

OMR RINSE**PRODUCT & COMPANY IDENTIFICATION**PRODUCT NAME: **OMR RINSE**

CREATION DATE: May 12, 1999

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MSDS PREPARED BY: Manufacturing Technology Division, Safety Control Section, TOK

JAPAN

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COMPOSITION & INFORMATION ON INGREDIENTS

SIMPLE/MIXTURE: Simple

CHEMICAL NAME (GENERIC NAME): n-Butyl acetate

SYNONYM (S): Butyl ethanoate

INGREDIENT AND COMPOSITION:

INGREDIENTS	wt%	CHEMICAL FORMULA	CAS NO.	EINECS NO.
n-Butyl acetate	100	CH ₃ COO(CH ₂) ₃ CH ₃	123-86-4	204-658-1

UN CLASS: 3 (Flammable Liquids)

UN NUMBER: 1123

HAZARDS IDENTIFICATION

Skin contact causes irritation. Prolonged skin contact may cause cracking or other damages on skin (such as dermatitis).

Eye contact causes irritation.

Inhalation causes irritation of the nose or the respiratory tract, and may cause headache, nausea, vomit, dizziness, or unconsciousness. It may also decrease the central nervous system function.

4. FIRST-AID MEASURES

SKIN CONTACT:

Wash the affected part with plenty of running water and mild soap.

If irritation continues, immediately take the patient to a physician for examination and treatment.

EYE CONTACT:

Immediately rinse the eyes with running water to wash off the chemical completely.

Immediately take the patient to a physician for examination and treatment.

INHALATION:

Move the patient at once to fresh air.

Immediately take the patient to a physician for examination and treatment.

INGESTION:

Rinse the mouth with water.

Immediately take the patient to a physician for examination and treatment.

5. FIRE FIGHTING MEASURES

SPECIFIC HAZARD REGARDING FIRE FIGHTING MEASURES:

Shut off fuel as much as possible.

Dry chemical or carbon dioxide should be used for small fires.

Evacuate unnecessary personnel to safe area.

Fire fighters should wear proper protective clothing.

Foam should be effective for large fires.

When sprayed, water should be effective for cooling and protection of the fire fighters. However, use of water may expand the fire.

EXTINGUISHING MEASURES:

Dry sand, foam, carbon dioxide, or dry chemical powder extinguisher should be used.

6. ACCIDENTAL RELEASE DEALING MEASURES

Evacuate the leeward personnel.

Ventilate the area.

Quickly shut off all ignition sources.

Equip extinguishers in case of ignition.

Wear proper protective clothings.

When the leak is small, wipe it with cloths. Leave the cloth in the draft, and burn it off after solvent has evaporated.

When the leak is large, try to stop the flow with cloths, and collect the spilt solution in an empty container as much as possible.

Prevent spilt solution from entering sewers, watercourses, rivers, or fields.

7. HANDLING & STORAGE

HANDLING:

Be careful in handling the container, and protect it from damages.

Wear proper protective clothing.

Use only in the well-ventilated area.

Seal the container after handling.

Avoid contact with oxidizing agents or reductants.

Shut off all sources of ignition.

The electric facility should be explosion proof.

Ground.

When moving the solution through pipings, ground the metallic part of the apparatuses, pipings and containers to prevent generation of electrostatic charges.

Pay attention to ventilation. This vapor is heavier than air, and easily stays at low position.

Solution should not remain in piping when it is not used.

Water facility should be installed at every place where the solution is used. It should facilitate measures in case of adhesion or contact with eyes.

Do not bring contaminated protective tools, such as gloves, to the lounge.

Be careful of personal health after handling.

STORAGE:

Keep the container sealed, and store in a dark place. (See the original label on the container for our storage recommendation.)

Keep away all sources of ignition.

Do not heat.

Do not let it evaporate without a reason.

Store in well-ventilated area.

OTHERS:

Follow all national and local regulations.

8. EXPOSURE PREVENTIVES

TOLERANCE LEVEL:

INGREDIENTS	ACGIH TLV	OSHA PEL
n-Butyl acetate	TWA 150 ppm (713 mg/m ³)	TWA 150 ppm (710 mg/m ³)

FACILITY CONTROL: When handling, try to use closed apparatuses, equipment or partial ventilator.

PERSONAL PROTECTIVE CLOTHINGS:

RESPIRATORY PROTECTOR: Chemical cartridge respirator with cartridge to protect against the organic vapor.

Airline respirator.

EYE PROTECTOR: Chemical goggles.

