

MATERIAL SAFETY DATA SHEET

Product name: CPS Screen Opener D2
Last revised date: 2004-01-15

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Printdate: 2004.01.15
SDS-ID: US-D/3.0

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

Product name: **CPS SCREEN OPENER D2**

Application: To remove dried ink in screen printing mesh during print run. Container size: 5,25 and 210 LT

Supplier: Autotype Americas, Inc.
2050 Hammond Drive
Schaumburg, IL 60173-3810
Emergency telephone: 1-800-424-9300

Tel: 1-847-303-5900

2. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains: organic solvents.

This product is covered by the OSHA Hazard Communication Rule 29, CFR 1910.1200

The following substances shall be indicated according to legislation:

1-Methoxy-2-propanol, CAS-No. 107-98-2: 60-100%

2-Methoxy-1-methylethylacetat, CAS-No. 108-65-6: 5-10%

Isoalkaner, C9-C12, CAS-No. 90622-57-4: 1-5%

N-Methyl-2-pyrrolidon, CAS-No. 872-50-4: 1.3%

3. HAZARDS IDENTIFICATION

Physical and Chemical Hazards: The product is flammable.

Human health: Irritating to eyes. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. In high concentrations, vapours may be irritating to the respiratory system. The product contains components which may penetrate skin.
This product contains no ingredient listed on the NTP, OSHA or IARC carcinogen lists.

Environment: The product contains volatile organic compounds (VOC).

4. FIRST-AID MEASURES

Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

Inhalation: Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring along these instructions.

Skin contact: Remove contaminated clothing immediately and wash skin with soap and water.

Eye contact: Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring along these instructions.

Ingestion: Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. If vomiting occurs, keep head low. Immediate transport to hospital. Bring along these instructions.

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5. FIRE-FIGHTING MEASURES

Extinguishing media: Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. If possible, remove containers exposed to heat or cool with water.

Specific hazards: During fire, health hazardous gases may be formed.
The explosions limits and the flash point are stated in point 9.

Protective equipment for fire-fighters: Selection of respiratory protection for fire fighting: follow the general fire precautions indicated by the workplace.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid inhalation of vapors and spray mists. Avoid contact with skin and eyes. Avoid smoking and use of open fire. For personal protection, see point 8.

Environmental precautions: Avoid release to the environment.

Methods for cleaning up: Remove sources of ignition.
Small spillages: Absorb spillage with non-combustible, absorbing material.
Large spillages: Dam and absorb spillages with sand, earth or other non-combustible material.
Flush contaminated area with plenty of water. For waste disposal, see point 13.

7. HANDLING AND STORAGE

Safe handling advice: Observe good industrial hygiene practices. Avoid inhalation of vapors and spray mists. Avoid contact with skin and eyes.

Technical measures: Avoid smoking and use of open fire. Avoid exposure to temperatures above the flash point.

Technical precautions: Mechanical ventilation may be required.

Technical measures for safe storage: Follow rules for flammable liquids.

Storage conditions: Store in tightly closed original container in a well-ventilated place. Keep at temperatures between 40°F and 85°F. Avoid contact with oxidizing agents.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures: Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapours and spray mist.

<u>Chemical name:</u>	<u>Exposure limits:</u>	<u>Type:</u>	<u>Notes:</u>	<u>References:</u>
Propylene glycol monomethyl ether	100 ppm 369 mg/m ³	TWA		ACGIH
Gasoline	300 ppm	TWA	A3	ACGIH

Respiratory equipment: In case of inadequate ventilation use suitable respirator. Use respiratory equipment with gas filter, type A2.

Hand protection: Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. The product consists of substances for which it is not possible to suggest a common suitable glove material. Therefore, a suitable type of gloves cannot be recommended without knowing the actual usage of the product. The most suitable glove must be chosen in collaboration with the supplier of gloves, who can inform about the breakthrough time of the glove material.

Eye protection: Risk of contact: Wear goggles/face shield.

Skin protection: No special precautions.

Environmental exposure controls: No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical state:</u>	Clear liquid	<u>Odor:</u>	Characteristic	<u>pH:</u>	not relevant
<u>Flash point:</u>	90°F	<u>Boiling point:</u>	250-400 °F	<u>Auto flammability:</u>	>480 °F
<u>Explosive limits:</u>	1.5-14.0 vol.%	<u>Evaporation rate. (BuAc=100):</u>	49	<u>Vapor pressure:</u>	10 mm Hg
<u>Relative density:</u>	0.92	<u>Solubility:</u>	Organic solvents.	<u>Kinematics viscosity at 40°C:</u>	<7 mm ² /s

VOC (Volatile Organic Substances, ASTM 2369-01): 900 g/l

10. STABILITY AND REACTIVITY

Stability: Stable under normal temperature conditions.

