

Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the substance or preparation

Product Name : Cleaning Solution RS

Product Code : SPC-0336

1.2. Use of the substance/preparation

General Use : For ink jet

Product Description : Solvent type pigment ink cleaning fluid

1.3. Company/undertaking identification

MANUFACTURER

Company Name : Mimaki Engineering Co., Ltd

Address : 2182-3 Otsu, Shigeno, Tomi-shi, Nagano 389-0512 Japan

Telephone No. : +81-268-64-2413

Charge post : Inks and Media Division

Person in charge : Isao Tabayashi

E-mail address : tabayashi@mimaki.jp

IMPORTER/DISTRIBUTOR ESTABLISHED IN EU

Company Name : MIMAKI EUROPE B.V.

Address : Joan Muyskenweg 42-44, 1099CK Amsterdam

Telephone No. : +31-20-4627-640

Person in charge : Sakae Sagane

1.4. Emergency telephone

EMERGENCY : Mimaki Engineering Co., Ltd +81-268-64-2413

TELEPHONE : National Vaccine Information Center (NVIC)

NUMBER : +31-30-274888

2. HAZARDS IDENTIFICATION

EMERGENCY : Clear liquid. Acute toxic substance.

OVERVIEW : Irritating to eyes, skin and respiratory tract.

This product is classified as 'Harmful (Xn)'.



Xn

POTENTIAL HEALTH EFFECTS

Inhalation : R20 Harmful by inhalation.

Eye : Irritating to eyes.

Skin : R21 Harmful in contact with skin.

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Ingestion : Harmful if swallowed.

POTENTIAL ENVIROMENTAL EFFECTS

: Harmful to aquatic organisms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

No	Chemical Name	Wt%	CAS No.	EINECS No.	Symbol letters	Risk Phrase	Chemical Formula
1	Cyclohexanone	1.0-4.5	108-94-1	203-631-1	Xn	10,20	C ₆ H ₁₀ O
2	2-butoxyethyl acetate	95-99	112-07-2	203-933-3	Xn	20/21	C ₈ H ₁₆ O ₃

*The wording of the symbol(s) and risk phrase(s) is specified in 16.OTHER INFORMATION.

4. FIRST AID MEASURES

INHALATION : Fresh air, rest. Refer for medical attention.

EYE : First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

SKIN : Remove contaminated clothes. Rinse and then wash skin with water and soap.

INGESTION : Rinse mouth. Give plenty of water to drink. Do NOT induce vomiting. Refer for medical attention.

PROTECTION TO FIRST-AIDERS

: Please wear a tool for protection.

5. FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

: Combustible. Flash point: 74.3 degree C

EXTINGUISHING MEDIA

: Powder, alcohol-resistant foam, water spray, carbon dioxide.
Never splash water.

FIRE FIGHTING INSTRUCTIONS

: Wear full fire-fighting turn-out gear (full bunker gear) and respiratory protection (self-contained breathing apparatus).
Exposure to decomposition products may cause a health hazard.

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Appropriate breathing apparatus may be required.

Cool closed containers exposed to fire with water. Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Ventilation. Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent and remove to safe place. (Extra personal protection: filter respirator for organic gases and vapours.)

7. HANDLING AND STORAGE

HANDLING : Handle in well-ventilated area. Prohibit use of fire, sparks or heat source. Ground equipment against electrostatics and use explosion-proof electric equipment. Use spark-proof tools. Keep used cloths, waste paints or spray dusts in water until disposal. Use proper protection (gloves, masks, aprons, goggles, etc.). Use local exhaust system and proper protection if working in closed area.

STORAGE : Keep from sunlight. Store in well-ventilated area. Keep from open fire or heat source. Separated from strong oxidants, and strong bases. Cool. Keep in the dark.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure limit values

No	Chemical Name		TWA	STEL	Ceiling	Skin	SEN
1	Cyclohexanone	ACGIH	20ppm	50ppm	N.E.	N.E.	N.E.
2	2-Butoxyethyl acetate (EGBEA)	2007 TLVs and BEIs	20ppm	N.E.	N.E.	N.E.	N.E.

8.2. Exposure controls

8.2.1. Occupational exposure controls

Engineering Controls : Use exhaust ventilation to keep airborne concentration below exposure limits.

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Personal Protection

Respiratory Protection : An air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where air-borne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited.

Hand Protection : Protective gloves.

Eye Protection : Safety goggles.

Skin Protection : Protective clothing.

