

VAMAC® ESX 398

Version 2.0

Revision Date 07/25/2017

Ref. 130000148420

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	VAMAC® ESX 398
Product Use	:	Polymer
Restrictions on use	:	For manufacturing and research use only
Manufacturer/Supplier	:	Celanese Sales U.S. Ltd. 222 West Las Colinas Boulevard Suite 900N Irving, TX 75039
Telephone	:	1-800-441-7515 (outside the U.S. +1 972-443-4000 E-mail address: HazCom@celanese.com)
E-mail address	:	1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency	:	Domestic NA: 800-424-9300 International, CALL +1 703-527-3887 (collect calls)

SECTION 2. HAZARDS IDENTIFICATION

Not classified as a hazardous substance or mixture according to the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard 2012.

Other hazards

During processing fumes may evolve irritating the eyes, nose and throat., Exposure may result in reddening, tears and itching of the eyes and soreness in the nose and throat, together with coughing., Exposure to off gases may cause dermatitis (reddening of the skin)., Irritation

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not contain any components that require disclosure according to OSHA Hazard Communication Standard 2012.

VAMAC® ESX 398

Version 2.0

Revision Date 07/25/2017

Ref. 130000148420

SECTION 4. FIRST AID MEASURES

General advice	: No applicable data available.
Inhalation	: Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. Get medical attention. Call a physician. If not breathing, give artificial respiration.
Skin contact	: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Cool skin rapidly with cold water after contact with molten material. Do not attempt to remove material from the skin. Obtain medical treatment for thermal burn.
Eye contact	: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.
Ingestion	: Not a probable route of exposure. However, in case of accidental ingestion, call a physician.
Most important symptoms/effects, acute and delayed	: No applicable data available.
Protection of first-aiders	: No applicable data available.
Notes to physician	: No applicable data available.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Water, Foam, Dry chemical, Carbon dioxide (CO2)
Unsuitable extinguishing media	: No applicable data available.
Specific hazards	: Hazardous combustion products Carbon dioxide (CO2) hydrocarbon oxidation products Alcohols Ketones Aldehydes Esters carboxylic acids Oxides of phosphorus Acrolein, Phosphonic acid
Special protective equipment for firefighters	: Wear self-contained breathing apparatus and protective suit.

VAMAC® ESX 398

Version 2.0

Revision Date 07/25/2017

Ref. 130000148420

Further information : Evacuate personnel and keep upwind of fire. The solid polymer can only be burned with difficulty.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel) : No applicable data available.
Environmental precautions : Do not discharge to streams, ponds, lakes or sewers.
Spill Cleanup : Shovel or sweep up.
Accidental Release Measures : No applicable data available.

SECTION 7. HANDLING AND STORAGE

Handling (Personnel) : When opening containers, avoid breathing vapours that may be emanating. Open container only in well-ventilated area. Do not breathe vapours or fumes that may be evolved during processing. Before using, read the product bulletin.
Handling (Physical Aspects) : No applicable data available.
Dust explosion class : No applicable data available.
Storage : Keep containers tightly closed in a cool, well-ventilated place. Storage of multiple pallets in unventilated area may cause acrylate concentrations to exceed specified limits.
Storage period : No applicable data available.
Storage temperature : No applicable data available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls : When hot processing this material, use local and/or general exhaust ventilation to maintain the concentration of vapors and fumes below exposure limits. Local exhaust ventilation is preferred. See Bulletin "Proper Use of Local Exhaust Ventilation During Processing of Plastics". Use sufficient ventilation to keep employee exposure below recommended limits.

VAMAC® ESX 398

Version 2.0

Revision Date 07/25/2017

Ref. 130000148420

Personal protective equipment

Respiratory protection : A respiratory protection program that meets country requirements must be followed whenever workplace conditions warrant respirator use. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.
Consult the OSHA respiratory protection information located at 29CFR 1910.134.

Hand protection : Material: Protective gloves

Eye protection : Wear safety glasses with side shields. Wear tightly fitting chemical splash goggles and face shield when possibility exists for eye and face contact due to splattering or splashing of molten material.

