

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 that 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

MATERIAL SAFETY DATA SHEET

Section 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL NAME (TRADE NAME): RMA 160

CHEMICAL NAME: POLYVINYL CHLORIDE RESIN, PVC SUSPENSION GRADES
CHEMICAL FAMILY: 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

Prepared: April 19973
Revision: June 2013

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

Section 2: INFORMATION ON INGREDIENTS

The basic product is a homogeneous white powdered polyvinyl chloride resin. Only trace quantities of ingredients such as suspending agent, buffer, catalyst fragments, heavy metals and moisture used in the preparation of product may remain. The CAS number is 9002-86-2.

The product contains residual vinyl chloride monomer, a cancer suspect agent (refer to Section 5 for specific information).

DESCRIPTION: RMA 160**Section 3: PHYSICAL DATA**

| | |
|--|--|
| BOILING POINT: | Not Applicable |
| MELTING POINT: | Degrades @ 250 ° F – 300 ° F |
| SOLUBILITY IN WATER: | Insoluble |
| VAPOR PRESSURE (mm Hg): | Not applicable |
| VAPOR DENSITY: | No data |
| % VOLATILES BY VOLUME | 0.5% maximum |
| PH: | Not applicable |
| SPECIFIC GRAVITY (H ₂ O=1): | 1.30 – 1.40 |
| APPEARANCE/ODOR: | White, solid free-flowing powder/odor of plastic |

Section 4: FIRE AND EXPLOSION DATA

| | |
|-----------------------|----------------|
| FLASH POINT: | Not applicable |
| FLAMMABLE LIMITS (%): | Not applicable |

SPECIAL FIREFIGHTING PROCEDURES:

Special firefighting procedures require a self-contained air breathing apparatus such as the Scott Air Pak.

FIRE AND EXPLOSION HAZARD:

PVC homopolymer resins are self-extinguishing plastic material. They will burn in the presence of other materials, which support combustion and will generate hydrogen chloride, benzene, water, carbon monoxide, carbon dioxide and smoke

Section 5: HEALTH HAZARD INFORMATION/FIRST AID

PVC Homopolymer Resin contains residual (less than 10 ppm) vinyl chloride monomer (VCM), which has been determined to be a cancer suspect agent by the Occupational Safety and Health Administration (OSHA). The present product specification level of less than 10 ppm free vinyl chloride monomer.

Section 6: ACCIDENTAL RELEASE MEASURES

Sweep (scoop) up and remove to chemical disposal area. Prevent entry into natural bodies of water.

DESCRIPTION: RMA 160**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.

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

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

DESCRIPTION: RMA 160**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 |
| LD50: | orl-rat=500 mg/kg (Sax) |
| Vinyl Acetate | 108-05-4 |
| LC50: | Not available |
| LD50: | orl-rat=2.92 g/kg (Merck) |

DESCRIPTION: RMA 160

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.

DESCRIPTION: RMA 160**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..

DESCRIPTION: RMA 160**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 Hoomopolymer

DESCRIPTION: RMA 160**Section 16: OTHER INFORMATION****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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