

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME	ELVACITE® 4400
Product Description	Polymer based on Methyl methacrylate, n-Butyl methacrylate, Hydroxyethyl methacrylate and Methacrylic acid This data sheet covers the following grades: ELVACITE® 4400
CAS No.	Proprietary
Recommended uses and restrictions on use	Manufacture of coatings, inks and adhesives.
Manufacturer	Lucite International, Inc., 7275 Goodlett Farms Parkway, Cordova, TN 38016-4909 Phone: 1-800-4-LUCITE msdsinfo@lucite.com
Emergency Phone No.	1-800-424-9300 (Transport Emergency) 1-877-886-2143 (Medical Emergency)

2. HAZARDS IDENTIFICATION

Hazard classification	Combustible dust
Signal word	Warning
Hazard statement(s)	May form combustible dust concentrations in air.
Other hazards	Low toxicity under normal conditions of handling and use.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical identity of the substance	Polymer based on Methyl methacrylate, n-Butyl methacrylate, Hydroxyethyl methacrylate and Methacrylic acid
CAS No.	Proprietary

4. FIRST AID MEASURES

Description of first aid measures	
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Skin Contact	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention.
Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	Do not induce vomiting. Rinse mouth. Obtain medical attention if ill effects occur.
Most important symptoms and effects, both acute and delayed	Not applicable.
Indication of any immediate medical attention and special treatment needed	None necessary.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water spray, foam, dry powder or CO ₂ .
Unsuitable Extinguishing Media	Do not use water jet.

Special hazards arising from the substance or mixture

Combustible but not readily ignited. By analogy with similar materials, the product may decompose if heated to temperatures above 392°F (200°C). Combustion or thermal decomposition will evolve toxic, irritant and flammable vapors.

Special protective equipment and precautions for fire fighters

A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up

Caution - spillages may be slippery. Sweep up and shovel into waste drums or plastic bags. Wash the spillage area with water.

7. HANDLING AND STORAGE

HANDLING

Product as supplied: Avoid contact with eyes. Avoid prolonged skin contact. Unlikely to represent a dust hazard under normal handling conditions.

Process Hazards

The product may be suitable for a wide range of industrial applications and therefore it is impossible to make detailed recommendations regarding all process hazards. Thermal processing requires adequate ventilation to remove any monomer decomposition products, and use of inert atmosphere may be required in some processes to safely decompose the resin when it is used as a binder. Any thermal processing must consider the time-temperature decomposition of the resin. If the product is to be used in applications for which the hazards are not fully understood it is recommended to consult the supplier before use.

STORAGE

Acrylic polymers are supplied in either bags or bulk containers. Keep containers in a clean, cool and dry area away from heat sources. Natural ventilation is adequate.

Storage Temperature

Ambient.

Incompatible materials:

None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Substance	CAS No.	OSHA PEL TWA	ACGIH TWA	ACGIH STEL	Company Std. TWA	Company Std. STEL
Particulates (Total dust) (Respirable dust)		15 mg/m ³ 5 mg/m ³	Not established.			
The following values apply to substances which may be evolved during thermal processing.						
Methyl methacrylate	80-62-6	100 ppm 410 mg/m ³	50 ppm (205 mg/m ³)	100 ppm (410 mg/m ³) (SEN;A4)	50 ppm	100 ppm
n-Butyl methacrylate	97-88-1	Not established.	Not established.		50 ppm	100 ppm
Methacrylic acid	79-41-4	50 ppm	50 ppm			

Appropriate engineering controls

Do not eat, drink or smoke at the work place. Provide adequate ventilation, including appropriate local extraction, to ensure that the occupational exposure limit is not exceeded. Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection



Wear eye/face protection.
Safety spectacles/goggles/full face shield.

Skin protection



Not normally required.

Respiratory protection



A suitable dust mask or dust respirator with filter type P may be appropriate. In the unlikely event of formation of particularly high levels of dust a self contained breathing apparatus may be appropriate.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Beads.
Color.	White.
Odour	Typically methacrylate.
pH (Value)	Not available.
Flash point (°C)	300
Flammable Limits	Not applicable.
Vapour pressure (Pascal)	Not applicable.
Vapor Density (Air=1)	Not applicable.
Solubility (Water)	Negligible.
Solubility (Other)	Not available.
Partition coefficient (n-Octanol/water)	Not applicable.
Viscosity (mPa. s)	Not available.
Explosive Properties	Not applicable.
Oxidising Properties	Not applicable.

