

MATERIAL SAFETY DATA SHEET

Product name: CPS Screen Opener D2
Last revised date: 22-07-2002

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Print date: 24.07.2002
SDS-ID: US/1.0

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

Supplier:: Autotype Americas, Inc. 2050 Hammond Drive, Schaumburg, IL 60173-3810
Tel: 1-847-303-5900 Emergency phone no.: 1-800-424-9300

Product name: CPS SCREEN OPENER D2

Application: To remove dried ink in screen printing mesh during print run.

Containers size: 1, 5, 25 and 210 LT

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-methylethylacetate, CAS-No. 108-65-6: 1-<10%
Isoalkanes, C9-C12, CAS-No. 90622-57-4: 1-<10 %
N-Methyl-2-pyrrolidone, CAS-No. 872-50-4: 1.3%

3. HAZARDS IDENTIFICATION

Physical and Chemical Hazards: The product is flammable.

Man: Irritating to eyes. May cause allergic skin disorders in sensitive individuals. Prolonged skin contact may cause redness, irritation and dry skin. The product contains components which may penetrate skin. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. This product contains no ingredient listed on the NTP or OSHA carcinogen lists.

Environment: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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. In case of eczema or other skin disorders: Seek medical attention and bring along these instructions.
- 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. Do not induce vomiting. If vomiting occurs, keep head low. Immediate transport to hospital. Bring along these instruction.
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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:** By fire, toxic vapours may be formed (COx, NOx). 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.
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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 discharge into drains, water courses or onto the ground..
- Methods for cleaning up:** 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.
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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. Change contaminated clothing.

Technical measures: Work practice should minimise contact. 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 closed original container at temperatures between 40°F and 85°F. Avoid contact with oxidizing agents.

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/m3	TWA	-	ACGIH (2002)
Gasoline	300ppm	TWA	-	ACGIH (2002)

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

Hand protection: Risk of contact: Wear protective gloves. 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. Consult the glove supplier to find the most suitable gloves.

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

Skin protection: Wear apron or protective clothing in case of splashes.

Hygiene measures: Wash contaminated clothing before reuse.

Environmental exposure controls: No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid	Color:	Clear	Odour:	Mild
pH:	not relevant	Boiling point:	250-400 °F	Melting point:	not relevant
Flash point:	86 °F	Evaporation rate (BuAc=100):	49	Autoignition temperature:	450-570°F
Explosive properties:	0.9-9.5 vol.%	Oxidizing properties:	not relevant	Vapor pressure:	10 mm Hg
Relative density:	0.92	Solubility:	organic solvents	Viscosity:	Thin liquid

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10. STABILITY AND REACTIVITY

Stability: Stable under normal temperature conditions.
**Conditions/
materials to avoid:** Heating. Oxidizing agents.
**Hazardous
decomposition products:** None in particular.

11. TOXICOLOGICAL INFORMATION

Inhalation: In high concentrations, vapours may irritate throat and respiratory system and cause coughing.
LC50 (inhalation, rat): 10000 ppm/5H (RTECS) for 1-Methoxy-2-propanol.
LCLo (inhalation, rat): 1 gm/m3 (RTECS) for N-Methyl-2-pyrrolidone.

Skin contact: Degreasing. Repeated exposure may cause skin dryness or cracking.

Eye contact: May irritate and cause redness and pain.

Ingestion: Irritating. May be absorbed in the body and cause dizziness, nausea and vomiting.
LDLo (oral, rat): 3739 mg/kg (RTECS) for 1-Methoxy-2-propanol.
LD50 (oral, rat): 3914 mg/kg (RTECS) for N-Methyl-2-pyrrolidone.

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 partly soluble in water. May spread in the aquatic environment.
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: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Bioaccumulative
potential:** No information available.

Other adverse effects: No information available.

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-number: 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>	
Class:	3	Class:	3	Class:	3
PG:	III	PG:	III	PG:	III
MP:	No			Primary risk label	3
EmS:	3-07			Subsidiary risk label	-
MFAG:	1				
Inland waterways:	To be handled locally.				

15. REGULATORY INFORMATION

Labeling: TSCA: All chemicals included in the product are TSCA listed.
N-Methyl-2-pyrrolidone, CAS-No. 872-50-4:
SARA Section 313: Form R reporting required for 1.0% de minimis concentration.
NFPA Rating: Health: 2 Fire: 1 Reactivity: 0 Other:-

Specific provisions: State and local regulation may apply.

16. OTHER INFORMATION

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

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.