 - Apply water from a safe distance to cool and protect surrounding area.
Move container from fire areas if it can be done without risk.
 - Firefighters should wear proper protective and respiratory equipment.
 - Evacuate non-essential personnel into surrounding area of fires.

6. ACCIDENTAL RELEASE MEASURES

- Personal precaution
- Evacuate personnel to safe area. Evacuate non-essential personnel. Shut off all sources of ignition
:No flares, smoking or flames in area.
 - Wear proper protective and respiratory equipment.
- Method for cleaning up
- For small spills, absorb spill with inert material(e.g., dry sand or earth)then, place in a chemical waste containers using nonsparking tools.
 - For large spills, dike for later disposal.
- Environmental precaution
- Do not wash away into sewer, watercourse or river.

7. HANDLING AND STORAGE

- HANDLING :
- Shut off all gas pilot and electrical igniters and other sources of ignition during use and until all vapors are gone.
 - Avoid release of this material into sewer or waterways.
 - In case of handling, should be worn proper protective equipment to avoid contact and inhalation.
- STORAGE :
- Store at below 95° F(35).
 - Keep away from heat, steam pipe and sunlight.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

- CONTROL PARAMETERS : ACGIH ; 150 ppm (TWA), 200ppm (STEL) (Butyl acetate)
(2002) 400ppm(TWA)(Methylcyclohexane)
OSHA; 150 ppm (TWA) (Butyl acetate),
500ppm(TWA)(Methylcyclohexane)
- ENGINEERING MEASURES : Handle this material only in a totally enclosed system or local exhaust ventilation. Make available in the work area emergency shower and eyes wash.
- ENGINEERING MEASURES : Handle this material only in a totally enclosed system or local exhaust ventilation.
- PERSONAL PROTECTIVE EQUIPMENT
- RESPIRATORY PROTECTION : Chemical cartridge respirator with organic vapor cartridge. Airline respirator for high vapor concentration.
- EYE PROTECTION : Safety goggles or face shield.
- HAND,SKIN AND BODY PROTECTION : Chemical-resistant gloves, impervious boots and apron or full-body suit.

9. PHYSICAL/CHEMICAL PROPERTIES

APPEARLANCE : Blue and transparent liquid with ester odor (product)
 BOILING POINT : 125 (Butyl acetate),101 (Methylcyclohexane)
 132 (Ethylcyclohexane)
 VAPOUR DENSITY (Air=1) : 0.88 (Butyl acetate), 3.4(Methylcyclohexane)
 SOLUBILITY IN WATER : Insoluble (product)
 SOLUBILITY IN ORGANIC SOLVENTS : Soluble (in Butyl acetate, Methylcyclohexane)

10. STABILITY AND REACTIVITY

This material is considered a stable material under normal and anticipated storage and handling condition.

FLASH POINT : - 1 (product)
 CHEMICAL STABILITY(Conditions to avoid) : Not dangerously unstable.
 Keep away from flames and spark-producing equipments.
 MATERIALS TO AVOID : Strong alkalies, Peroxide etc.
 HAZARDOUS DECOMPOSITION PRODUCT :
 • Carbon monoxide, various hydrocarbons etc.
 • Decomposition will not occur under normal condition.
 HAZARDOUS POLYMERIZATION : Will not occur.

11. TOXICOLOGICAL INFORMATION

ROUTE OF ENTRY : May cause absorption in the body by inhalation, dermal and oral.
 CORROSIVE AND IRRITANT PROPERTIES : This material is irritating to eyes, skin, mucous membrane and respiratory tract. Repeated or prolonged contact may cause dermatitis.
 ACUTE TOXICITY :

ROUTE OF ENTRY	Butyl acetate	Methylcyclohexane
Oral LD ₅₀ (rat)	10,768 mg/kg	> 3,200 mg/kg
Inhalation LC ₅₀ (rat)	390 ppm/4H	No data
Oral LD ₅₀ (mouse)	6g/kg	2,250 mg/kg
Inhalation LC ₅₀ (mouse)	6g mg/kg 2H	1,500 mg/kg 2H

CARCINOGENIC EFFECTS : Butyl acetate is not classified in IARC,NTP, ACGIH and OSHA.

12. ECOLOGICAL INFORMATION

Log Pow (octanol/water partition coefficient) : 1.82 (Butyl acetate)
 BIODEGRADABILITY : Butyl acetate is biodegradable.4)

13. DISPOSAL CONSIDERATION

- Do not dump into sewers, on the ground or into any body of water.
- Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in general careful matter as highly flammable liquids.
- Follow all relevant regulations in your state or local.

14. TRANSPORT INFORMATION

- Keep away from source of ignition.
- Follow all regulation on the transport in your local, state and federal laws and regulations.

DOT BASIC DESCRIPTION:

	UN No.	UN Class	Packing Group	IMDG Code Page
Mixture	UN 1263	3	2	3268

TYPE OF CONTAINER SUPPLY : Can

15. REGULATORY INFORMATION

- Regulatory information with regard to this substances in your country or in your region should be examined by your own responsibility.

16. OTHER INFORMATION

NFPA rating

Material	Safety	Flammability	Reactivity
Butyl acetate	1	3	0

REFERENCES : May cause absorption in the body by inhalation, dermal and oral.

- 1.International Chemical Safety Card,#0267 IPCS(WHO/FAO/UNEP)
- 2.Registry of Toxic Effects of Chemical Substances. NIOSH(2002,CD-ROM DB)
- 3.Technical information(International Isocyanate Institute,Inc,1982)
- 4.Biodegradation and Bioaccumulation Data of Existing Chemicals Based on The CSCL Japan(Edited by CITI Japan(1992))

INQUIRY OF THE INFORMATION CONTAINED HEREIN :

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