Arro-Mark
COMPANY, L.L.C.

MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER:	Arro-Mark Company, L.L.C.	24 HOUR EMERGENCY TELEPHONE	201-310-3495
ADDRESS:	158 West Forest Avenue Englewood, NJ 07631 USA	TELEPHONE NO. FOR INFORMATION	888-440-ARRO
TELEPHONE:	(201) 567-4112	DATE PREPARED:	February 27, 2013
IDENTITY:	Low Chloride Paint Marker	PRODUCT CLASS:	Alcohol based marker
ITEM NO:	MM-08, MM-38, 01308, 01338	OTHER NAMES:	Hi Purity, Stainless Steel
COLORS:	White XV-790	BATCH #:	XV12486

SECTION 2. COMPOSITION INFORMATION ON INGREDIENTS

Ingredient	CAS No.	OSHA PEL	ACGIH-TLV	Recommended	%
n-Propanol	71-23-8	TWA 200 ppm	TWA 200 ppm	No Data	45-55
Titanium Dioxide	13463-67-7	TWA 10mg/m3	TWA 10mg/m3	Nuisance dust	30-40
Rosin Based Resin	68152-57-8	TWA 15mg/m3	TWA 10mg/m3	Nuisance dust	10-20

Nuisance dust as free dust only, not as bound in paint or ink.

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW – White, thin viscosity liquid alcohol odor. Warning! Flammable liquid and vapor. Keep away from heat sparks and flames. May cause eye, skin, and respiratory tract irritation. If swallowed, do not induce vomiting. Get immediate medical attention.

The hi-purity marking pen contains 10 – 13.5 ml of liquid. The liquid contents are only released in a controlled manner when the tip of the pen is pressed. No free liquid is present under normal conditions of use. This product presents only a minimal fire and exposure hazard.

HEALTH HAZARDS

INGESTION: Ingestion of significant amounts is extremely unlikely due to product form. This product has low oral toxicity. Swallowing of the liquid contents may cause irritation, nausea, vomiting and diarrhea. The liquid contents are an aspiration hazard. If swallowed, can enter the lungs and may cause pneumonitis.
EYES: Contact with the liquid contents may be mildly irritating to eyes. May cause redness and tearing.
SKIN: Prolonged and/or repeated contact with the liquid contents may produce mild irritation and defatting with possible dermatitis.
IHALATION: Overexposure is very unlikely due to product form. High concentrations may cause nasal and respiratory conditions such as asthma. Intentional abuse may be harmful or fatal.

SECTION 4. FIRST AID MEASURES

INGESTION: Ingestion of significant amounts is extremely unlikely due to product form, however, liquid contents are an aspiration hazard. DO NOT induce vomiting. Call physician.
EYE CONTACT: Flush thoroughly with water. Get medical attention if irritation persists.
SKIN CONTACT: Wash with soap and water. If irritation develops and persists, get medical attention.
INHALATION: Inhalation overexposure is very unlikely due to product form. If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

SECTION 5. FIRE FIGHTING MEASURES

FLASH POINT: 77°F (TCC) ASTM D56
FLAMMABLE LIMITS: LEL 2.1 UEL 13.7
EXTINGUISHING MEDIA: Use water fog, dry chemical, carbon dioxide or foam.
SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should always wear positive pressure self-conatined breathing apparatus and full protective clothing.
UNUSUAL FIRE/EXPLOSION HAZARDS: The liquid contents of the pen is a flammable liquid; however, the pen contains a small amount of the liquid, and the contents are released only when pressure is applied to the tip. The product presents only a minimal fire hazard.

SECTION 6. ACCIDENTAL RELEASE MEASURES

SPILL RESPONSE: Large spills of this product are unlikely due to product form. If marking pen leaks, wipe up any free liquid, and place the pen and waste in an appropriate container for disposal. In storage where large numbers of pens may be damaged, eliminate all sources of ignition, ventilate area and collect the pens into a container for disposal. Collect any released liquid with an inert absorbent and place in a container for disposal.

SECTION 7. HANDLING AND STORAGE

HANDLING: Keep product away from open flame. Keep away from children. Replace cap on pen when not in use. Avoid contact with eyes. Avoid prolonged contact with skin.
STORAGE: Store away from heat and flame.

SECTION 8. EXPOSURE CONTROL/PERSONAL PROECTION

EYE PROTECTION: None should be needed for normal use. Avoid eye contact.
SKIN PROTECTION: None should be needed for normal use. Avoid repeated or prolonged contact with skin.
Wear impervious gloves if needed to prevent possible skin irritation.
RESPIRATORY PROTECTION: None should be needed for mormal use.
VENTILATION: No special ventilation is normally required.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Not usually necessary.
WORK/HYGENIC PRACTICES: Follow label instructions.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	207 °F	SPECIFIC GRAVITY:	<1 @ 70°F
SOLUBILITY IN WATER:	70% – 80%	MELTING POINT:	No Data

VAPOR PRESSURE:	20.8mm-Hg @ 70°F	EVAPORATION RATE:	1.3
VAPOR DENSITY:	2.1	pH:	Not applicable
APPEARANCE & ODOR:	White, thin viscosity liquid with alcohol odor.		

