

## Safety Data Sheets

### 1. Identification

Product Name : Acid Dye Ink Ac400 Orange  
Order No. : AC400-OR-2L  
General Use : Ink jet printing ink  
Product Description : Acid Dye Ink  
SDS Number : 037-W451847  
Manufacture  
Company Name : Mimaki Engineering Co., Ltd.  
Address : 2182-3 Shigeno-otsu, 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 NE , suite A, Suwanee, Georgia 30024,  
U.S.A.  
Telephone No. : +1-678-730-0170  
Emergency Telephone No. : +1 866 928 0789 (within United States only, Toll free)  
+1 215 207 0061

### 2. Hazards Identification

#### [HCS Classification]

##### Physical Hazards

Flammable Liquids : Category Not classified

##### Health Hazards

Sensitization – Skin : Category 1A

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

#### [HCS Label Elements]

##### Symbol



##### Signal Word

Warning

##### Hazard Statements

H317 May cause an allergic skin reaction.

## Safety Data Sheets

### Precautionary Statements

#### [Prevention]

P261 Avoid breathing gas/mist/vapors.

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

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

#### [Response]

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

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

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

#### [Storage]

None.

#### [Disposal]

P501 Dispose of contents/container in accordance with local/regional/national/international regulation (to be specified).

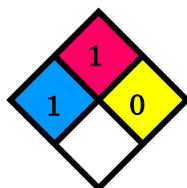
### NFPA Rating (scale 0 – 4)

Health = 1

Flammability = 1

Instability = 0

Special =



## 3. Composition / Information on Ingredients

No	Chemical Name	Wt%	CAS No.
1	Water	balance	7732-18-5
2	Glycols	30-50	Trade Secret
3	Pigment	1-10	Trade Secret
4	Other additives	<3	Trade Secret
5	Preservative	<0.5	Mixture

Component Related Regulatory Information.

The chemical identity and/or percentage of composition is being withheld as a trade secret.

## 4. First Aid Measures

Inhalation

: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

## Safety Data Sheets

Eye Contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
Skin Contact	: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs: Get medical advice/attention.
Ingestion	: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
Most Important Symptoms/Effects	
Acute	: mild skin irritation, allergic skin reaction.
Delayed	: allergic skin reaction.
Indication of Immediate Medical Attention and Special Treatment Needed, If Needed	: Treat symptomatically and supportively.

### 5. Fire Fighting Measures

Flammable Properties	: Not flammable.
Extinguishing Media	: Regular dry chemical, carbon dioxide, water spray, foam.
Unsuitable Extinguishing Media	: Do not scatter spilled material with high-pressure water streams.
Special Hazards Arising from the Chemical	: Negligible fire hazard during intended use. Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.
Hazardous Combustion Products	: Oxides of carbon.
Fire Fighting Measures	: Move material from fire area if it can be done without risk. Use extinguishing agents appropriate for surrounding fire. Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.
Special Protective Equipment and Precautions for Firefighters	: Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

## Safety Data Sheets

### 6. Accidental Release Measures

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

### 7. Handling and Storage

Precautions for Safe Handling	: Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.
Conditions for Safe Storage, including any Incompatibilities	: None needed according to classification criteria. Further information on storage conditions: Store and handle in accordance with all current regulations and standards. Store in a well-ventilated area. Keep container tightly closed. Keep cool. Keep separated from incompatible substances.
Incompatible Materials	: oxidizing materials, acids, combustible materials, bases, reducing agents, metals, metal salts, halocarbons.

### 8. Exposure Controls / Personal Protection

Exposure Limit Values	: The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.
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## Safety Data Sheets

ACGIH - Threshold : There are no biological limit values for any of this product's  
 Limit Values - Biological components.  
 Exposure Indices (BEI)

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### Exposure Controls

#### Occupational Exposure Controls

Appropriate : Provide local exhaust or process enclosure ventilation system.

#### Engineering Controls

### Individual Protection Measures, such as Personal Protective Equipment

Respiratory Protection : Consult with a health and safety professional for specific respirators appropriate for your use.



Glove : Wear appropriate chemical resistant gloves.

### Recommendations



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



Skin Protection : Wear appropriate chemical resistant clothing.



