

Safety Data Sheets

1. Identification

Product Name	: Acid Dye Ink Ac400 Yellow
Order No.	: AC400-Y-2L
General Use	: Ink jet printing ink
Product Description	: Acid Dye Ink
SDS Number	: 037-W451843
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.	: +1-678-730-0170
Emergency Telephone No.	: +81-268-64-2281

2. Hazards Identification

[HCS Classification]

Physical Hazards

Flammable Liquids : Not classified

Health Hazards

Acute Toxicity – Oral : Not classified

Acute Toxicity – Dermal : Not classified

Skin Corrosion / Irritation : Not classified

Eye Damage / Irritation : Category2

Sensitization – Skin : Category1

Toxic to Reproduction : Category1

Specific Target Organ Toxicity (Single Exposure) : Category1 (central nervous system, respiratory, kidneys, heart)

Specific Target Organ Toxicity (Repeated Exposure) : Category1 (central nervous system, respiratory, heart)

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Environmental Hazards

Hazardous to the Aquatic : Category3

Environment - Acute Hazard

The above list does not include category being non-classifiable or not-applicable.

[HCS Label Elements]

Symbol



Signal Word

Danger

Hazard Statements

H317 May cause an allergic skin reaction

H319 Cause serious eye irritation

H360 May damage fertility or the unborn child

H370 Causes damage to organs(central nervous system, respiratory, kidneys, heart)

H372 Cause damage to organs through prolonged or repeated exposure(central nervous system, respiratory, heart)

H402 Harmful to aquatic life

Precautionary Statements

[Prevention]

P201 Obtain SDS (Safety Data Sheet) and printer's Operation Manual before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe gas/mist/vapors.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

[Response]

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor.

P314 Get medical advice/attention if you feel unwell.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash before reuse.

[Storage]

P405 Store locked up.

[Disposal]

P501 Dispose of contents/container in accordance with

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local/regional/national/international regulation (to be specified).

3. Composition / Information on Ingredients

No	Chemical Name	Wt%	CAS No.
1	Colorants	5-10	Trade Secret
2	Glycerols	10-20	Trade Secret
3	Ethylene glycol	20-30	107-21-1
4	Additives	<3	Trade Secret
5	Water	balance	7732-18-5

4. First Aid Measures

Inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.
Eye Contact	: Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.
Skin Contact	: Wash with plenty of soap and water. Take off contaminated clothing and wash before re-use. Get medical attention if irritation develops.
Ingestion	: If swallowed, get medical attention.
Most Important Symptoms/Effects	
Acute	: allergic skin reaction, eye irritation, skin irritation, central nervous system damage, respiratory damage, kidney damage, heart damage
Delayed	: allergic skin reaction, reproductive effects, central nervous system damage, respiratory damage, heart damage
Indication of Immediate Medical Attention and Special Treatment Needed, If Needed	: Treat symptomatically and supportively.

5. Fire Fighting Measures

Flammable Properties	: Not flammable.
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Extinguishing Media	: carbon dioxide, regular dry chemical, water spray, alcohol resistant foam
Unsuitable Extinguishing Media	: Do not scatter spilled material with high-pressure water streams.
Special Hazards Arising from the Chemical	: Negligible fire hazard.
Hazardous Combustion Products	: oxides of carbon
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. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Avoid inhalation of material or combustion by-products.
Special Protective Equipment and Precautions for Firefighters	: Wear full fire-fighting turn-out gear (full bunker gear) and respiratory protection (self-contained breathing apparatus).

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures	: Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.
Methods and Materials for Containment and Cleaning Up	: Eliminate all ignition sources if safe to do so. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.

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7. Handling and Storage

Handling	: Obtain SDS (Safety Data Sheet) and printer's Operation Manual before use. Do not handle until all safety precautions have been read and understood. Do not breathe gas/mist/vapors. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Storage	: Store locked up. Keep container tightly closed and in a cool place. Protect from temperatures below: 0 degree C. Protect from temperatures above: 40 degree C.

