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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:	<b>Marking Pens</b>
Product Name:	<b>IM-85, IM-21, IM-17, IM-27, IM-22, IM-48</b>
Synonyms	<b>arroMarker® Ink Marker</b>

### Other Means of Identification

Part Number:

Colors	Black	Blue	Brown	Green	Orange	Purple	Red
IM-85	00185	00285	00385	00585	00885	00985	01185
IM-21	00121	00221	00321	00521	00821	00921	01121
IM-17	00117	00217	00317	00517	00817	00917	01117
IM-27	00127	00227	00327	00527	00827	00927	01127
IM-22	00122	00222	00322	00522	00822	00922	01122
IM-48	00148	00248	00348	00548	00848	00948	01148

Formula Code:

Black	Blue	Brown	Green	Orange	Purple	Red
XV-676	XV-12349	XV-985	XV-11127	XV-1083	XV-12381	XV-12408

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



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Specific target Organ Toxicity (repeated Exposure) Inhalation Category	2
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**GHS Label Elements, including precautionary statements**


<p><b>Signal Word: Danger</b></p>

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. Obtain special instructions before use. Keep container tightly closed Use only in a well ventilated area. Do not breathe dust/vapors/fumes Wash face and hands and any exposed skin thoroughly after handling. Wear protective gloves/clothing/eye protection/face protection. Keep away from heat/sparks/flame hot surfaces – no smoking. Use explosion proof electrical/ventilating/lighting equipment Ground/bond container and receiving equipment. Use non-sparking tools. Take precautionary measures against static discharge.</p>	<p>If exposed or concerned: get medical attention/advice. 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. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. 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. Store locked up. 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
ACUTE HAZARD:	At high concentration, dizziness and unconsciousness may occur.
CAUTION:	Keep away from children. Avoid inhalation. Direct contact may cause skin or eye irritation.



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**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**

<u>Chemical Name</u>	<u>CAS -No</u>	<u>Weight %</u>
1-methoxy-2-propanol	107-98-2	35-40
N-Methyl Pyrrolidone	872-50-4	1-5
Diacetone Alcohol	123-42-2	30-40

\* 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

**Specific Hazards arising from the chemical**

Flash Point:	89°F (TCC) ASTM D56
Flammability Limits (% by volume):	LEL 2.1 UEL 13.7 Note: Approximate
Unusual Fire Explosion Hazards:	none



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**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
TWA 50 ppm	TWA 50 ppm STEL 100 ppm		
N-Methyl Pyrrolidone	BEIS 100 mg/l		
Diacetone Alcohol	TWA: 50 ppm	50 ppm	

**Appropriate engineering controls**

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

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.



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**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):	20.8mm-Hg	None Known
Flash Point:	89°F (TCC) ASTM D56	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:	207°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 Compounds**

Color	Formula	Percentage (% by weight)	Parts Per Gallon	g/L
Black	XV-676			
Blue	XV-12349			
Brown	XV-985			
Green	XV-11127			
Orange	XV-1083			
Purple	XV-12381			
Red	XV-12408			

**10. STABILITY AND REACTIVITY**

Reactivity	No data available
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.



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**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
1-methoxy-2-propanol	6,040 mg/kg - Rat	12,900 mg/kg - Rat	7 hours - Rat
N-Methyl Pyrrolidone	4,150 mg/kg - Rat	>5,000 mg/kg - Rat	>5.1 mg/l - 4 hours - Rat
Diacetone Alcohol	4.0 g/kg - Rat	14.5 mL/kg - Rabbit	-

**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).

**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.

**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)	 3	 3	 3	 3	 3	 3
Packing Group	III	III	III	III	III	III
Environmental Hazards	No.	No.	No.	No.	No.	No.
Additional Information	Limited quantity: Yes. Packaging instruction Passenger aircraft	Explosive Limit and Limited Quantity Index 5 Passenger	Special provisions: 223	Hazard identification number 30 Limited quantity	Emergency schedules (EmS) F-E, _S-E_ Special provisions	Passenger and Cargo Aircraft Quantity limitation: 60 L Packaging



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	Quantity limitation: 60 L <u>Cargo aircraft</u> Quantity limitation: 220 L <u>Special provisions</u> B1, B52, IB3, T2, TP1	<u>Carrying Road or Rail Index</u> 60		5 L Special provisions 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)	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>instructions:</u> 355 <u>Cargo Aircraft Only</u> <u>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
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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.

1-methoxy-2-propanol	107-98-2
N-Methyl Pyrrolidone	872-50-4
Diacetone Alcohol	123-42-2
Carbon Black	1333-86-4

**Hazard categories**

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	1-methoxy-2-propanol Listed N-Methyl Pyrrolidone Listed Diacetone Alcohol Listed Carbon Black Listed
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16. OTHER INFORMATION

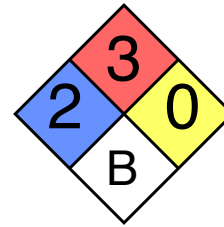
HMIS CLASSIFICATION

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