



SAFETY DATA SHEET

1. Identification

Product identifier Multipurpose & Oneshot Cartridges Ink
Other means of identification None.
Recommended use Marking.
Recommended restrictions None known.
Manufacturer/Importer/Supplier/Distributor Information
Company name Diagraph MSP
Address 5307 Meadowland Parkway Marion IL 62959
Telephone 1-800-521-3047
E-mail mds@diagrammsp.com
Contact person Customer Service
Emergency phone number Emergency telephone 800-535-5053 (US only)
+1-352-323-3500 International

2. Hazard(s) identification

Physical hazards Flammable liquids Category 3
Hazard hazards Serious eye damage/eye irritation Category 2
Specific target organ toxicity, single exposure Category 3 respiratory tract irritation
OSHA defined hazards Not classified.

Label elements



Signal word

Warning

Hazard statement

Flammable liquid and vapor. Causes serious eye irritation. May cause respiratory irritation.

Precautionary statement

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: 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. In case of fire: Use appropriate media to extinguish. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. None known.

Storage

Disposal

Hazard(s) not otherwise classified (HNOC)

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Diacetone alcohol	123-42-2	42 - 50
Titanium dioxide	13463-67-7	0 - 12

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US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
2-Methoxy-1-methylethyl acetate (CAS 108-65-6)	TWA	50 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation

2-Methoxy-1-methylethyl acetate (CAS 108-65-6) Can be absorbed through the skin.

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved safety goggles.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear suitable protective clothing.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Colored liquid.

Physical state Liquid.

Form Liquid.

Color Various.

Odor Characteristic.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 302 °F (150 °C)

Flash point 132.8 °F (56.0 °C)

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 1.4 % v/v

Flammability limit - upper (%) 8.1 % v/v

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 1.1 hPa (20°C/68°F)

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not soluble in water.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not applicable.

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Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Clean up in accordance with all applicable regulations. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

Environmental precautions

7. Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid contact with eyes. Avoid breathing mist or vapor. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS). Store between 35°F (2°C) and 120°F (49°C).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	PEL	3.5 mg/m ³	
Diacetone alcohol (CAS 123-42-2)	PEL	240 mg/m ³	

Titanium dioxide (CAS 13463-67-7)	PEL	50 ppm 15 mg/m ³	Total dust.
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US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m ³	Inhalable fraction.
Diacetone alcohol (CAS 123-42-2)	TWA	50 ppm	
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m ³	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper (CAS 147-14-8)	TWA	1 mg/m ³	Dust and mist.
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m ³	
Diacetone alcohol (CAS 123-42-2)	TWA	240 mg/m ³	
		50 ppm	

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Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.21 g/cm ³ (20°C/68°F)
10. Stability and reactivity	
Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, sparks and open flame. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases. Alkali metals. Halogens.
Hazardous decomposition products	Carbon oxides. Metal oxides.
11. Toxicological information	
Information on likely routes of exposure	
Inhalation	May cause irritation to the respiratory system.
Skin contact	Prolonged or repeated contact may dry skin and cause dermatitis.
Eye contact	Causes serious eye irritation.
Ingestion	May cause discomfort if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Information on toxicological effects	
Acute toxicity	May cause respiratory irritation. May cause discomfort if swallowed.
Components	Species Test Results
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper (CAS 147-14-8)	
Acute	
Dermal	
LD50	Rat > 5000 mg/kg, 24 hours
Oral	
	Rat 15000 mg/kg
2-Methoxy-1-methylethyl acetate (CAS 108-65-6)	
Acute	
Dermal	
LD50	Rabbit > 5000 mg/kg
Skin corrosion/irritation	Prolonged or repeated contact may dry skin and cause irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Inhalation of carbon black or titanium dioxide dust may cause cancer, however due to the physical form of the product, inhalation of dust is not likely.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Carbon black (CAS 1333-86-4)	2B Possibly carcinogenic to humans.
Titanium dioxide (CAS 13463-67-7)	2B Possibly carcinogenic to humans.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
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Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	No data available.
Chronic effects	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. The product contains organic solvents which may be absorbed into the body by skin contact and cause permanent damage to the nervous system, including the brain.
12. Ecological information	
Ecotoxicity	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data available.
Bioaccumulative potential	No data available.
Partition coefficient n-octanol / water (log Kow)	-0.098
Diacetone alcohol (CAS 123-42-2)	
Mobility in soil	The product is insoluble in water. Expected to have low mobility in soil.
Other adverse effects	None known.
13. Disposal considerations	
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 °F
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Dispose of waste and residues in accordance with local authority requirements.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
14. Transport information	
DOT	
UN number	UN1210
UN proper shipping name	Printing ink, flammable
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B1, B3, T2, TP1
Packaging exceptions	150
Packaging non bulk	173
Packaging bulk	242
IATA	
UN number	UN1210
UN proper shipping name	Printing ink flammable
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Environmental hazards	No
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
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IMDG	
UN number	UN1210
UN proper shipping name	PRINTING INK FLAMMABLE
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Environmental hazards	
Marine pollutant	No
EMS	F-E, S-D
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.
15. Regulatory information	
US federal regulations	This product is hazardous according to OSHA 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
	CERCLA/SARA Hazardous Substances - Not applicable.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	
Not regulated.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Not listed.	
CERCLA Hazardous Substance List (40 CFR 302.4)	
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper LISTED (CAS 147-14-8)	
Superfund Amendments and Reauthorization Act of 1986 (SARA)	
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
SARA 302 Extremely hazardous substance	
Not listed.	
SARA 311/312 Hazardous chemical	Yes
SARA 313 (TRI reporting)	
Not regulated.	
Other federal regulations	
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List	
Not regulated.	
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)	
Not regulated.	
Safe Drinking Water Act (SDWA)	Not regulated.
US state regulations	
US, Massachusetts RTK - Substance List	
Carbon black (CAS 1333-86-4)	
Diacetone alcohol (CAS 123-42-2)	
Titanium dioxide (CAS 13463-67-7)	
US, New Jersey Worker and Community Right-to-Know Act	
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper (CAS 147-14-8)	
Carbon black (CAS 1333-86-4)	
Diacetone alcohol (CAS 123-42-2)	
Titanium dioxide (CAS 13463-67-7)	
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US, Pennsylvania Worker and Community Right-to-Know Law	
Carbon black (CAS 1333-86-4)	
Diacetone alcohol (CAS 123-42-2)	
Titanium dioxide (CAS 13463-67-7)	
US, Rhode Island RTK	
Not regulated.	
US, California Proposition 65	
Not Listed.	
International inventories	
Country(s) or region	Inventory name On inventory (yes/no)*
Canada	Domestic Substances List (DSL) Yes
Canada	Non-Domestic Substances List (NDSL) No
*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(ies). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(ies).	
16. Other information, including date of preparation or last revision	
Issue date	13-April-2015
Revision date	-
Version #	01
Further information	HMIS® is a registered trade and service mark of the NPCA.
HMIS® ratings	Health: 2 Flammability: 2 Physical hazard: 0
NFPA ratings	
Disclaimer	Diagraph MSP cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.
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