Conditions/materials to avoid: Heating. Oxidizing agents.

Hazardous decomposition products: None in particular.

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11. TOXICOLOGICAL INFORMATION

- Inhalation: Irritating to respiratory system. Vapours may cause drowsiness and dizziness. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
LC50 (inhalation, rat): 10000 ppm/5H (RTECS) for 1-Methoxy-2-propanol.
LD50 (skin, rabbit): > 5 gm/kg (RTECS) for 2-Methoxy-1-methylethylacetate.
LCLo (inhalation, rat): 1 gm/m³ (RTECS) for N-Methyl-2-pyrrolidone.
- Skin contact: Degreasing. Repeated exposure may cause skin dryness or cracking. Contains components which may penetrate the skin.
- Eye contact: Irritating and may cause redness and pain.
- Ingestion: Irritating. May be absorbed in the body and cause dizziness, nausea and vomiting.
LD50 (oral, rat): 3914 mg/kg (RTECS) for N-Methyl-2-pyrrolidone.
LD50 (oral, rat): 8532 mg/kg (RTECS) for 2-Methoxy-1-methylethylacetate.
LDLo (oral, rat): 3739 mg/kg (RTECS) for 1-Methoxy-2-propanol.
- Specific effects: Frequent inhalation of even small concentrations may cause irritability, fatigue and memory failure and eventually permanent damage to the nervous system, including the brain. This product contains no ingredient listed on the NTP, OSHA or IARC carcinogen lists.

12. ECOLOGICAL INFORMATION

- Mobility: The product is not miscible with water and will spread on the water surface. The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.
- Degradability: The product is biodegradable, but it must not be discharged into drains without permission from the authorities.
- Ecotoxicity: The product contains a substance which is hazardous to aquatic organisms. Do not discharge into the aquatic environment.
- Bioaccumulative potential: No data available on bioaccumulation.
- Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS

Dispose of waste and residues according to agreement with local authorities. This product, if discarded, may be considered a characteristic hazardous waste under RCRA (ignitable waste, D001). Rags and the like, moistened with flammable liquids, must be discarded into designated fireproof bucket.

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14. TRANSPORT INFORMATION

UN-no: 1993
Proper shipping name: FLAMMABLE LIQUID N.O.S. (1-Methoxy-2-propanol.)

<u>Sea (IMDG):</u>		<u>Air (ICAO/IATA):</u>		<u>Land (RID/ADR):</u>	
<u>Class:</u>	3	<u>Class:</u>	3	<u>Class:</u>	3
<u>PG:</u>	III	<u>PG:</u>	III	<u>PG:</u>	III
<u>MP:</u>	No			<u>Primary risk label</u>	3
<u>EmS:</u>	F-E, S-E				
<u>Inland waterways:</u>	To be handled locally.				

15. REGULATORY INFORMATION

TSCA: All chemicals included in the product are TSCA listed.

CERCLA: Final RQ = 100 pounds (45.4 kg).

NFPA Rating: Health:2 Fire:2 Reactivity:0 Other:-

N-Methyl-2-pyrrolidone, CAS-No. 872-50-4:

SARA Section 313: Form R reporting required for 1.0% de minimis concentration.

Specific provisions: State and local regulation may apply.

National regulation: The following lists have been checked:
Threshold Limit Values (2003), ACGIH, by the American Conference on Governmental Industrial Hygienists.
The Code of Federal Regulation, Title 29, part 1910. Occupational Safety and Health Standards, Air contaminants.
U.S. Department of health and human services: 2002 - Report on Carcinogens - 10th Ed.
International Agency for Research on Cancer (IARC): IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Lyon: IARC, World Health Organization, 1972-2000.
The Code of Federal Regulation, Title 40, part 261.33. Identification and listing of hazardous waste.
The Code of Federal Regulation. Title 40, part 355.50. Emergency Planning and Notification
The Code of Federal Regulation. Title 40, part 302.4. Designation, Reportable Quantities, and Notification.
The Code of Federal Regulation. Title 40, part 68.130. Chemical Accident Prevention Provisions.
The Code of Federal Regulation. Title 40, part 372.65. Toxic Chemical Release Reporting: Community Right to Know.

16. OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

The following sections contain revisions or new statements: 3, 8, 9, 10, 11, 12.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.