HAND, SKIN AND BODY PROTECTOR: Gloves and clothing to cover the whole body.

9. PHYSICAL & CHEMICAL PROPERTY

APPEARANCE: Colorless liquid

DENSITY: 0.88 (d25@4)

BOILING POINT: 125.0~126.0 °C

MELTING POINT: -77.0 °C

RELATIVE VAPOR DENSITY: 4.0 (air=1)

SOLUBILITY IN WATER: Insoluble

10. PHYSICAL HAZARD

MATERIAL	FLASH POINT	IGNITION POINT	EXPLOSION LIMIT
n-Butyl acetate	24 °C	425 °C	1.7~15.0 vol%

STABILITY: Stable.

REACTIVITY: Emit carbon monoxide when burned with insufficient oxygen.

11. TOXICOLOGICAL INFORMATION

n-Butyl acetate

ACUTE TOXICITY:

Oral LD50 (rat): 10768 mg/kg

Oral LD50 (mouse): 6000 mg/kg

Inhalation LC50 (rat): 2000 ppm/4 hours

Inhalation LC50 (mouse): 6000 mg/m³/2 hours

Intraperitoneal LD50 (mouse): 1230 mg/kg

Intraperitoneal LDLo (guinea pig): 1500 mg/kg

Skin LD50 (rabbit): >17600 mg/kg

SUBCHRONIC TOXICITY AND CHRONIC TOXICITY:

Sub-acute intoxication of rats (route unspecified) with 0.8-1.6 g/kg/day for 1 month caused glomerulonephritis.

Administration of 0.5 mg/kg for 6 months caused no change in organs.

MUTAGENIC EFFECT:

The mutation test was performed in the absence and presence of rat microsomal activation. No mutagenic activity was observed with n-butyl acetate.

CARCINOGENIC EFFECT:

No carcinogenic effects were noted in OSHA, EPA, EU, NTP, IARC, and ACGIH.

TERATOGENIC EFFECT:

Pregnant rats and rabbits were made to inhale 1500 ppm an average. The fetotoxicity of rats are evidenced by delayed growth and slight coastal malformation. However, these responses are not enough to conclude its teratogenicity.

12. ECOLOGICAL INFORMATION

n-Butyl acetate

BIODEGRADABILITY:

Direct: 87%

Indirect: 38■

(butyl acetate 284 mg/l, activated sludge 30 mg/l, in coulometer for 120 hours)

FISH TOXICITY:

LC50 (96hours, fathead minnow): 18 mg/l

LC50 (96hours, bluegill sunfish): 100 ppm

OTHER INFORMATION ON ECOTOXICITY

Octanol/Water Partition Coefficient: 1.82

BOD: BOD₅ 23.5■, BOD₂₀ 57.4■ (settled sewage seed)

COD: COD_{Mn} 110 mg/g, COD_{Cr} 1880 mg/g

13. DISPOSAL CONSIDERATION

When dispose, pay attention to what is written in **7.HANDLING & STORAGE**, and follow all regulations.

It should be burned off as a rule.

Follow all national and local regulations.

14. TRANSPORT INFORMATION

UN CLASS: 3 (Flammable Liquids)

UN NUMBER: 1123

HAZCHEM CODE: Not Applicable

ADR/RID (GGVS/GGVE): 31^O(c)

IATA/ICAO: Class 3 packing group III

Keep away from incompatibilities and all sources of ignition.

Follow all national and local regulations.

15. REGULATION INFORMATION

NATIONAL REGULATION

UN CLASS: 3 (Flammable Liquids)

UN NUMBER: 1123

US TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS

The subject product is listed on TSCA Inventory of Existing Chemical Substances.

LABELLING IN ACCORDANCE WITH EC GUIDELINES

HAZARD SYMBOL: Not Applicable

HAZARD CLASSIFICATION: R10

R66

R67

REGULATION IN ACCORDANCE WITH EC GUIDELINES

R-REGULATIONS: R10 - Flammable.

R66 - Repeated exposure may cause skin dryness or cracking.

R67 - Vapours may cause drowsiness and dizziness.

S-REGULATIONS: S25 - Avoid contact with eyes.

Follow all your national regulations.

16. OTHER INFORMATION

Reference:

1. HSDB
2. RTECS
3. The Dictionary of Substance and Their Effects (The Royal Society of Chemistry)
4. Material Safety Data Sheet (of the raw material manufacturer)

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

TOKYO OHKA KOGYO CO., LTD.

MATERIAL SAFETY DATA SHEET **RI-01-C 1/6**