RMA TECHNOLOGIES

MSDS
RMA 110-110F

NOTICE

This notice and the enclosed Material Safety Data Sheet (MSDS) are provided to assist you in the handling, processing and distribution of your product. We believe our materials are articles as defined in OSHA 29 CFR 1910.1200 "Hazard Communication Standard". We consider this product to be safe under traditional industry processing conditions.

The information contained herein was developed from our supplier MSDS sheets, NTIS Annual Report on Carcinogens, Sax's Handbook, "Dangerous Properties of Industrial Chemicals", NIOSH registry of Toxic Effects of Chemical Substances, U.S. Dept. of Health National Toxicology Program, American Conference of Industrial Hygienists TLV for Chemical Substances in the work Environment.

We recognize that you may not be the person in your organization who most needs this information. If not, please direct it to the personnel who are responsible.

We urge that you familiarize yourself with the enclosed MSDS. Also, that you provide instructions to your employees, agents, contractors, customers or others who may handle this product.

We value your business and want to be sure you have our current product safety information. If you need additional copies, at any time, or have any questions concerning the information, please let us know.

Ronald Mark Associates, Inc.
PO Box 776
1227 Central Avenue
Hillside, NJ 07205
908-558-0011

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MATERIAL SAFETY DATA SHEET

Section 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION
MATERIAL NAME (TRADE NAME): RMA 110-110F

PRODUCT TYPE: PVC-PVA COPOLYMER
APPLICATION: VINYL CHLORIDE HOMOPOLYMER

MANUFACTURER/SUPPLIER INFORMATION
MSDS prepared by:
Ronald Mark Associates, Inc
Hillside, New Jersey 07205
Revision: June 2013

Emergency Phone Number:
908-558-0011

For additional health, safety or regulatory information, call 908-558-0011.

Section 2: COMPOSITION, INFORMATION ON INGREDIENTS
The ingredients listed below have been associated with one or more immediate and/or delayed (*) health hazards. Risk of damage and effects depends upon duration and level of exposure. BEFORE USING, HANDLING, OR EXPOSURE TO THESE INGREDIENTS, READ AND UNDERSTAND THE MSDS.

	% by weight
75-01-4 *Vinyl Chloride	<0.01
108-05-4 *Vinyl Acetate	0.1-0.99

Section 3: HAZARDS IDENTIFICATION

3.1 Emergency Overview
Appearance White Powder
Will Burn

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HMIS RATING

HEALTH	=1 (Slight)
FLAMMABILITY	=1 (Slight)
REACTIVITY	=0 (Minimal)
CHRONIC	=*

3.2: Potential Health Effects

INGESTION:	No hazards known to Ronald Mark Associates, Inc.
INHALATION:	Not expected to be harmful under normal conditions of use. However, if allowed to become airborne, may cause irritation of nose, throat and lungs.
SKIN:	May cause irritation on prolonged or repeated contact.
EYES:	May cause irritation on prolonged or repeated contact.

Delayed Hazards

Vinyl Chloride 75-01-4

CANCER HAZARD. Can cause cancer. Vinyl chloride has been identified as an OSHA cancer-suspect agent (29 CFR 190.1017), and ACGIH confirmed human carcinogen, and an NTP and IARC human carcinogen.

Vinyl Acetate 108-05-4

POSSIBLE CANCER HAZARD. May cause cancer based on animal data. This material has been classified by IARC as an animal carcinogen (group 2B) this material is not listed by NTP nor regulated by OSHA as a carcinogen. Vinyl acetate vapors have been shown to cause tumors of the respiratory tract of laboratory animals in lifetime inhalation studies at high exposure levels (600 ppm).

Section 4: FIRST AID MEASURES

INGESTION:	If accidentally swallowed, dilute by drinking large quantities of water. Immediately contact poison control center or hospital emergency room for any other additional treatment direction.
INHALATION:	Remove to fresh air.
SKIN:	In case of irritation, flush with water.

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EYES:	Immediatly flush eyes with plenty of Water. Call a physician if irritation persists.

Section 5: FIRE FIGHTING MEASURES
Will burn. In case of fire, use water spray, dry chemical, foam or CO2. Use water to keep fire-exposed containers cool.

Section 6: ACCIDENTAL RELEASE MEASURES
Sweep (scoop) up and remove to chemical disposal area. Prevent entry into natural bodies of water.

Section 7: HANDLING AND STORAGE

7.1: Handling
Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing. Wash thoroughly after handling.

INHALATION:	Avoid prolonged or repeated breathing of dust or vapor.
SKIN:	Avoid prolonged or repeated contact with skin and clothing.
EYES:	Avoid prolonged or repeated contact with eyes.

7.2: Storage
Keep container closed. Store in a cool, dry place

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1: Exposure Controls
If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and airflow patterns should be provided to keep contaminant concentration levels below acceptable criteria.

8.2: Personal Protection
Where air contaminants can exceed acceptable criteria, use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA laws and regulations or other applicable standards or guidelines, including ANSI standards regarding respiratory protection.

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8.3: Exposure Guidelines

Vinyl Chloride	75-01-4
ACGIH TLV:	1 ppm (2.6 mg/m3) TWA, A1-See Appendix A
OSHA PEL:	1 ppm TWA, 5 ppm 15-minute STEL
OTHER: OSHA PEL:	CANCER-SUSPECT AGENT, 29CFR1910.1017

Vinyl Acetate	108-05-4
ACGIH TLV:	10 ppm (35 mg/m3) TWA; 15 ppm (53 mg/m3) STEL, A3- See appendix A

OSHA PEL;: REMANDED PEL: 10 ppm (30 mg/m3) TWA; 20 ppm (60 mg/m3) STEL
OSHA 1989 PEL remanded but in effect in some states

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White powder
Residual Vinyl Acetate	Typical range 0.07-0.3% (See section 16)
Residual Vinyl chloride	Typical concentration 0.005%
Boiling Point, °F	Not applicable
Vapor Pressure @ 20’ C	0
Vapor Density (Air=1)	Not applicable
Evaporation Rate (But. Acet. =1)	Not applicable
Freezing Point	Not applicable
Odor	Bland
pH determination	Not applicable
Solubility in Water	Not soluble

Section 10: STABILITY AND REACTIVITY

Normally stable as defined in NFPA 704-12 (4-3.1)
Decomposition products may include:
Hydrogen chloride, CO< CO2 and small amounts of aromatic and aliphatic hydrocarbons
Hazardous polymerization: Will not occur

Section 11: TOXICOLOGICAL INFORMATION

See Section 3 Hazards Identification Information

Vinyl Chloride	75-01-4
LC50:	Not available

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LD50:	orl-rat=500 mg/kg (Sax)
Vinyl Acetate	108-05-4
LC50:	Not available
LD50:	orl-rat=2.92 g/kg (Merck)

Section 12: ECOLOGICAL INFORMATION
Ecotoxicity:

Acute and Long-term Toxicity to Fish, Plants, Birds and Animals: There are no known cases of acute or chronic toxicity associated with PVC Homopolymer resin.

Environmental Fate:

Persistence and Degradation: PVC Homopolymer resin and its products are inert in land-fill. Leaching of additives may occur under favorable conditions only.

Bioaccumulation/Bioconcentration: Solid PVC Homopolymer resin and its products are not known to bioaccumulate or bioconcentrate.

Soil Mobility: No data are available on soil mobility of PVC co-polymer or its products, but it is expected to be highly immobile due to its solidity and inert chemical characteristics.

Physical/chemical Priorities:

Hydrolytic and Photolytic Stability: PVC Homopolymer is not reactive with water or light under normal ambient conditions, although discoloration may occur with exposure to light unless stabilizers are used in manufacture.

Section 13: DISPOSAL CONSIDERATION
Dispose of according to local, state/provincial, and federal requirements.

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Section 14: TRANSPORT INFORMATION

14.1 U.S. Department of Transportation (DOT)
The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.
Non- regulated.

14.2 Canadian Transportation of Dangerous Goods (TDG)
Non- regulated.

Section 15: REGULATORY INFORMATION (SELECTED REGULATION)

15.1 U.S. Federal Regulations

OSHA Hazard Communication Standard 29CFR1910.1200

This material presents possible health hazards as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 “Hazard Communication” Standard.

SARA Title III: Section 311/312

Delayed health hazard

SARA Title III Section 313 and 40 CFR Part 372

This product contains the following toxic chemical (s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and Subpart C-Supplier Notification Requirement of 40CFR Part 372.
Vinyl Acetate 108-05-4 0.30%

TSCA Section 8 (b) Inventory

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by Ronald Mark Associates, Inc..

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15.2 Canadian Regulations

Workplace Hazardous Materials Information System (WHMIS)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by CPR.

CLASS D, DIV 2A
Canadian Environmental Protection Act (CEPA)

All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

National Pollutant Release Inventory (NPRI)

This product contains the following chemical (s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16 (1), National Pollutant Release Inventory.

None required.

15.3 State Regulations

New Jersey Worker and Community RTK Act (NJSA 34:5A-1 et seq.)

The listing of a chemical does not necessarily indicate it is hazardous.

Vinyl Chloride-Vinyl Acetate Copolymer 9003-22-9

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Section 16: OTHER INFORMATION
Typical total vinyl acetate concentrations have been measured at about 0.3%. When the copolymer resin is heated to 175 C for 20 minutes, simulating commercial conversions, only about 0.07% vinyl acetate is found as emissions.

Users Responsibility
The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS), require that the information contained on these sheets be made available to your workers, Education and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

Disclaimer
SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specification and the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed.

In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

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