



SAFETY DATA SHEET

Issuing Date 02-Apr-2018

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Revision Number 1

This document complies with 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.

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

GHS product identifier

Product Name M1 Fine Line Permanent Marker

Other means of identification

Product Code(s) 10581 M1 Black
10581 M1 Red

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Solvent based marker

Uses advised against Keep away from children. Not for use on skin.

Supplier's details

Supplier Address
U-Mark, Inc
102 Iowa Ave.
Belleville, IL 62220
TEL: 618-235-7500

Emergency telephone number

Emergency Telephone Number INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification

This product is not considered hazardous according to the criteria set within 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.

Label Elements

Signal Word
Not Classified

None

Physical and Health Hazards Not Otherwise Classified
Not applicable.

Precautionary Statements**Other information**

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Propylene glycol monomethyl ether	107-98-2	50-80	-	-
Ethanol	64-17-5	0-15	-	-
Benzyl alcohol	100-51-6	5-10	-	-
Methyl lactate	547-64-8	0-6	-	-
Propyl alcohol	71-23-8	0-2	-	-
Isopropyl alcohol	67-63-0	0-1	-	-

4. FIRST AID MEASURES**Description of necessary first-aid measures****General Advice**

Under normal conditions of use first aid is not required.

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 irritation persists.

Skin Contact

Wash skin with soap and water. Get medical attention if irritation develops and persists.

Inhalation

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Ingestion

Not an expected route of exposure.

Most important symptoms/effects, acute and delayed**Most Important Symptoms/Effects** None known**Indication of immediate medical attention and special treatment needed, if necessary****Notes to Physician**

Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

None

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.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Remove all sources of ignition.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological Information.

Methods and materials for containment and cleaning up

Methods for Containment None required.

Methods for Cleaning Up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE**Precautions for safe handling**

Handling Keep away from open flames, hot surfaces and sources of ignition.

Conditions for safe storage, including any incompatibilities

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

Incompatible Products None known based on information supplied.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Control parameters**

Exposure Guidelines 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
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
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 10% LEL TWA: 1000 ppm TWA: 1900 mg/m ³
Propyl alcohol 71-23-8	TWA: 100 ppm	TWA: 200 ppm TWA: 500 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 500 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 625 mg/m ³	IDLH: 800 ppm TWA: 200 ppm TWA: 500 mg/m ³ STEL: 250 ppm STEL: 625 mg/m ³
Isopropyl alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m ³	IDLH: 2000 ppm 10% LEL TWA: 980 mg/m ³ TWA: 400 ppm STEL: 500 ppm STEL: 1225 mg/m ³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls

Engineering Measures None under normal use conditions.

Individual protection measures, such as personal protective equipment

Eye/Face Protection No protective equipment is needed under normal use conditions.
Skin and Body Protection No protective equipment is needed under normal use conditions.
Respiratory Protection No protective equipment is needed under normal use conditions.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid.	Appearance	Red, Black.
Odor	Solvent.	Odor Threshold	No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
pH	No data available	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	121 °C / 249.8 °F	None known
Flash Point	25-35 °C / 77-95 °F	(Liquid Ink only)
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	11.8%	
lower flammability limit	2.7%	
Vapor Pressure	No data available	None known
Vapor Density	3.1 (air = 1)	None known
Relative Density	No data available	None known
Specific Gravity	0.9	None known
Water Solubility	Insoluble	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known

Flammable Properties Flammable.

Explosive Properties No data available

Oxidizing Properties No data available

Other information

VOC Content (%) 79-90

10. STABILITY AND REACTIVITY

Reactivity No data available.

Chemical stability Stable under recommended storage conditions.

Possibility of hazardous reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

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

Product Information

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

Numerical measures of toxicity - Product**Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Propylene glycol monomethyl ether	= 5000 mg/kg (Rat)	= 13 g/kg (Rabbit)	> 7559 ppm (Rat) 6 h
Ethanol	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
Benzyl alcohol	= 1230 mg/kg (Rat)	= 2000 mg/kg (Rabbit)	= 8.8 mg/L (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

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 and abused as an alcoholic beverage.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethanol	A3	Group 1	Known	X
Isopropyl alcohol		Group 3		X

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

OSHA: (Occupational Safety & Health Administration)

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	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Propylene glycol monomethyl ether 107-98-2		LC50 96 h: 4600 - 10000 mg/L static (Leuciscus idus) LC50 96 h: = 20.8 g/L static (Pimephales promelas)		EC50 48 h: = 23300 mg/L (Daphnia magna)
Ethanol 64-17-5		LC50 96 h: 12.0 - 16.0 mL/L static (Oncorhynchus)	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	LC50 48 h: 9268 - 14221 mg/L (Daphnia magna)

		mykiss) LC50 96 h: 13400 - 15100 mg/L flow-through (Pimephales promelas) LC50 96 h: > 100 mg/L static (Pimephales promelas)		EC50 24 h: = 10800 mg/L (Daphnia magna) EC50 48 h: = 2 mg/L Static (Daphnia magna)
Benzyl alcohol 100-51-6	EC50 3 h: = 35 mg/L (Anabaena variabilis)	LC50 96 h: = 10 mg/L static (Lepomis macrochirus) LC50 96 h: = 460 mg/L static (Pimephales promelas)	EC50 = 50 mg/L 5 min EC50 = 63.7 mg/L 15 min EC50 = 63.7 mg/L 5 min EC50 = 71.4 mg/L 30 min	EC50 48 h: = 23 mg/L (water flea)

Persistence and Degradability No information available

Bioaccumulation No information available

Chemical Name	Log Pow
Propylene glycol monomethyl ether	-0.437
Ethanol	-0.32
Benzyl alcohol	1.1
Propyl alcohol	0.34
Isopropyl alcohol	0.05

Mobility No information available

Other Adverse Effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with local regulations.

Contaminated Packaging Not Applicable

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated.

15. REGULATORY INFORMATION

International Regulations

Ozone depleting substances Not applicable

Persistent Organic Pollutants Not applicable

Hazardous Waste Not applicable

Chemical Name	Basel Convention (Hazardous Wastes)
Ethanol	Y42
Isopropyl alcohol	Y42

The Rotterdam Convention (Prior Informed Consent) Not applicable

International Convention for the Prevention of Pollution from Ships (MARPOL) Not applicable

International Inventories

TSCA Contact supplier for inventory compliance status

DSL/NDL Contact supplier for inventory compliance status

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

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.

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

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.

U.S. 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	CAS-No	California Prop. 65
Ethanol	64-17-5	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Propylene glycol monomethyl ether	X	X	X	X	X
Ethanol	X	X	X	X	
Benzyl alcohol	-	X	X	-	-
Propyl alcohol	X	X	X		X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA Health Hazard 0 Flammability 2 Instability 0 Physical and Chemical Hazards -

HMIS Health Hazard 0 Flammability 2 Physical Hazard 0 Personal Protection X

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

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General Disclaimer

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet