EarthGuard Low HAP High Perf. Filled Tooling Resin - MSDS

Polycryl Corporation

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SECTION I – Product and Company Identification

Manufacturer **Polycryl Corporation**
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Product Name EarthGuard Low HAP Filled Tooling Resin **CAS NO.** NA

Product Codes EG-3000Plus

SECTION II – Composition/Information on Ingredients

COMPONENTS	CAS NO	AMOUNT
H.P.Vinylester Resin Solution	Mixture	15% - 25%
Unsat. Polyester Resin	Mixture	15% - 25%
Styrene	000100-42-5	20% - 23.5%
Acrylic Oligomer	Proprietary	8% -10%
Silicon Dioxide	007631-86-9	0.2% - 0.5%
Silicon Dioxide TR	67762-90-7	0.5% - 1.50%
Alpha Methyl Styrene	98-83-9	0% - 1%
Alunimum Trihydrate	21645-51-2	40% - 50%

EMERGENCY OVERVIEW
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Pigmented viscous liquid. Pungent styrene odor. Flammable liquid and vapor. Vapors may travel a long distance; ignition and/or flash back can occur. Harmful or fatal if swallowed. Can enter lungs and cause damage to body systems. May cause eye irritation. May cause skin irritation. May be harmful if inhaled. May cause anesthetic effects. Highly toxic to fish and/or other aquatic organisms. Isolate area. Keep upwind of spill. Stay out of low areas. This product is normally used with an initiator. There are additional hazards and precautions that should be taken with the use of these resins and associated products. Consult their MSDS's for specific guidance.

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SECTION III – Hazards Identification

OSHA Status
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Routes of Exposure
Skin contact, Eye contact, Inhalation, Ingestion

Skin Absorption
Prolonged contact may cause slight skin irritation with local redness. Material may stick to skin causing irritation upon removal. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Repeated contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.

Eye Contact
May cause moderate eye irritation. May cause slight corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness. Vapor may cause lacrimation (tears).

Ingestion Low toxicity if swallowed. Aspiration into the lungs may occur during ingestion or vomiting, resulting in rapid absorption and injury to other body systems
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Inhalation
Vapor concentrations are attainable which could be hazardous on single exposure. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

SECTION IV – First Aid Procedures for Exposure

Skin
Wash skin with plenty of water.

Eyes
Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion
Do not induce vomiting. Call a physician and/or transport to emergency facility immediately

Inhalation
Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility. NOTE TO PHYSICIAN: Because rapid absorption may occur through the lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Maintain adequate ventilation and oxygenation of the patient. Consider additional thorough skin wash with mild non-abrasive soap and plenty of warm water for at least 15 minutes. If burn is present, treat as an thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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SECTION V – FIRE DATA and FIRE Fighting Measures

Flammable Limits
LFL 0.9% (based on styrene), UFL: 6.8% (based on styrene)
LFL 2.1% (based on methylmethacrylate), UFL: 12.5% (based on methylmethacrylate)

Flash Point
90°F, METHOD USED: ASTM-D93, PMCC (based on styrene)
47°F METHOD USED:SETA (based on Methyl methacrylate)

Extinguishing Media
Water fog or fine spray, carbon dioxide fire extinguishers, dry chemical fire extinguishers, foam. Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire. General purpose synthetic
foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function. Water fog, applied gently may be used as a blanket for fire extinguishment.

Media to be avoided
To minimize the spreading of an active fire, do not use direct water stream until danger of re-ignition has passed.

Special Fire Fighting Procedures
Keep people away. Isolate fire area and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Fight fire from protected location or safe distance. Consider use of unmanned hose holder or monitor nozzles. Do not use direct water stream. May spread fire. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment. Contain fire water
run-off if possible. Fire water run-off, if not contained may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this MSDS.

Unusual Fire and Explosion Hazards
Container may rupture from polymerization. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.
Electrically bond and ground all equipment. Flammable mixtures of this product are readily ignited, even by static discharge. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Flammable mixtures may exist within the vapor space of containers at room temperature. Flammable concentrations of vapor can accumulate at temperatures above flash point, see flash point. Dense smoke is emitted when burned without sufficient oxygen.

Auto Ignition Temperature
914F (490C)based on styrene

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Combustion Products
The original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to phenolic compounds, carbon monoxide, carbon dioxide.

SECTION VI – Accidental Spill Procedures

Personnel Precautions
Avoid breathing vapors.

Environmental Precautions
Remove all sources of ignition (flames, hot surfaces, and electrical, static, or frictional sparks). Ventilate area. Contain and remove with inert absorbent and non-sparking tools.

Methods for Containment
Absorb with an inert material and place in an appropriate waste disposal container.

SECTION VII – Handling and Storage

Conditions to Avoid
Elevated temperatures. Improper addition of promoter and/or catalyst. Avoid direct contact of MEKP catalyst with accelerator. If an accelerator such as cobalt drier is to be added, mix this accelerator with base material before adding catalyst.

Incompatability (Materials to Avoid)
Oxidizers, reducing agents, mild steel, peroxides, strong acids, bases, UV light, or any source of free radicals.

SECTION VIII – Exposure Controls, Personal Protection, & Exposure Guidelines

Engineering Controls
Provide general and/or local exhaust ventilation to control airborne levels below the exposure guideline. Use only with adequate ventilation.

Eye/Face Protection
Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection Description
Wear clean, long-sleeved, body-covering clothing. Use gloves chemically resistant to this material. When prolonged or frequently repeated contact could occur, use chemically protective clothing resistant to this material. Selection of specific items such as face shield, gloves, boots, apron, or full-body suit will depend on operation.

Respiratory Protection
Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use an approved air-purifying or positive pressure supplied-air respirator depending on the potential airborne concentration. For emergency and other conditions where the exposure guideline may be exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure airline with auxiliary self-container air supply.

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EXPOSURE GUIDELINE(S): Styrene monomer: The Styrenics Industry, supports a 50 ppm TWA, 100 ppm STEL, exposure limit in accord with a voluntary compliance program proposed by industry and accepted by OSHA in March, 1996. The ACGIH TLV is 20 ppm TWA, 40 ppm STEL. ACGIH classifies as A4. (OSHA continues to list the PEL in the Z-2 Table as 100 ppm TWA, 200ppm Ceiling, with a maximum acceptable concentration of 600 ppm for 5 minutes in any 3 hours). The AIHA recommends a maximum exposure to trimethylolpropane triacrylate of 1 mg/m3 8 hour TWA.

General Hygiene Considerations
Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

SECTION IX – Physical and Chemical Properties

Appearance	Pigmented viscous liquid
Solubility in Water	Insoluble
Vapor Density	3.94 (Based on Styrene)
Melting Point	NA
Specific Gravity (Water=1)	1.020-1.060
Vapor Pressure (mm Hg)	4.5 @ 20°C (based on styrene) 35 @ 20°C (based on methylmethacrylate)
Boiling Point	294F, 146C (based on styrene)
Reactivity with water	None
Odor	Pungent styrene
Percent Volatile	22 – 24.5%

SECTION X – Stability and Reactivity

Chemical stability
Stable under recommended storage conditions.
Elevated temperatures can cause hazardous polymerization.
Maintain inhibitor and dissolved oxygen level. Do not purge containers of this material with nitrogen. Polymerization can be catalyzed by: free radical initiators, sunlight, ultraviolet light. Uninhibited monomer vapors can polymerize and plug relief devices.

Conditions to avoid
Avoid temperatures above 50C (122F). Exposure to elevated temperatures can cause product to decompose. Avoid static discharge. Do not blanket or purge with an inert gas to avoid depleting the oxygen concentration. Avoid direct sunlight or ultraviolet sources.

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Special decomposition products
Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: carbon monoxide, carbon dioxide, phenolics.

Avoid contact with
Oxidizing materials, acids, caustic potash, caustic soda, metal halides. Avoid unintended contact with peroxides. Avoid contact with absorbent materials such as clay base absorbents.

SECTION XI – Toxicological Information

Acute Toxicity
Contains styrene, which, in animals has been reported to cause effects on the following organs: central nervous system, kidney, liver and respiratory tract. Lung effects have been observed in mice following repeated exposure to styrene. Styrene is reported to have caused hearing loss in laboratory animals upon exposure to high concentrations (>800 ppm); however, the relevance of this to humans is unknown. Some studies in humans allege that repeated exposure to styrene may result in minor, subclinical decreases in the ability to discriminate between colors

Chronic Effects / Carcinogenicity
This mixture contains component(s) which are listed as potential carcinogens for hazard communication purposes under OSHA Standard 29 CFR Part 1910.1200. Components listed by IARC: styrene. An increased incidence of Lung tumors was observed in mice from a recent inhalation study on styrene. The relevance of this finding to humans is uncertain since data from other long-term animal studies and from epidemiology studies of workers exposed to styrene do not provide a basis to conclude that styrene is carcinogenic.

Teretology (Birth Defects)
In laboratory animals, styrene did not produce birth defects, but was toxic to the fetus at exposure concentrations having an adverse effect on the mother.

Reproductive Effects:
Contains component(s) which did not interfere with reproduction in animal studies. The component(s) is/are styrene.

SECTION XII – Ecological Information

Ecotoxicity
Toxic to aquatic organisms. Should not be released to sewage system, or other bodies of water at concentrations above limits established in regulations or permits.

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SECTION XIII – Disposal Considerations
DISPOSAL METHOD: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulation. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

SECTION XIV – Transporation Information
DOT Shipping Name UN 1866 Resub Solution; 3; lll

SECTION XV – Regulatory Information
This section does not reference all applicable regulatory compliance lists.

Styrene
CERCLA Reportable Quantity 1000 lbs

Cobalt
This product can contain low levels of cobalt containing compounds but the level is below the reportable level as required by 40 CFR Part 372 or SARA Title III.

Propositon 65 Warning
This product contains a chemical(s) known to the State of California to cause cancer, birth defects, and/or reproductive harm.

Canadian Regulatory Information
This product contains more than 1% of a known, controlled ingredient regulated under WHMIS. Styrene is classified under WHMIS as Classification D2B.

Ingredient(s) – Canadian Regulatory Information
Styrene monomer WHMIS - Ingredient Disclosure List

SARA HAZARD CATEGORY
An immediate health hazard
A delayed health hazard
A fire hazard
A reactive hazard

Hazardous Air Pollutants (HAPS)
40% Maximum

SECTION XVI – Additional Information
DISCLAIMER OF LIABILITY
The information herein is given in good faith, but no warranty, express or implied, is made. Consult Polycry Corporation for further information. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product. This MSDS was prepared and is to be used only for these products. If the product is used as a component in another product, this MSDS information may not be applicable.