



Product Name: Reactive Dye Ink Rc300 Light Black
MSDS No. 031-38W311B
First issue: 2012/06/08
Revised: 2013/01/22
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Material Safety Data Sheets

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : Reactive Dye Ink Rc300 Light Black
Product Code : RC300-LK-BB/RC300-LK-2L
Ver. : 1
General Use : Ink Jet Ink
Product Description : Ink Jet Ink
MSDS Number : 031-38W311B
Manufacture
Company Name : Mimaki Engineering Co., Ltd
Address : 2182-3 Otsu, Shigeno, Tomi-shi, Nagano 389-0512 Japan
Telephone No. : +81-268-64-2413
Importer/Distributor Established in USA
Company Name : MIMAKI USA. INC.
Address : 150 Satellite Boulevard, suite A, Suwanee, Georgia 30024, U.S.A
Telephone No. : 1-678-730-0100
Emergency Telephone No. : +81-268-64-2413

2. Hazards Identification

EMERGENCY OVERVIEW

Color: black

Physical Form: liquid

Odor: characteristic

Health Hazards: respiratory tract irritation, skin irritation, eye irritation, central nervous system depression, nerve damage, kidney damage

POTENTIAL HEALTH EFFECTS

Inhalation

Short Term: irritation, headache, drowsiness, dizziness, loss of coordination, blood disorders, difficulty breathing

Long Term: irritation, headache, nausea, lung damage

Skin

Short Term: irritation, allergic reactions, absorption may occur, nausea, vomiting, stomach pain, difficulty breathing, headache, drowsiness, dizziness, disorientation, loss of coordination

Long Term: irritation, allergic reactions, skin disorders



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Eye

Short Term: irritation, eye damage

Long Term: irritation, eye damage

Ingestion

Short Term: harmful if swallowed, nausea, vomiting, stomach pain, difficulty breathing, headache, drowsiness, dizziness, disorientation, loss of coordination, sore throat, symptoms of drunkenness

Long Term: kidney damage, sore throat, nausea, stomach pain, symptoms of drunkenness, lung congestion

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

3. Composition / Information On Ingredients

Chemical Name	CAS-No	Weight %
Water	7732-18-5	40-60
1,2-Propylene glycol	57-55-6	20-40
Glycerols	Trade Secret	5-15
Ethylene glycol	107-21-1	<5
Reactive Dye	Trade Secret	<5
Additives	Trade Secret	<5

4. First Aid Measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get medical attention.

Skin

Wash with plenty of soap and water. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eyes

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.



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Ingestion

Get medical attention. DO NOT induce vomiting. Do not give anything by mouth to an unconscious or convulsive person.

5. Fire Fighting Measures

See Section 9 for Flammability Properties

Flammable Properties

Slight fire hazard.

Extinguishing Media

alcohol resistant foam, carbon dioxide, regular dry chemical, water

Large fires: Use alcohol-resistant foam or flood with fine water spray.

Protective Equipment and Precautions for Firefighters

Wear self-contained breathing apparatus and protective clothing.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dike for later disposal. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

6. Accidental Release Measures

Occupational spill/release

Stop leak if possible without personal risk. Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Keep unnecessary people away, isolate hazard area and deny entry.

7. Handling And Storage

Handling Procedures

Store and handle in accordance with all current regulations and standards. Wash thoroughly after handling.



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Storage Procedures

Store and handle in accordance with all current regulations and standards. Store in a tightly closed container. Store in a cool, dry place. Store in a well-ventilated area.

8. Exposure Controls / Personal Protection

Component Exposure Limits

Ethylene glycol (107-21-1)

ACGIH: 100 mg/m³ Ceiling (aerosol only)

Mexico 100 mg/m³ Ceiling (aerosol)

Biological Limit Value

There are no biological limit values for any of this product's components

Ventilation

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face

Wear safety glasses or safety goggles, with a faceshield, as appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Protective Clothing

Wear appropriate chemical resistant clothing.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Respiratory Protection

Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Consider the need for appropriate protective equipment, such as self-contained breathing apparatus, adequate masks and filters.

9. Physical And Chemical Properties



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Appearance:	black ink	Color:	black
Physical Form:	liquid	Odor:	characteristic
Odor Threshold:	Not available	pH:	8-10 (25 °C)
Melting Point:	Not available	Boiling Point:	Not available
Flash Point:	Not available	Decomposition Temperature:	Not available
Evaporation Rate:	Not available	LEL:	Not available
UEL:	Not available	Vapor Pressure:	Not available
Vapor Density (air = 1):	Not available	Density:	Not available
Specific Gravity (water = 1):	1.1-1.2 (25 °C)	Water Solubility:	Not available
KOW:	Not available	Coeff. Water/Oil Dist:	Not available
Auto Ignition Temperature:	Not available	Viscosity:	4-6 mPa s
Surface tension:	30-36mN/m		

10. Stability And Reactivity

Chemical Stability

Stable at standard temperatures and pressure.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition.

