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Latest Revision: 10/29/2019

Revision #: 2

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 Form/Description:	Marking Pens
Product Name:	PM-92, PM-24, PM-16, PM-19, PM-05, PM-23, PM-83
Synonyms	Mighty Marker Paint Marker

Other Means of Identification

Part Number:

Colors	Black	Blue	Brown	Gold	Green	Light Blue	Light Green	Orange	Purple	Pink	Red	Silver	White	Yellow	Violet
PM-92	00192	00292	00392	00492	00592	00692	00792	00892	00992	01092	01192	01292	01392	01492	02992
PM-24	00124	00224	00324	00424	00524	00624	00724	00824	00924	01024	01124	01224	01324	01424	02924
PM-16	00116	00216	00316	00416	00516	00616	00716	00816	00916	01016	01116	01216	01316	01416	02916
PM-19	00119	00216	00319	00419	00519	00619	00719	00819	00919	01019	01119	01219	01319	01419	02919
PM-05	00501	00502	00503	00504	00505	00506	00507	00508	00509	00510	00511	00512	05013	05014	02905
PM-23	00123	00223	00323	00423	00523	00623	00723	00823	00923	01023	01123	01223	01323	01423	02923
PM-83	00183	00283	00383	00483	00583	00683	00783	00883	00983	01083	01183	01283	01383	01483	02983

Formula Code:

Black	Blue	Brown	Gold	Green	Light Blue	Light Green	Orange	Purple	Pink	Red	Silver	White	Yellow	Violet
XV-585	XV-11753	XV-12578	XV-654	XV-11724	XV-11802	XV-478	XV-12491	XV-671	XV-12081	XV-543	XV-642	XV-11619	XV-11619	XV-12574

Recommended use of the chemical and restrictions on use

Recommended Use	Marking
Uses Advised Against:	No information available

Supplier's Details

Supplier Address	Arro-Mark Company LLC. 158 West Forest Ave Englewood, New Jersey, 07631 USA Phone: (201) 567-4112 Email: Sales@arromark.com
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Emergency Telephone Number

Chemtrec	US 800-424-9300	International 703-527-3887
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2. HAZARD IDENTIFICATION

Classification

This chemical is considered hazardous according to the OSHA Hazard Communications Standard 2012 (29 CFR 1910.1200):

Flammable Liquid Category	3
Skin Corrosion/Irritation Category	2
Serious eye damage/Eye Irritation Category	2A
Acute Toxicity Inhalation Category	4
Acute Toxicity Skin Category	4
Aspiration Hazard Category	1



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Carcinogenicity Inhalation Category	2
Specific target Organ Toxicity (single Exposure) respiratory tract irritation Category	3
Specific target Organ Toxicity (repeated Exposure) Inhalation Category	2

GHS Label Elements, including precautionary statements



Signal Word: Danger

Appearance:	Opaque, varies
Physical state:	Thin viscosity liquid
Odor:	Aromatic Odor

Hazard Statements:

Code	Statement
H315	Causes skin irritation. Causes serious eye irritation.
H335	May cause respiratory irritation.
H332	Harmful if inhaled.
H312	Harmful in contact with skin.
H304	May be fatal if swallowed and enters airways.
H372	May cause damage to organs through prolonged or repeated exposure by inhalation.
H351	Suspected of causing cancer if inhaled.
H226	Flammable liquid and vapor.

Precautionary Statements:

Prevention	Response	Storage	Disposal
<p>Do not handle until all safety precautions have been read and understood.</p> <p>Obtain special instructions before use.</p> <p>Keep container tightly closed Use only in a well ventilated area.</p> <p>Do not breathe dust/vapors/fumes</p> <p>Wash face and hands and any exposed skin thoroughly after handling.</p> <p>Wear protective gloves/clothing/eye protection/face protection.</p> <p>Keep away from heat/sparks/flame hot surfaces – no smoking.</p> <p>Use explosion proof electrical/ventilating/lighting equipment</p> <p>Ground/bond container and receiving equipment.</p> <p>Use non-sparking tools.</p> <p>Take precautionary measures against static discharge.</p>	<p>If exposed or concerned: get medical attention/advice.</p> <p>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.</p> <p>If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.</p> <p>If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.</p> <p>If swallowed: Immediately call a poison center/doctor. Do not induce vomiting. In case of fire: Use CO2, dry chemical, foam or water spray to extinguish.</p>	<p>Store in a well-ventilated place. Keep cool.</p> <p>Store locked up.</p> <p>Keep container tightly closed.</p>	<p>Dispose of contents/container in approved waste disposal plant.</p>

General Advice

If exposed or concerned:	Get medical attention/advice
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ACUTE HAZARD:	At high concentration, dizziness and unconsciousness may occur.
CAUTION:	Contains xylene. Harmful or fatal if swallowed. Avoid inhalation. Direct contact may cause skin or eye irritation.

