

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200), Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR), and Mexico's NMX-R-019-SC-2011

Issuing Date 11-Apr-2018

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Revision Number 2

1. Identification

Product identifier

Product Name Marsh M88 Dye Marker

Other means of identification

Product Code(s) M88-BKD Black; M88-R Red; M88-BL Blue

UN/ID no UN1210

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Markers

Restrictions on use Keep away from children. Not to be used for skin.

Details of the supplier of the safety data sheet

Manufacturer Address

MSSC, LLC
926 McDonough Lake Road
Suite E
Collinsville, IL 62234

Emergency telephone number

Emergency Telephone 24-hour Emergency Phone: Infotrac 1-800-535-5053 (USA & Canada), 1-352-323-3500 (International)

2. Hazard(s) identification

Classification

Label elements

Hazard statements

This product is an article as defined by the US OSHA Hazard Communication Standard (29 CFR 1910.1200), Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR), and Mexico's NMX-R-019-SC-2011. No exposure to hazardous chemicals is expected to occur during intended product use. Misuse of the product may result in exposure to hazardous chemicals.

Other information

May be harmful if inhaled.

3. Composition/information on ingredients**Substance**

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Ethanol	64-17-5	25-100	-	-
Propylene glycol monomethyl ether	107-98-2	25-50	-	-
Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, [[3-(dimethylamino)propyl]amino]sulfonyl derivatives	68411-04-1	0-10	-	-

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures**Description of first aid measures**

General advice	Under normal conditions of use first aid is not required.
Inhalation	If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.
Skin contact	Wash skin with soap and water. Get medical attention if irritation develops and persists.
Ingestion	Not an expected route of exposure.

Most important symptoms and effects, both acute and delayed

Symptoms	None known.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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Unsuitable extinguishing media	None known.
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Specific hazards arising from the chemical The ink contained in this product is flammable but not readily ignited.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Remove all sources of ignition.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Keep away from open flames, hot surfaces and sources of ignition.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store in a well-ventilated place. Keep cool.

8. Exposure controls/personal protection

Control parameters

Exposure Limits The following exposure limits are provided for information only; exposure is not expected under normal conditions of use or storage.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethanol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³
Propylene glycol monomethyl ether 107-98-2	STEL: 100 ppm TWA: 50 ppm	(vacated) TWA: 100 ppm (vacated) TWA: 360 mg/m ³ (vacated) STEL: 150 ppm (vacated) STEL: 540 mg/m ³	TWA: 100 ppm TWA: 360 mg/m ³ STEL: 150 ppm STEL: 540 mg/m ³
Copper, [29H,31H-phthalocyaninato(2-)- N29,N30,N31,N32]-,	TWA: 1 mg/m ³ Cu dust and mist	-	IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Cu dust and

[[3-(dimethylamino)propyl]amino]sulfonyl derivatives 68411-04-1				mist
Chemical name	Alberta	British Columbia	Ontario	Quebec
Ethanol 64-17-5	TWA: 1000 ppm TWA: 1880 mg/m ³	STEL: 1000 ppm	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1880 mg/m ³
Propylene glycol monomethyl ether 107-98-2	TWA: 100 ppm TWA: 369 mg/m ³ STEL: 150 ppm STEL: 553 mg/m ³	TWA: 50 ppm STEL: 100 ppm	TWA: 50 ppm STEL: 100 ppm	TWA: 100 ppm TWA: 369 mg/m ³ STEL: 150 ppm STEL: 553 mg/m ³

Other information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection No protective equipment is needed under normal use conditions.

Hand protection No special protective equipment required.

Skin and body protection No protective equipment is needed under normal use conditions.

Respiratory protection No protective equipment is needed under normal use conditions.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state Liquid
Color Red, Blue, Black
Odor Alcohol-like
Odor threshold No information available

Property

pH No data available
Melting point / freezing point No data available
Boiling point / boiling range 78 °C / 172.4 °F
Flash point 13 °C / 55.4 °F
Evaporation rate No data available
Flammability (solid, gas) No data available
Flammability Limit in Air
Upper flammability or explosive limits No data available
Lower flammability or explosive limits No data available
Vapor pressure No data available
Vapor density No data available
Relative density No data available
Water solubility Miscible in water