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Hazardous Reactions	None known.
Conditions to avoid	Keep away from heat.
Materials to avoid	None known.
Hazardous Decomposition Product(s)	Methyl methacrylate, n-Butyl methacrylate, Methacrylic acid, Carbon dioxide, Carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Acute toxicity	
Ingestion	Low oral toxicity.
Inhalation	Unlikely to be hazardous by inhalation.
Skin Contact	Unlikely to cause skin irritation. Contains greater than 0.1% residual (Methyl methacrylate, n-Butyl methacrylate). During normal handling this will not constitute a hazard. If the polymer matrix is destroyed e.g. when the product is dissolved in organic solvent, chemical residues will be released from the polymer matrix. Under these conditions, they may produce an allergic reaction in persons already sensitised.
Eye Contact	Dust may cause irritation.
Repeated exposure toxicity	
Chronic exposure	This type of material has been in use for many years with no evidence of adverse effects.

CHEMICALS	IARC	NTP	OSHA	ACGIH
NONE				

12. ECOLOGICAL INFORMATION

Ecotoxicity	The product is predicted to have low toxicity to aquatic organisms.
Persistence and degradability	The product is non-biodegradable in soil. There is no evidence of degradation in soil and water.
Bioaccumulative potential	The product has low potential for bioaccumulation.
Mobility	The product is predicted to have low mobility in soil.

13. DISPOSAL CONSIDERATIONS

The waste is considered to be non hazardous. Clean scrap may be reprocessed. Certain packages are returnable. Please consult your local office for further details. Ensure that all packaging is disposed of safely.

Disposal methods	May be disposed of by landfill in accordance with local regulations. Incineration may be used to recover energy value.
------------------	--

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)	Not Classified as Dangerous for Transport.
UN No.	Not applicable.
Proper Shipping Name	Not applicable.

Class	Not applicable.
Packing group	Not applicable.
Environmental hazards	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

15. REGULATORY INFORMATION

SARA 302 - Extremely Hazardous Substances	NONE
SARA 313 - Toxic Chemicals	NONE

US State Regulations

California	SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM None known. SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER None known.
------------	--

Canadian Regulations

WHMIS Classification	Not classified.
----------------------	-----------------

NFPA Rating

Health	0
Flammability	1
Reactivity	0

NPCA-HMIS Rating

Health	0
Flammability	1
Reactivity	0

16. OTHER INFORMATION

The following sections contain revisions or new statements:

Date of preparation: 5 -September- 2013

Inventory Status

European Union	To the best of our knowledge all chemicals in this product comply with REACH regulations.
United States (TSCA)	Listed in TSCA
Canada (DSL/NDSL)	Not listed in DSL/NDSL
Japan (ENCS)	Not listed in ENCS
Philippines (PICCS)	Not listed in PICCS
Australia (AICS)	Not listed in AICS
South Korea (KECI)	Listed in KECI
China (IECSC)	Not listed in IECSC

LEGEND

Note: Not all of the following are necessarily contained in this Safety Data Sheet:

LTEL: Long Term Exposure Limit

STEL: Short Term Exposure Limit

TWA: Time Weighted Average

PEL: Permissible Exposure Levels

OSHA: Occupational Safety and Health Administration

SARA: Superfund Amendments and Reauthorisation Act

WHMIS: Worker Hazardous Materials Information System

ELVACITE® is the Registered Trade Mark of companies within the Lucite International Limited Group of companies.

MEDICAL USE: CAUTION: DO NOT USE IN MEDICAL APPLICATIONS INVOLVING IMPLANTATION IN THE HUMAN BODY.

Lucite International Inc. has performed no clinical testing on the use of this product in any medical application. Lucite International Inc. has no data to support the use of this product in any medical application. This product was not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. Lucite International Inc. has neither sought, nor received, approval from any regulatory agency for the use of this product in implantation in the human body or in contact with internal body fluids or tissues.

It is the responsibility of the end-product manufacturer to identify all market and use-specific regulations and to ensure compliance with these regulations.

Subject to the exclusions and limitations set out below the information contained in this publication or as otherwise supplied to the User is believed to be accurate and has been given in good faith. It is for the User to use the information contained in this publication or as otherwise supplied to the User with care and satisfy itself of the suitability of the product for their intended use and the applicability of the advice given. Except to the extent that exclusion is prevented by applicable law Lucite International Inc. gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded and accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.