KEEP OUT OF REACH OF CHILDREN.

Fire	Use CO2, dry chemical, foam, or water spray
Spills and Leaks	Contain and collect spillage
Hazard not Otherwise Classified (HNOC)	Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS**Hazardous substance(s) or Complex Substance(s) required for disclosure**

Chemical Name	CAS -No	Weight %	Trade Secret
Xylene	1330-20-7	10-40	*
Titanium Dioxide	13463-67-7	10-40	*
Resin	Proprietary	5-40	*
Ethyl Benzene	100-41-4	1-10	*
Carbon Black	1333-86-4	1-10	*
Colorant	Proprietary	1-10	*

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

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

General Advice	In case of doubt, or when symptoms persist, seek medical attention.
Eye Contact	Immediately flush eyes with plenty of water for at least fifteen (15) minutes. Get medical attention immediately.
Skin Contact	Flush skin with plenty of water. Remove contaminated clothing. Wash skin thoroughly with soap and water or use a proprietary skin cleanser.
Inhalation:	Remove to fresh air, keep patient warm and at rest. If breathing is irregular seek medical advice. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention immediately.
Ingestion:	Seek medical attention immediately. Do not induce vomiting. Never give anything by mouth to an unconscious person.
Protection of First Aiders:	Use personal protection equipment.

Most important symptoms/effects, acute and delayed

Most important symptoms/effects	No information available
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Indication of immediate medical attention and special treatment needed, if necessary

Note to physician	Treat symptomatically
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5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Dry chemical, carbon dioxide, and regular foam. For large fires, use foam or flood with fine water spray

Unsuitable Extinguishing media

No information available



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Specific Hazards arising from the chemical

Flash Point:	70°F
Flammability Limits (% by volume):	Lower – 1.1%; Upper – 6.4%
Unusual Fire Explosion Hazards:	none

Protective Equipment and Precautions for Firefighters

Wear appropriate self-contained breathing apparatus MSHA/NIOSH (approved or equivalent) and full protective gear. Cool closed containers exposed to fire with water spray. Avoid inhalation of material or combustion by-products; stay upwind.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Personal Precautions:	Avoid breathing vapors. Evacuate personnel to safe areas. Ensure adequate ventilation.
Environmental Precautions:	Avoid release into the environment. Do not allow entrance to drains or water-courses.

Methods and materials for containment and cleaning up

Methods for Containment:	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	Contain the spillage with non-combustible absorbent materials such as sand, earth, vermiculite, and diatomaceous earth. This will soak up the product. Place in a suitable container for disposal in accordance with the waste regulations.

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

Handling	Avoid skin and eye contact. Avoid the inhalation of vapor and mist.
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Conditions for safe storage, including any incompatibilities

Storage	Keep away from open flame, hot surfaces and sources of ignition. Keep containers tightly closed. Observe label precautions. Store between 5-25° C in a dry, well ventilated place. Prevent unauthorized access.
Incompatible products	Unknown

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

Exposure Guidelines:

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Titanium Dioxide 13463-67-7	TWA 10 mg/m3	TWA 15 mg/m3 total dust Vacated TWA 5 mg/m3 total dust	IDLH 5000 mg/m3
Xylene 1330-20-7	STEL 150 ppm TWL 100 ppm	TWA 100 ppm TWA 435mg/m3 Vacated TWA 100 ppm Vacated TWA 435 mg/m3 Vacated STEL 150 ppm Vacated STEL 655 mg/m3	
Ethyl Benzene			
Carbon Black			

Appropriate engineering controls

Engineering Measures	Showers, eyewash stations, ventilation systems
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Individual protection measures, such as personal protective equipment