Skin and body protection : Where there is potential for skin contact, have available and wear as appropriate, impervious gloves, apron, pants, jacket, hood and boots. If there is a potential for contact with hot/molten material wear heat resistant clothing and footwear.

Exposure Guidelines**Exposure Limit Values**

This product does not contain any exposure limits that require disclosure according to OSHA Hazard Communication Standard 2012.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Physical state : solid
Form : bales
Color : clear, to, light yellow, translucent

Odor : acrylic-like

Odor threshold : 0.0048 - 20 ppm
Methyl acrylate

pH : No applicable data available.

Melting point/range : No applicable data available.

VAMAC® ESX 398

Version 2.0

Revision Date 07/25/2017

Ref. 130000148420

Boiling point/boiling range : No applicable data available.

Flash point : ca.212.5 °C (1,016 hPa)
closed cup
Method: Setaflash closed cup - SCC

Evaporation rate : No applicable data available.

Flammability (solid, gas) : No applicable data available.

Upper explosion limit : No applicable data available.

Lower explosion limit : No applicable data available.

Vapour Pressure : No applicable data available.

Vapour density : No applicable data available.

Density : > 1 g/cm³

Specific gravity (Relative density) : No applicable data available.

Water solubility : insoluble

Solubility(ies) : No applicable data available.

Partition coefficient: n-octanol/water : No applicable data available.

Auto-ignition temperature : No applicable data available.

Decomposition temperature : >282 °C

Thermal decomposition of the resin accelerates above temperature listed.

Decomposition can occur below the recommended processing temperature limit.

Decomposition is a function of both processing temperature and time at that temperature.

Viscosity, kinematic : No applicable data available.

VAMAC® ESX 398

Version 2.0

Revision Date 07/25/2017

Ref. 130000148420

Viscosity, dynamic : No applicable data available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable at normal ambient temperature and pressure.
Chemical stability	: Stable at normal ambient temperature and pressure.
Possibility of hazardous reactions	: Polymerization will not occur. Large molten masses may give off hazardous gases. Water quenching is good practice.
Conditions to avoid	: Temperature > 282 °C (> 540 °F) Decomposes on heating. At temperatures above the "conditions to avoid" temperature, thermal decomposition of the resin accelerates. Decomposition can occur below the recommended processing temperature limit. Decomposition is a function of both processing temperature and time at that temperature.
Incompatible materials	: Strong acids and, Oxidizing agents
Hazardous decomposition products	: Hazardous decomposition products may include: Aldehydes, Ketones, Esters, Alcohols, Acrolein, Carboxylic acid, Oxides of phosphorus, Organic acids, Acrylic acid, Maleic anhydride, Formaldehyde, acetaldehydes, Phosphonic acid

SECTION 11. TOXICOLOGICAL INFORMATION

VAMAC® ESX 398

Further information : No data is available on the product itself.

Carcinogenicity

The carcinogenicity classifications for this product and/or its ingredients have been determined according to HazCom 2012, Appendix A.6. The classifications may differ from those listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or those found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition).

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

VAMAC® ESX 398

Version 2.0

Revision Date 07/25/2017

Ref. 130000148420

SECTION 12. ECOLOGICAL INFORMATION

Additional ecological information : There is no data available for this product. Toxicity is expected to be low based on insolubility in water.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods - Product : Preferred options for disposal are recycling, incineration with energy recovery, and landfill. The high fuel value of this product makes incineration very desirable for material that cannot be recycled. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

Contaminated packaging : No applicable data available.

SECTION 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION

TSCA : In compliance with TSCA Inventory requirements for commercial purposes.

SARA 313 Regulated Chemical(s) : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

PA Right to Know Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances):
None known.

VAMAC® ESX 398

Version 2.0

Revision Date 07/25/2017

Ref. 130000148420

NJ Right to Know
Regulated Chemical(s) : Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): None known.

California Prop. 65 : WARNING! This product contains a chemical or chemicals known to the State of California to cause cancer.
WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

SECTION 16. OTHER INFORMATION

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

Revision Date : 07/25/2017

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Significant change from previous version is denoted with a double bar.