Materials to Avoid

acids, bases, combustible materials, oxidizing materials, reducing agents, metals, metal salts, combustible materials

Decomposition Products

Thermal decomposition products: oxides of carbon, cyanide compounds, ammonia, and oxides of nitrogen.

Possibility of Hazardous Reactions

Will not polymerize.

11. Toxicological Information

Acute and Chronic Toxicity

Harmful if swallowed.



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Symptoms/effects may include allergic reactions, difficulty breathing, lung congestion, heart damage, kidney damage, liver damage, brain damage, nausea, vomiting, hallucinations, hyperactivity, visual disturbances, nerve damage, and headache.

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

1,2-Propylene glycol (57-55-6)

Oral LD50 Rat 20000 mg/kg; Dermal LD50 Rabbit 20800 mg/kg

Ethylene glycol (107-21-1)

Oral LD50 Rat 4000 mg/kg; Dermal LD50 Rabbit 9530 µL/kg

Component Carcinogenicity

Ethylene glycol (107-21-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Irritation

respiratory tract irritation, skin irritation, eye irritation

Medical Conditions Aggravated by Exposure

kidney disorders, skin disorders and allergies, eye disorders, respiratory disorders

12. Ecological Information



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Component Analysis - Aquatic Toxicity

1,2-Propylene glycol (57-55-6)

Fish: 96 Hr LC50 Oncorhynchus mykiss: 51600 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 41 - 47 mL/L [static]; 96 Hr LC50 Pimephales promelas: 51400 mg/L [static]; 96 Hr LC50 Pimephales promelas: 710 mg/L

Algae: 96 Hr EC50 Pseudokirchneriella subcapitata: 19000 mg/L

Invertebrate: 24 Hr EC50 Daphnia magna: >10000 mg/L; 48 Hr EC50 Daphnia magna: >1000 mg/L [Static]

Ethylene glycol (107-21-1)

Fish: 96 Hr LC50 Oncorhynchus mykiss: 41000 mg/L; 96 Hr LC50 Oncorhynchus mykiss: 14 - 18 mL/L [static]; 96 Hr LC50 Lepomis macrochirus: 27540 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 40761 mg/L [static]; 96 Hr LC50 Pimephales promelas: 40000 - 60000 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 16000 mg/L [static]

Algae: 96 Hr EC50 Pseudokirchneriella subcapitata: 6500 - 13000 mg/L

Invertebrate: 48 Hr EC50 Daphnia magna: 46300 mg/L

13. Disposal Considerations

Disposal Methods

Dispose in accordance with all applicable regulations.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

14. Transport Information



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US DOT Information

No Classification assigned.

TDG Information

No Classification assigned.

MEX Information

No Classification assigned.

ICAO Information

No Classification assigned.

IATA Information

No Classification assigned.

IMDG Information

No Classification assigned.

RID Information

No Classification assigned.

ADR Information

No Classification assigned.

ADN Information

No Classification assigned.

15. Regulatory Information

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Ethylene glycol (107-21-1)

SARA 313: 1.0 % de minimis concentration

CERCLA: 5000 lb final RQ; 2270 kg final RQ

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
1,2-Propylene glycol	57-55-6	No	No	Yes	Yes	Yes
Ethylene glycol	107-21-1	Yes	Yes	Yes	Yes	Yes



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Not regulated under California Proposition 65

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which fall under WHMIS criteria specified in the Controlled Products Regulations and present above the threshold limits listed on the IDL.

Ethylene glycol (107-21-1)

1 %

Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PHI L	JP	KR	CN	NZ
1,2-Propylene glycol	57-55-6	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Ethylene glycol	107-21-1	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

16. Other Information

Key / Legend

ACGIH = American Conference of Governmental Industrial Hygienists. AICS = Australian Inventory of Chemical Substances. CAS = Chemical Abstract Service. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. CFR = Code of Federal Regulations. CHEMTREC = Chemical Transportation Emergency Center. DSL = Canadian Domestic Substance List. EINECS = European Inventory of New and Existing Chemical Substances. EPA = Environmental Protection Agency. HEPA = High Efficiency Particulate Air. HMIS = Hazardous Materials Identification System. IARC = International Agency for Research on Cancer. IDLH = Immediately Dangerous to Life and Health. MITI = Japanese Ministry of International Trade and Industry. NDSL = Canadian Non-Domestic Substance List. NFPA = National Fire Protection Association. NIOSH = National Institute of Occupational Safety and Health. NJTSR = New Jersey Trade Secret Registry. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. NA = Not available or Not Applicable. SARA = Superfund Amendments and Reauthorization Act. TDG = Transportation of Dangerous Goods. TLV = Threshold Limit Value. TSCA = Toxic Substances Control Act. WHMIS = Workplace Hazardous Materials Information System.



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Other Information

Disclaimer: Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

Revision history

Version	Date	Content
1.0	2012/06/08	First Issue
2.0	2013/01/22	1. Addition of Product Code 3. Correction of an error in Weight %