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Eye/Face protection	None under normal use conditions
Skin and body Protection	None under normal use conditions
Respiratory Protection	None under normal use conditions. If irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn
Hygiene Measures	Use in a well-ventilated area. When using do not eat, drink, or smoke. Provide regular cleaning of equipment, work areas and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Property	Value	Remarks/Method
Physical State:	Liquid	None Known
Appearance and Odor:	Opaque, thin viscosity liquid with aromatic odor.	None Known
Odor Threshold:	No Data	None Known
Vapor Density (AIR = 1):	Greater than one (1)	None Known
Vapor Pressure (mm-Hg @ 70°F):	No Data	None Known
Flash Point:	No Data	Tag closed cup
Specific Gravity (H2O=1) @70°F:	>1	None Known
Flammability:	No Data	None Known
Auto-ignition Temperature:	No Data	None Known
Decomposition Temperature:	No Data	None Known
Melting Point:	No Data	None Known
Freezing Point:	No Data	None Known
Boiling Point:	282 to 286°F	None Known
Relative Evaporation Rate (Butyl Acetate = 1):	Less than one (1)	None Known
Solubility in Water:	Negligible	None Known
Log Pow:	No Data	None Known
PH:	No Data	None Known
Viscosity (Kinematic):	No Data	None Known
Viscosity (Dynamic):	No Data	None Known
Explosive limits	No Data	None Known
Explosive Properties	No Data	None Known
Oxidizing Properties	No Data	None Known
Volatile Organic Compound:	705 grams per liter	None Known

Volatile Organic Compounds

Color	Formula	Percentage (% by weight)	Parts Per Gallon	g/L
Black	XV-585	65.59	5.31	636.61
Blue	XV-11753	56.04	5.40	647.38
Brown	XV-12578	40.12	3.92	470.2
Gold	XV-654	68	6.35	761.1
Green	XV-11724	58.81	5.59	666.6
Light Blue	XV-11802	51	5.31	637.4
Light Green	XV-478	57.2	5.49	657.8
Orange	XV-12491	58.9	5.62	673.0
Purple	XV-671	54.1	5.24	627.5
Pink	XV-12081	55.71	5.17	619.5
Red	XV-543	66.65	5.28	632.5
Silver	XV-642	73.19	5.71	684.1
White	XV-11619	51	5.32	637.4
Yellow	XV-11619	57.59	5.99	702.1
Violet	XV-12574	48.64	4.47	536.21

10. STABILITY AND REACTIVITY

Reactivity	No data available
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Chemical Stability	Stable under normal storage and handling conditions
Possibility of Hazardous reactions	None under normal use
Hazardous Polymerization	Will not occur
Conditions to Avoid	Heat, open flame, sparks, and sources of ignition
Incompatible Materials	Strong oxidizing and reducing agents, strong alkalis and strong acids
Hazardous Decomposition products	Carbon dioxide, carbon monoxide, smoke, soot and various oxidation by-products.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	May cause irritation of respiratory tract. May cause drowsiness and dizziness.
Eye Contact	Irritating to eyes. Causes serious eye irritation.
Skin Contact	Irritating to skin. Causes skin irritation.
Ingestion	Ingestion may cause nausea and vomiting.

Chemical	LD50 oral	LD50 Dermal	LD50 Inhalation
Xylene	3500 mg/kg rat	4350 mg/kg rabbit	29.08 mg/l rat
Titanium dioxide	1000 mg/kg rat	-	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	No information available.
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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	This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical Name	ACGIH*	IARC**	NTP***	OSHA****
Titanium dioxide		Group 2B - Possibly Carcinogenic to Humans	-	-
Carbon black	A3 - Animal Carcinogen	Group 2B - Possibly Carcinogenic to Humans	-	X
Silicon Dioxide		Group 3 - Not Classifiable as to its Carcinogenicity to Humans		
Quartz	A2 - Not classifiable as a human carcinogen.	Group 1 - ?	Known	X

* ACGIH: (American Conference of Governmental Industrial Hygienists)

** IARC: (International Agency for Research on Cancer)

*** NTP: (National Toxicology Program)

****OSHA: (Occupational Safety & Health Administration)

If X is present in OSHA column:

Reproductive Toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Chronic Toxicity	Avoid repeated exposure.
Target Organ Effects	Liver. Kidney. Respiratory system. Eyes. Skin. Central nervous system (CNS). Blood. Lungs. Lymphatic system.
Aspiration Hazard	No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity	There is no data available on the product itself
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13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods	Dispose of in accordance with all applicable local, state and federal regulations.
Contaminated Packaging	Do not re-use empty containers.