SECTION 10. STABILITY AND REACTIVITY

STABILITY: Stable
INCOMPATIBILITY: Strong oxidizing agents. Avoid heat and open flames.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Please refer to Section 3 for available information on potential health effects.

None of the components of this product are listed as a carcinogen or suspected carcinogen or is considered a reproductive hazard.

SECTION 12. ECOLOGICAL INFORMATION

No data is currently available. Please refer to Section 6 for information regarding accidental releases and Section 15 for regulatory reporting information.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Discard empty pen in trash. Dispose in accordance with federal, state and local regulations. The liquid contents of the pen meet the definition of hazardous waste under RCRA, D001 (ignitable).

SECTION 14. TRANSPORT INFORMATION

DOMESTIC HIGHWAY (Containers < 1 Quart are ORM-D)	
PROPER SHIPPING NAME:	Consumer Commodity
HAZARD CLASS/SUBSIDIARY HAZARD:	ORM-D
UN.NA NO.	None
PACKING GROUP:	None
LABEL REQUIRED:	ORM-D

DOMESTIC AIR SHIPMENTS (PENS)	International Air Transport
PROPER SHIPPING NAME:	Consumer Commodity
HAZARD CLASS/SUBSIDIARY HAZARD:	9
UN/NA NO.	I.D. 8000
PACKING GROUP:	III
LABEL REQUIRED:	Class 9

SECTION 15. STABILITY AND REACTIVITY

U.S. FEDERAL REGULATIONS:
CARCINOGENICITY: NTP: No IARC Monographs: No OSHA Regulations: No
OSHA: Hazardous by definition of Hazard Communications Standard (29 CFR 1910.1200)
SECTION 313 REPORTING REQUIREMENTS: This product does not contain toxic chemicals that are listed and does not require reporting under SARA Title III Sec. 313. TSCA: All compounds are exempt.

INTERNATIONAL REGULATIONS:
CANADIAN WHMIS: Not WHMIS controlled (pens) Bulk: Class B2, D2A

STATE REGULATIONS:
CALIFORNIA PROPOSITION 65: This product is not known to contain any material listed under California's Proposition 65.

SECTION 16. OTHER INFORMATION

HMIS and NFPA Ratings: 2 (Health), 3 (Flammability), 0 (Reactivity), B (Personal Protection) (4=extreme, 3=high, 2=moderate, 1=slight, 0=least) (B=gloves & safety glasses).

This information provided in the Material Safety Data Sheet has been compiled from our experience and data with similar commercially available materials and is believed to be accurate. No guarantee of accuracy is made. It is the user's responsibility to determine the suitability of this information for this information for the adoption of necessary safety precautions and disposal procedures.

Report prepared for:
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RESULTS OF ANALYSIS
SAMPLE NUMBER
White XV-790 *Felt Tip Ink, Batch # XV12486*
Lab ID: *2013-T-1599, 2012-T-1600*

Analysis	Results (ppm)	Requirements (ppm)
Total Halogens:	.....	**250 maximum**
Bromine	<19 ppm	100 maximum
Chlorine	64 ppm	100 maximum
Fluorine	<10 ppm	100 maximum
Iodine	<6.0 ppm	100 maximum
Lead	<4.51 ppm	25 maximum
Sulfur	<10 ppm	250 maximum
Low Melting Point Elements:	.....	***300 maximum***
Sodium	86.4 ppm	100 maximum
Boron	<9.01 ppm	100 maximum
Phosphorus	26 ppm	100 maximum
Cadmium	<4.51 ppm	100 maximum
Antimony	<4.51 ppm	100 maximum
Bismuth	<4.51 ppm	100 maximum
Mercury	<0.027 ppm	100 maximum
Zinc	<4.51 ppm	100 maximum
Tin	<9.01 ppm	100 maximum
Tellurium	<4.51 ppm	100 maximum
Selenium	<4.51 ppm	100 maximum
Silver	<4.51 ppm	100 maximum
Thallium	<4.51 ppm	100 maximum
Copper	<4.51 ppm	100 maximum

Meets GE Specification # D50TF8
Signatures:
Published by: tony.pickett
• *Physical signatures are on file.*
• *"Published By" signature indicates authorized release of data.*
• *Analytical Method on file.*

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Presented this 25th day of September 2013.

President & CEO
For the Accreditation Council
Certificate Number 2777.01
Valid to July 31, 2015

For the tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.