MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP S-3/77

Section I

MANUFACTURER'S NAME REICHHOLD CHEMICALS, INC.

STREET ADDRESS 525 North Broadway CITY, STATE, AND ZIP CODE White Plains, New York 10603

EMERGENCY TELEPHONE NO. (914) 682-5700

PRODUCT CLASS Unsaturated Polyester in Monomer MANUFACTURERS CODE IDENTIFICATION POLYLITE® 32-033

TRADE NAME POLYLITE® Polyester resin

Section II – HAZARDOUS INGREDIENTS

INGREDIENT	PERCENT	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE
Unsaturated Polyester	> 50	--			N.A.
Styrene Monomer	< 50	100		1.1	< 5

Styrene Hazards: See MCA Chemical Safety Data Sheet SD-37

Section III – PHYSICAL DATA

BOILING RANGE Above 145°C VAPOR DENSITY ☒ HEAVIER ☐ LIGHTER, THAN AIR

EVAPORATION RATE ☐ FASTER ☒ SLOWER, THAN ETHER PERCENT VOLATILE BY VOLUME < 50 WEIGHT PER GALLON 9.1-9.5 lbs.

Section IV – FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY DOT Red Label FLASH POINT 89°F (Setaflash) LEL 1.1

EXTINGUISHING MEDIA

Foam, carbon dioxide or dry chemical.
Per National Fire Protection Association, Class B extinguisher.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Styrene will polymerize readily at elevated temperatures such as fire conditions. If this occurs in a closed container, there is a possibility of violent rupture.

SPECIAL FIRE FIGHTING PROCEDURES

None - fight like a fuel oil fire.

Section V — HEALTH HAZARD DATA

THRESHHOLD LIMIT VALUE Styrene 100 ppm (See Section II)

EFFECTS OF OVEREXPOSURE Styrene @ 400 ppm or in strong concentration is irritating to all parts of the respiratory tract and eyes. May be fatal @ 10,000 ppm. Somewhat anaesthetic.

(N.B.) Styrene vapor generation of polyester resins will rarely exceed 200 ppm.

EMERGENCY AND FIRST AID PROCEDURES Remove victim from exposure to well-ventilated area - make comfortably warm but not hot - use oxygen or artificial respiration as required. In case of eye contact, flush promptly with copious amounts of water for 15 minutes and seek medical attention.

Section VI — REACTIVITY DATA

STABILITY ☐ UNSTABLE ☒ STABLE CONDITIONS TO AVOID

INCOMPATABILITY (Materials to avoid) Strong acids, peroxides and other oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS Carbon monoxide and dioxide, low molecular weight hydrocarbons and organic acids.

HAZARDOUS POLYMERIZATION ☒ MAY OCCUR ☐ WILL NOT OCCUR

CONDITIONS TO AVOID. Sunlight, open flames, contamination and prolonged storage above 100°F.

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove saturated clothing promptly and wash affected areas with soap and water. Remove all sources of ignition (flames, heat and sparking). Ventilate area. Use protective measures outlined in Section VIII.

WASTE DISPOSAL METHOD Absorb with inert materials such as vermiculite or sand and place in closed container for disposal as solid waste. Wash area well with trisodium phosphate and water. Disposal must conform to local, state and federal regulations.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION Up to 100 ppm: None
100 ppm and above: U. S. Bureau of Mines approved air line mask or self-contained breathing apparatus.

VENTILATION Provide general dilution or local exhaust ventilation to comply with Sections II and IV. (Styrene vapor is heavier than air). Use explosion-proof motors.

PROTECTIVE GLOVES Neoprene or non-soluble plastic.

EYE PROTECTION Use safety eye wear designed to protect against splash or liquids.

OTHER PROTECTIVE EQUIPMENT Safety showers and eye wash stations should be available.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

OTHER PRECAUTIONS Avoid improper addition of promoter and/or catalyst. Consult product bulletin. A promoter (metal organic such as cobalt, or aniline type) and catalyst (organic peroxide type) used with this product should always be mixed separately with the product and should never be mixed directly together.

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TECHNICAL BULLETIN

POLYLITE® 32-033 POLYESTER RESIN

TYPE OF POLYESTER

Resilient, low viscosity, clear casting resin, promoted for room temperature gel and cure using MEK Peroxide.

MAJOR USES AND FEATURES

1. For decorative casting applications where extreme clarity and freedom from color in cured form are necessary.
2. For encapsulation of biological and botanical specimens.
3. Resistance to cracking of hard and metallic embeddments, particularly those having sharp edges or corners.
4. Resistant to thermal cracking over a wide temperature range.

SPECIFICATIONS OF LIQUID POLYLITE® 32-033

Viscosity, Brookfield @ 25°C	275-425 cps.
Color, Uncatalyzed	Light blue-green
Density, kg/liter	1.11 - 1.30
Weight Per Gallon	9.3 - 9.5 lbs.
Storage Stability @ 75°F, dark	6 months min.
Gel Time @ 25°C, 1% SUPEROX® 700	20-25 minutes

TYPICAL PROPERTIES OF CURED UNFILLED CASTINGS OF POLYLITE 32-033

Barcol Hardness	37
Tensile Strength, PSI	9,000
Flexural Strength, PSI	14,000
Compressive Strength, PSI	21,000
Heat Distortion Point	50°C

REICHHOLD CHEMICALS, INC. • RCI BUILDING, WHITE PLAINS, N.Y. 10602

APPLICATION

Gel time of POLYLITE 32-033 can be adjusted by varying the concentration of SUPEROX 700 used for catalyzation. The effect of this variation is shown in the following table:

% SUPEROX 700	Gel Time @ 25°C, Minutes
1.00	20-25
0.75	25-30
0.50	40-45

Catalyst levels below 0.50% are not recommended due to the necessity of having sufficient peroxide free radicals to effectively remove promoter coloration and providing adequate cure.
If longer gel/cure requirements are necessary, it is suggested that resin temperature be lowered to extend this property.

As the mass of unfilled resin increases in casting dimensions, exotherm development of the system may exceed prudent levels. Care should be taken to correct for this possibility by catalyst adjustment, temperature reduction or multiple casting pours.

Each user must determine the suitability of this product in their particular mode of operation. An RCI representative will be happy to assist in the proper selection of all RCI products available for your use.

Resin should be stored in closed containers away from sources of heat and sunlight to provide maximum uncatalyzed stability.

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