8. Exposure Controls / Personal Protection

Exposure Limit Values	: Ethylene glycol (107-21-1) OSHA PEL: 50ppm Ceiling; 125mg/m ³ Ceiling ACGIH TLV-C: 100 mg/m ³ Ceiling (aerosol only) NIOSH: 50ppm Ceiling Mexico 100 mg/m ³ Ceiling (aerosol)
Component Biological Limit Values	: There are no biological limit values for the component(s) of this product.
Exposure Controls	
Occupational Exposure Controls	
Engineering Controls	: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.
Personal Protection	
Respiratory Protection	: Consult with a health and safety professional for specific respirators appropriate for your use.



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Hand Protection : Wear appropriate chemical resistant gloves.



Gloves

Eye Protection : Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.



Safety Glasses

Skin Protection : Wear appropriate chemical resistant clothing.



Protective Apron



Boots



Gloves



Full Suit

Environmental Exposure Controls : Not available.

9. Physical and Chemical Properties

Appearance	- Physical state	: liquid
	- Colour	: Yellow
Odour		: Slight odor
pH		: 7.0~10.0 (at 20 degree C)
Boiling Point / Boiling Range		: Not available
Melting Point / Merging Range		: Not available.
Flash Point		: Not flammable.
Flammability(solid, gas)		: Not available.
Specific Gravity		: 1.0~1.1
Solubility		: Not available.
Water solubility		: complete
Viscosity		: 3.0~10.0mPa.s(20 degree C)

10. Stability and Reactivity

Reactivity : No reactivity hazard is expected.

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Chemical Stability	: Stable under normal conditions of use.
Possibility of Hazardous	: Will not polymerize.
Reactions	
Conditions to Avoid	: Avoid flames, sparks, and other sources of ignition. Avoid high and freezing temperatures. Avoid contact with incompatible materials.
Incompatible Materials	: acids, bases, oxidizing materials, metal oxides, peroxide salts
Hazardous	: oxides of carbon(Combustion)
Decomposition	

11. Toxicological Information

Acute Toxicity	: The component(s) of this material have been reviewed in various sources and the following selected endpoints are published: Ethylene glycol (107-21-1) Oral LD50 Rat 4700 mg/kg; Dermal LD50 Rabbit 10600mg/kg
Eye Irritation	: Cause serious eye irritation.
Skin Irritation	: Not available.
Sensitization	: May cause an allergic skin reaction.
Toxic to Reproduction	: May damage fertility or the unborn child.
Specific Target Organ Toxicity - Single Exposure	: central nervous system, respiratory, kidneys, heart.
Specific Target Organ Toxicity - Repeated Exposure	: central nervous system, respiratory, heart.

12. Ecological Information

	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	: Component Analysis - Aquatic Toxicity 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

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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

Component Analysis - : Not available.

Aquatic Toxicity

Persistence and : Not available.

Degradability

Bioaccumulation : Not available.

Mobility : Not available.

Other Toxicity : Not available.

13. Disposal Considerations

Disposal Methods : Dispose in accordance with all applicable regulations.
Do not dump this product into sewers, on the ground or into any body of water.

Disposal of Contaminated Packaging : Empty containers may contain product residue. Dispose in accordance with all applicable regulations.

14. Transport Information

Check a thing without a leak in a container.

Perform prevention of collapse of cargo surely.

US DOT Information : Not regulated as a hazardous material for transport.

TDG Information : Not regulated as dangerous goods for transport.

IATA Information : Not regulated as dangerous goods for transport.

ICAO Information : Not regulated as dangerous goods for transport.

IMDG Information : Not regulated as dangerous goods for transport.

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15. Regulatory Information

U.S. Federal Regulations : None of this products components are listed 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), or require an OSHA process safety plan.

California Proposition 65

: **WARNING:**



This product can expose you to chemicals including Ethylene glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

16. Other Information

This information is furnished without warranty, express or implied, except that it is accurate to the best knowledge of Mimaki Engineering Corporation.

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

Mimaki Engineering Corporation assumes no legal responsibility for use or reliance upon this information.