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14. TRANSPORT INFORMATION

Domestic Highway (Containers <1 Quart are ORM-D) Proper Shipping Name:	Consumer Commodity
Hazard Class/Subsidiary:	ORM-D
Label Required:	ORM-D

	(Ground) DOT	(Ground) TDG	(Ground) MEX	(Road/Train) ADR/RID	(Sea) IMDG/IMO	(Air) IATA
UN number	UN 1263	UN 1263	UN 1263	UN 1263	UN 1263	UN 1263
UN proper shipping name	Paint related material	Paint related material	Paint related material	Paint related material	Paint related material	Paint related material
Transport Hazard Class(es)						
Packing Group	III	III	III	III	III	III
Environmental Hazards	No.	No.	No.	No.	No.	No.
Additional Information	<u>Limited quantity:</u> Yes. <u>Packaging instruction</u> <u>Passenger aircraft</u> Quantity limitation: 60 L <u>Cargo aircraft</u> Quantity limitation: 220 L <u>Special provisions</u> B1, B52, IB3, T2, TP1	<u>Explosive Limit and Limited</u> <u>Quantity Index</u> 5 <u>Passenger Carrying Road or Rail Index</u> 60	<u>Special provisions:</u> 223	<u>Hazard identification number</u> 30 <u>Limited quantity</u> 5 L <u>Special provisions</u> 640E Viscous substance exemption This class 3 material can be considered non hazardous in packagings up to 450 L. Exempted according to 2.2.3.1.5 (Viscous substance exemption) Tunnel code (D/E)	<u>Emergency schedules (EmS)</u> F-E, S-E <u>Special provisions</u> 223, 955 Viscous substance exemption This class 3 material can be considered non hazardous in packagings up to 30 L. Exempted according to 2.3.2.5 (Viscous substance exemption)	<u>Passenger and Cargo Aircraft</u> <u>Quantity limitation:</u> 60 L <u>Packaging instructions:</u> 355 <u>Cargo Aircraft</u> <u>Only Quantity limitation:</u> 220 L <u>Packaging instructions:</u> 366 <u>Limited Quantities - Passenger Aircraft</u> <u>Quantity limitation:</u> 10 L <u>Packaging instructions:</u> Y344 <u>Special provisions</u> A3

Special Precautions for User:	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
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15. REGULATORY INFORMATION

TSCA INVENTORY:	The product on this SDS is not listed on the Toxic Substances Control Act Inventory. All ingredients used to manufacture this product are listed on the TSCA Inventory.
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US Regulatory Rules:

Section 313 or Title III of SARA. This product contains a chemical, which is subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations Part 372.

Titanium Dioxide	13463-67-7
Xylene	1330-20-7
Carbon Black	

Hazard categories



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Acute Health Hazard	YES
Chronic Health Hazard	YES
Fire Hazard	YES
Sudden release of Pressure Hazard	NO
Reactive Hazard	NO

State Regulation

California Proposition 65	Titanium Dioxide 13463-67-7 Listed (only in respirable form) Xylene Listed Carbon Black Listed (only in respirable form)
Massachusetts Right to know List	Xylene 1330-20-7 Listed
New Jersey Right to Know	Xylene 1330-20-7 Listed
Pennsylvania Right to Know	Xylene 1330-20-7 Listed

16. OTHER INFORMATION

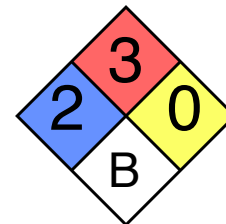
HMIS CLASSIFICATION

Health Hazard:	2
Flammability:	3
Physical Hazard:	0
PPE	Splash Goggles, Gloves, Apron, Vapor Respirator

Health Hazard: 2
Flamability: 3
Physical Hazard: 0
Personal Protection: B

NFPA CLASSIFICATION

Health Hazard	2
Flammability	3
Reactivity	0
Personal Protection	B



End of Safety Data Sheet