

MATERIAL SAFETY DATA SHEET

diagraph^{MSP}

Revision date: March 2, 2015
SDS# 417310

SECTION 1: IDENTIFICATION

Product Identifier: Micro-X Cartridge

Product Use: For the purpose of transferring ink onto porous substrates such as paper or paperboard products.

Chemical Family: Mixture

Supplier's name and address: Diagraph MSP
5307 Meadowland Parkway
Marion IL 62959

Telephone: 1-800-521-3047

E-mail: msds@diagraphmsp.com

Contact person: Customer Service

24 Hr. Emergency Telephone #: 800-535-5053 (US only)
+1-352-323-3500 international

SECTION 2: HAZARDS IDENTIFICATION

Classification:	Acute aquatic toxicity	Category 1	
	Chronic aquatic toxicity	Category 1	
	Serious eye damage	Category 1	
	Acute toxicity, Oral	Category 4	
	Reproductive toxicity	Category 1B	
	Skin irritation	Category 2	
	Germ cell mutagenicity	Category 2	
	Specific organ toxicity – single exposure	Category 3	Central nervous system
	Carcinogenicity	Category 1B	

Labeling:

Symbols:



Signal Word: Danger

Hazard statements:	H302	Harmful if swallowed
	H315	Causes skin irritation
	H318	Causes serious eye damage
	H336	May cause drowsiness or dizziness
	H341	Suspected of causing genetic defects
	H350	May cause cancer
	H360	May damage fertility or the unborn child
	H410	Very toxic to aquatic life with long lasting effects

Precautionary statements:

- P261 Avoid breathing dust/fume/gas/vapors/spray
P264 Wash skin thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P273 Avoid release to the environment
P281 Wear personal protective equipment as required
P301+312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+352 IF ON SKIN: Wash with plenty of soap and water
P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.
P332+313 If skin irritation occurs: Get medical attention/advice.
P391 Collect spillage
P501 Dispose of contents to an approved waste disposal plant.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS #	Wt. %	GHS Classification	Hazard Statements	Pictograms
Light paraffinic petroleum oil solvent extract	64742-05-8	15 - 25	Carcinogenicity (Cat. 1B)	H350	
Butyl benzyl phthalate	85-68-7	15 - 25	Reproductive toxicity (Cat. 1B) Acute aquatic toxicity (Cat. 1) Chronic aquatic toxicity (Cat. 1)	H360 H400 H410	
Chrysoidine monochloride	532-82-1	0.2 – 0.5	Acute toxicity, Oral (Cat. 4) Skin irritation (Cat. 2) Serious eye damage (Cat. 1) Germ cell mutagenicity (Cat. 2) Acute aquatic toxicity (Cat. 1) Chronic aquatic toxicity (Cat. 1)	H302 H315 H318 H341 H400 H410	
1,4 Butanediol	110-63-4	15 - 25	Acute toxicity, Oral (Cat. 4) Specific target organ toxicity – single exposure (Cat. 3), Central nervous system	H302 H336	
Cocamide DEA	68603-42-9	1 - 5	Skin irritation (Cat. 2) Eye irritation (Cat. 2)	H315 H319	
Diethanolamine	111-42-2	0.5 - 2	Acute toxicity, Oral (Cat. 4) Skin irritation (Cat. 2) Serious eye irritation (Cat. 2) Specific target organ toxicity – repeat exposure (Cat. 2)	H302 H315 H318 H373	

SECTION 4: FIRST AID MEASURES

Inhalation:

Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Seek immediate medical attention/advice.

Skin contact:	Immediately flush with plenty of water, while removing contaminated clothing. Wash contaminated clothing before reuse. When symptoms persist or in all cases of doubt, seek medical advice.
Eye contact:	Flush eyes with low pressure water for at least 15 minutes while holding eyelids open. When symptoms persist or in all cases of doubt, seek medical advice.
Ingestion:	Seek immediate medical attention/advice. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.
Notes for physician:	Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Suitable extinguishing media:	Dry chemical, foam, carbon dioxide and water fog
Fire hazards/conditions of flammability:	This material is not flammable.
Explosion data: Sensitivity to mechanical impact / static discharge:	Not expected to be sensitive to mechanical impact or static discharge.
Special fire-fighting procedures/equipment:	Firefighters should wear protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.
Hazardous combustion products:	Oxides of carbon and nitrogen, irritating fumes and smoke.
NFPA Rating:	Health: 2 Flammability: 1 Instability: 0 Special Hazards: 0

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions:	All persons dealing with clean-up should wear the appropriate protective equipment. Do not eat, drink or smoke while participating in clean up.
Environmental precautions:	Ensure spilled product does not enter drains, sewers, waterways or confined spaces. For large spills, dike the area to prevent spreading.
Spill response/cleanup:	Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Notify the appropriate authorities as required.
Prohibited materials:	None specific
Special spill response procedures:	In case of a transportation accident, in the United States contact CHEMTREC at 1-800-424-9300 or International at 1-703-527-3887.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:	Wear suitable protective equipment during handling. Do not ingest. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.
Conditions for safe storage:	Store in a cool, dry, well-ventilated area. Store away from incompatibles, temperature extremes and out of direct sunlight. Inspect periodically for damage or leaks.
Incompatible materials:	Strong oxidizing agents; strong reducing agents; acids
Special packaging materials:	Always keep in containers made of the same materials as the supply container.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Component	CAS No.	Value	Control Parameters	Source
Light paraffinic petroleum oil solvent extract	64742-05-8	TWA	0.2 mg/m ³	USA ACGIH Threshold Limit Values (TLV) Holly Refining and Marketing

Ventilation and engineering measures: Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

Respiratory protection: If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Confirmation of which type of respirator is most suitable for the intended application should be obtained from respiratory protection suppliers.