8.2.2. Environmental exposure controls

: Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

Appearance - Physical state : Liquid
- Colour : Colourless, transparent

Odour : Solvent odour

9.2. Important health, safety and environmental information

pH : Not Applicable
Boiling Point / Boiling Range : 191 degree C or higher
Flash Point : 74.3 degree C
Flammability(solid, gas) : Not available
Vapour Pressure : 40 Pa (20 degree C)
Relative density : 0.936±0.01 (20 degree C)
Solubility : Not available
Water solubility : Not available
Viscosity : Not available

9.3. Other information

Melting Point / Melting Range : Not available
Auto-Ignition Temperature : 340 degree C
Specific Gravity : Not available

10. STABILITY AND REACTIVITY

CONDITONS TO AVOID : Heat, flames, ignition sources and incompatibles.

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STABILITY : Stable under ordinary conditions of use and storage.
MATERIALS TO AVOID : The substance can presumably form explosive peroxides. Reacts with strong oxidants and strong bases, causing fire and explosion hazard. Strong oxidizers, strong bases.
HAZARDOUS DECOMPOSITION PRODUCTS : Above 71-C explosive vapor/air mixtures may be formed. Carbon dioxide and carbon monoxide may form when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

	Oral LD50	Dermal LD50	Inhalation LC50
Cyclohexanone	1400-2100mg/kg (mouse) 1000-3000mg/kg(rat)	948mg/kg(rat) 948-1000mg/kg(rabbit)	2675-8000ppm(4h) (rat)
2-Butoxyethyl acetate	3200mg/kg(mouse) 2400 mg/kg(rat)	1500 mg/kg(eabbit)	

EYE IRRITATION : Irritation of eyes and mucous membranes.
 Cyclohexanone
 Draize test, rabbit, eye: 20 mg Severe
 Draize test, rabbit, eye: 250 ug/24H Severe

SKIN IRRITATION : Irritating to skin.

SENSITIZATION : Not available

EFFECTS OF SHORT-TERM EXPOSURE : The vapour is irritating to the eyes , the skin and the respiratory tract .
 The substance may cause effects on the central nervous system .
 Exposure far above the OEL may result in unconsciousness. The substance may cause effects on the blood , resulting in lesions of blood cells and kidney impairment .

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE : The liquid defats the skin.
 The substance may have effects on the blood , resulting in anaemia and kidney impairment .

MUTAGENICITY : Not available

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CARCINOGENICITY :	IARC	ACGIH 2007 TLVs and BEIs
Cyclohexanone	3: [108-94-1] (Vol. 47, Vol. 71; 1999)	A3
2-butoxyethyl acetate	-	A3

12. ECOLOGICAL INFORMATION

Harmful to aquatic organisms. Handling is noted because it might influence the environment when leaking and abandoning it. Especially, note that the product doesn't flow directly to ground, the river, and the drain ditch.

ECOTOXICITY : LC50

Cyclohexanone	2-butoxyethyl acetate
303(48-h)mg/l (Oncorhynchus mykiss)	150(24h) mg/l (Daphnia)
527(96-h)mg/l (Pimephales promelas)	

PERSISTENCE AND DEGRADABILITY

: Not available

BIOACCUMULATIVE POTENTIAL

: Not available

RESULTS OF PBT ASSESSMENT

: Not available

OTHER ADVERSE EFFECTS

: Not available

13. DISPOSAL CONSIDERATIONS

Have waste liquids, containers and other materials disposed of by licensed industrial waste contractors. Keep waste liquids from flushing containers, machines or other equipment from flowing directly to the ground or drainage. Dispose of wastes from drainage, combustion, etc, in compliance with laws and regulations on waste disposal or cleaning, or have them disposed of by contractors. To avoid harmful gases, do not use incinerators without flushing systems to burn wastes and other materials. Comply with all EU, national and local regulations.

Do not dump this product into sewers, on the ground or into any body of water.

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14. TRANSPORT INFORMATIONS

Check a thing without a leak in a container.
Perform prevention of collapse of cargo surely.
This product is not classified.

15. REGULATORY INFORMATION

This product is classified as follows and labeled accordingly.

Symbol

Xn Harmful



Xn

Risk Phrase

20/21 Harmful if inhaled or swallowed.

Safety Advise

24 Avoid contact with skin.

25 Avoid contact with eyes.

Please refer to any other EU, national and local measures.

16. OTHER INFORMATION

From clause 3

Symbol letters : Xn Harmful

Risk phrase : 10 Flammable.

20 Harmful by inhalation.

21 Harmful in contact with skin.

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It relates only to the specific material designated herein, and dose not relates to use in combination with any other material or process.

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Product Name: Cleaning Solution RS
MSDS No.032-33C010B
First issue: 2008/03/21
Revise: -
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Revision history

Version	Date	Content
1.0	2008/03/21	First issue