## 9. Physical and Chemical Properties

Appearance	- Physical State	: liquid
	- Color	: orange
Odor		: faint odor
pH		: 7 - 10 (20 °C )
Boiling Point / Boiling Range		: Not available
Melting Point / Melting Range		: Not available

## Safety Data Sheets

Decomposition Temperature	: Not available
Flash Point	: not flammable
Auto ignition temperature	: Not available
Flammability (Solid, Gas)	: Not available
Explosive Properties	: Not available
Oxidizing Properties	: Not available
Upper / Lower Flammability or Explosive Limits	: Not available
Vapor Pressure	: Not available
Specific Gravity	: 1 - 1.1
Solubility	: Not available
Water Solubility	: soluble
Partition Coefficient (n-octanol / Water)	: Not available
Viscosity	: 3 - 10 mPa · s (20 °C )
Vapor Density	: Not available
Evaporation Rate	: Not available

### 10. Stability and Reactivity

Reactivity	: No reactivity hazard is expected.
Chemical Stability	: Stable at normal temperatures and pressure.
Possibility of Hazardous Reactions	: Will not polymerize.
Conditions to Avoid	: Avoid flames, sparks, and other sources of ignition. Containers may rupture or explode if exposed to heat. Avoid contact with incompatible materials.
Incompatible Materials	: oxidizing materials, acids, combustible materials, bases, reducing agents, metals, metal salts, halocarbons.
Hazardous Decomposition	: Oxides of carbon.

### 11. Toxicological Information

#### Information on Likely Routes of Exposure

Inhalation	: irritation.
Ingestion	: irritation.

## Safety Data Sheets

Skin Contact : mild skin irritation, allergic skin reaction

Eye Contact : mild eye irritation

### Acute and Chronic Toxicity

Component Analysis - : **Product Toxicity Data** (Acute Toxicity Estimate)

#### LD50/LC50

Dermal > 2000 mg/kg

Inhalation – Vapor > 20 mg/L

Oral > 2000 mg/kg

Immediate Effects : mild skin irritation, allergic skin reaction.

Delayed Effects : allergic skin reaction.

Irritation/Corrosivity : mild skin irritation.

#### Data

Respiratory : No information available for the product.

#### Sensitization

Dermal Sensitization : Available data characterizes components of this product as dermal sensitization hazards.

Germ Cell : No information available for the product.

#### Mutagenicity

Carcinogenicity : No information available for the product.

Component : None of this product's components are listed by ACGIH, IARC, NTP, Carcinogenicity DFG or OSHA.

Tumorigenic Data : No information available for the product.

Reproductive Toxicity : No information available for the product.

Specific Target Organ : No target organs identified.

#### Toxicity - Single

##### Exposure

Specific Target Organ : No target organs identified.

#### Toxicity - Repeated

##### Exposure

Aspiration Hazard : Not expected to be an aspiration hazard.

Medical Conditions : skin disorders and allergies.

#### Aggravated by Exposure

## 12. Ecological Information

Handling is noted because it might influence the environment when leaking and abandoning it.

## Safety Data Sheets

Especially, note that the product doesn't flow directly to ground, the river, and the drain ditch.

Component Analysis -	: No LOLI ecotoxicity data are available for this product's
Aquatic Toxicity	components.
Persistence and	: No information available for the product.
Degradability	
Bioaccumulation	: No information available for the product.
Mobility	: No information available for the product.

### 13. Disposal Considerations

Disposal Methods	: Comply with all USA, national and local regulations. <u>Do not dump this product into sewers, on the ground or into any body of water.</u>
Component Waste	: The U.S. EPA has not published waste numbers for this product's
Numbers	components.
Disposal of	: Empty containers may contain product residue. Dispose in
Contaminated	accordance with all applicable regulations.
Packaging	

### 14. Transport Information

Check a thing without a leak in a container.	
Perform prevention of collapse of cargo surely.	
US DOT Information	: No Classification assigned.
International Bulk	: This material does not contain any chemicals required by the IBC
Chemical Code	Code to be identified as dangerous chemicals in bulk.

### 15. Regulatory Information

U.S. Federal	: None of this products components are listed under SARA Sections
Regulations	302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.
SARA Section 311/312	: Respiratory/Skin Sensitization.
(40 CFR 370 Subparts B	
and C) reporting	





## Safety Data Sheets

categories

U.S. State Regulations : None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA

California Proposition : Not listed under California Proposition 65.

Canada Regulations : Canadian WHMIS Ingredient Disclosure List (IDL)  
 The components of this product are either not listed on the IDL or are present below the threshold limit listed on the IDL.

### Component Analysis – Inventory

#### Glycols (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes

#### Pigment (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	No	Yes

#### Other additives (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes

#### Preservative (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes

### 16. Other Information

#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*; CAS -

## Safety Data Sheets

Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC – European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL) , KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX – Mexico; NDSL – Non-Domestic Substance List (Canada); NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TCCA – Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW – Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); WHMIS - Workplace Hazardous Materials Information System (Canada).

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## Safety Data Sheets

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