Skin protection: Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.

Eye / face protection: Good industrial hygiene practices should be used when handling this product including preventing eye contact and minimizing skin contact and inhalation.

Other protective equipment: As needed to prevent eye contact and minimizing skin contact and inhalation.

General hygiene considerations: Avoid breathing vapor or mist. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove and wash contaminated clothing before re-use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid
Appearance:	Flexible gel saturated with black ink
Odor:	Mild
Odor Threshold:	N/Av
Specific Gravity:	0.9
pH:	Not applicable
Boiling point:	>300 °F
Melting/Freezing point:	Not available
Coefficient of water/oil distribution:	Not available
Vapor pressure (mm Hg @ 20°C / 68°F):	Not available
Vapor density (Air = 1):	Heavier than air
Evaporation rate (n-Butyl acetate = 1):	Slower than n-Butyl acetate
Solubility in water:	Very slightly
Flash Point	>200 °F, TCC
Auto-ignition temperature	Not applicable
Lower flammable limit (% by vol)	Not applicable
Upper flammable limit (% by vol)	Not applicable
Flame Projection Length	Not available
Flashback observed	Not available

SECTION 10: STABILITY AND REACTIVITY

Chemical stability:	Stable under the recommended storage and handling conditions prescribed.
Possibility of hazardous reactions:	None are known.
Conditions to avoid:	Avoid heat and open flame.
Materials to avoid and incompatibility:	See Section 7 (Handling and Storage) for further details.
Hazardous decomposition products:	None known; refer to hazardous combustion products in Section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

Target organs: Eyes, skin, liver, thymus, bone marrow and blood

Routes of exposure:	<i>Inhalation:</i>	No
	<i>Skin absorption:</i>	YES
	<i>Eyes:</i>	No
	<i>Ingestion:</i>	No

Toxicological data: There is no available data for the mixture itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Ingredient	LD ₅₀			
	Inhalation, rat	Oral, rat	Rabbit, dermal	Behavioral
Butyl benzyl phthalate	No data available	2,330 mg/kg	>10,000 mg/kg	Altered sleep time, Somnolence
1,4 Butanediol	No data available	1.525 mg/kg	No data available	

Carcinogenic status: This product contains a component/components that has/have been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP or EPA classification.

IARC classified light paraffinic petroleum oil solvent extract as carcinogenic. Prolonged and repeated lifetime skin contact with similar oils has produced skin tumors in laboratory animals. Oral and skin exposure to similar oils has produced toxic liver, thymus, bone marrow, blood (anemia) effects and death in laboratory animals. Oral and skin exposure of pregnant animals to similar oils has injured or been lethal to the unborn.

Reproductive effects: No information found; this material has not been evaluated as a mixture.

Teratogenicity: No information found; this material has not been evaluated as a mixture.

Mutagenicity: Chrysoidine monochloride showed mutagenic effects (in vitro tests).

Epidemiology: No information found; this material has not been evaluated as a mixture.

Specific target organ toxicity – single exposure: 1,4 Butanediol: May cause drowsiness or dizziness.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: No data is available on the mixture itself.

Butyl benzyl phthalate:	Toxicity to fish:	LC ₅₀	Lepomis macrochirus	1.7 mg/l	96.0 hr
		NOEC	Oncorhynchus mykiss	0.48 mg/l	96.0 hr
	Flow through test	LC ₅₀	Pimephales promelas	2.1 mg/ml	96.0 hr
	Toxicity to aquatic invertebrates:	EC ₅₀	Daphnia magna	1.8 mg/l	48 hr
	Toxicity to algae:	EC ₅₀	Desmodesmus subspicatus	0.31 mg/l	72 hr

Mobility: No data is available on the mixture itself.

Persistence: No data is available on the mixture itself.

Butyl benzyl phthalate: Biodegradability aerobic – Exposure time 14 d 81% - Readily biodegradable

Bioaccumulation potential: No data is available on the mixture itself.

Butyl benzyl phthalate: Lepomis macrochirus (Bluegill) 21 d -0.00973 mg/l Bioconcentration Factor (BCF): 663

Other adverse environmental effects: The ecological characteristics of this mixture have not been fully investigated. No data is available on the mixture itself, but it is expected to be very toxic to aquatic life with long lasting effects.

SECTION 13: DISPOSAL CONSIDERATIONS

Methods of disposal: Dispose of in accordance with federal, provincial and local hazardous waste regulations. Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

This material is not UN / IATA regulated.

This material is not classified as ICAO/IATA-DGR Dangerous Goods.

This material is not classified as hazardous per the IMDG Code.

This material is not classified as hazardous per ADR.

This material is not classified as hazardous per the U.S. Department of Transportation (DOT).

SECTION 15: REGULATORY INFORMATION

Inventory Status: All listed ingredients appear on the Toxic Substances Control Act (TSCA) Inventory, EINECS/ELINCS, AICS, and DSL.

This material is classified as hazardous under OSHA regulations (29CFR 19410.1200). See Section 2.

SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present in this mixture.

SARA TITLE III: 311/312 Chronic Health Hazard
Acute Health Hazard

SARA TITLE III: This mixture does not contain any chemical components with known CAS numbers that exceed the Threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

TDG	Canadian Transportation of Dangerous Goods Act and Regulations
TLV	Threshold Limit Values
TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Identification System

References:

1. ACGIH, Threshold Limit Values and Biological Exposure Indices
2. International Agency for Research on Cancer Monographs
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases (Chempendium, HSDB and RTECs)
4. Material Safety Data Sheets for manufacturers
5. US EPA Title III List of Lists
6. California Proposition 65 List

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.