Remarks • Method

None known
None known
(Liquid Ink)
(Liquid Ink)
None known
None known
None known
None known
None known
None known
None known
None known

Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available.
Oxidizing properties	No information available.
Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity	None under normal use conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	Thermal decomposition can lead to release of irritating gases and vapors

11. Toxicological information**Information on likely routes of exposure**

Inhalation	No known effect based on information supplied.
Eye contact	No known effect based on information supplied.
Skin contact	No known effect based on information supplied.
Ingestion	No known effect based on information supplied.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	None known.
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Acute toxicity

Numerical measures of toxicity
No information available

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethanol	= 7060 mg/kg (Rat)		= 124.7 mg/L (Rat) 4 h
Propylene glycol monomethyl ether	= 5000 mg/kg (Rat)	= 13 g/kg (Rabbit)	> 7559 ppm (Rat) 6 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Ethanol 64-17-5	A3	Group 1	Known	X

Legend**ACGIH (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. Ecological information

Ecotoxicity Not classified.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethanol 64-17-5	-	LC50: 12.0 - 16.0mg/L (96h, Oncorhynchus mykiss) LC50: >100mg/L (96h, Pimephales promelas) LC50: 13400 - 15100mg/L (96h, Pimephales promelas)	-	LC50: 9268 - 14221mg/L (48h, Daphnia magna) EC50: =2mg/L (48h, Daphnia magna) EC50: =10800mg/L (24h, Daphnia magna)
Propylene glycol monomethyl ether 107-98-2	-	LC50: 4600 - 10000mg/L (96h, Leuciscus idus) LC50: =20.8g/L (96h, Pimephales promelas)	-	EC50: =23300mg/L (48h, Daphnia magna)

Persistence and degradability	No information available.
Bioaccumulation	There is no data for this product.
Component Information	

Chemical name	Partition coefficient
Ethanol 64-17-5	-0.32
Propylene glycol monomethyl ether 107-98-2	-0.437

Mobility in soil No information available.

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Ethanol 64-17-5	Toxic Ignitable
Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, [[3-(dimethylamino)propyl]amino]sulfonyl derivatives 68411-04-1	Toxic

14. Transport information

DOT

UN/ID no UN1210
Proper shipping name PRINTING INK
Hazard class 3
Packing group II
Special Provisions 149, IB2, T4, TP1, TP8, 367
Description UN1210, PRINTING INK, 3, II, Limited Quantity
Emergency Response Guide Number 129

TDG

UN/ID no UN1210
Proper shipping name PRINTING INK
Hazard class 3
Packing group II
Description UN1210, PRINTING INK, 3, II, Limited Quantity

MEX

UN/ID no UN1210
Proper shipping name PRINTING INK
Hazard class 3
Special Provisions 163
Packing group II
Description UN1210, PRINTING INK, 3, II, Limited Quantity

IATA

UN number	UN1210
UN proper shipping name	Printing ink
Transport hazard class(es)	3
Packing group	II
ERG Code	3L
Description	UN1210, Printing ink, 3, II

IMDG

UN number	UN1210
UN proper shipping name	PRINTING INK
Transport hazard class(es)	3
Packing group	II
EmS-No	F-E, S-D
Special Provisions	163, 367
Description	UN1210, PRINTING INK, 3, II, (13°C C.C.), Limited Quantity

15. Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture****International Regulations**

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, [[3-(dimethylamino)propyl]amino]sulfonyl derivatives - 68411-04-1	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32] -, [[3-(dimethylamino)propyl]amino]sulfonyl derivatives 68411-04-1	-	X	-	-

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals: Ethyl alcohol is only considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage.

Chemical name	California Proposition 65
Ethanol - 64-17-5	Carcinogen Developmental

U.S. State Right-to-Know Regulations**US State Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Ethanol 64-17-5	X	X	X
Propylene glycol monomethyl ether 107-98-2	X	X	X
Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, [[3-(dimethylamino)propyl]amino]sulfonyl derivatives 68411-04-1	X	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA Health hazards 0 Flammability 3 Instability 0 Physical and chemical properties -

HMIS **Health hazards** 0 **Flammability** 3 **Physical hazards** 0 **Personal protection** X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AELG(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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Revision Note	SDS sections updated: 3. 8. 15.

Disclaimer

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 a 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.

End of Safety Data Sheet