



POLYGEM
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307FR LITE II™

LIGHTWEIGHT TROWELABLE SCULPTING EPOXY

E-84 CLASS A FLAME-RATED & PUBLIC SPACE SAFE



TB - TECHNICAL BULLETIN

PRODUCT DESCRIPTION

307FR LITE II™ is a lightweight, two-component trowelable epoxy system that is E-84 Class A Flame-Rated and public space safe- It has an easy-to-mix, "paste-like" consistency that is commonly used for general fabrication, coating, sculpting, patching, filling, joining, and repair. It contains no VOC's and is solvent-free. 307FR LITE II cures to a hard, strong, durable material suitable for interior and exterior spaces and themed environments.

WORKING FEATURES & BENEFITS

307FR LITE II is easy to mix and apply by hand or with a trowel or spatula.

EASY TO MANIPULATE

- **Can be Smoothed With Water**
- **Can be Sculpted, Stamped, or Textured**
- **Bonds to Itself and Many Other Substrates**
- **Will Not Melt or Dissolve Foam Surfaces**
- **Easy to Clean Up With Just Water**

USE WITH POLYGEM THICKENING AGENT

POLYGEM THICKENING AGENT allows you to customize your working consistency from a "paste" to a thicker "dough" or "clay" material to best fit your preferred working style and project needs.

THICKENING AGENT makes **307FR LITE II** easier to manipulate, sculpt, & stamp. It also minimizes sag when applying the material to vertical surfaces.

SUBSTRATES

307FR LITE II bonds to properly prepared materials including metals, wood, fiberglass, concrete, PVC, acrylic, plastics, Rigid foams, lathing and glass.

NOTE: 307FR LITE II DOES NOT BOND to silicone, polyethylene, polypropylene, or plastic wrap.

PACKAGING

307FR LITE II is available in a **2** or **10 Gallon Kit** and also in a **2 Drum Kit**.

PERFORMANCE BENEFITS OF CURED MATERIAL

- **ASTM E-84 Class A Flame Rated**
- **No VOC's**
- **Chemically Inert**
- **No Solvents**
- **Halogen-Free**
- **Contains No Heavy Metals**
- **Cures to a Hard, Durable, Lightweight Material**
- **Easy to Sand, Shape, and Machine**
- **Paintable, Stainable, and Pigmentable**
- **Weather Resistant to Heat & Moisture**
- **Solvent Resistant**
- **Not Suitable for Aquatic Environments**
(For aquatic environments use 307 Lite)

UNIT SIZE & COVERAGE RATE @ ¼ in. (6.35 mm)

2 Gallons 21.80 lb (9.89 kg)	11 square ft. (1.02 m²)
10 Gallons 114.36 lb (51.87 kg)	55 square ft. (5.10 m²)
2 Drums 1,206 lb (547.03 kg)	550 square ft. (60.3 m²)

TECHNICAL SPECIFICATIONS

TYPICAL PROPERTIES | All values measured after 7 days at 73 °F (23 °C).

Mix Ratio: 1A:1B by volume | **Mixed Viscosity:** Paste

Working Time: .

Spreadable: 1 Hr. - **Stampable:** 2 Hrs. - **Sculptable:** 3 Hrs.

Cure Time: 16 Hours | **Shore Hardness:** 77D | **Shelf Life:** 36 Mos.*

Color: Light Brown/Tan **Color may vary.**

PART A: Brown- **PART B:** Off-White

Heat Deflection Temp: 115 °F (46 °C) **ASTM D648**

Compressive Strength: 11,500 psi **ASTM D695**

Tensile Strength: 2,100 psi **ASTM D638**

Specific Volume: 19.10 cu. in./lb. **ASTM D1475**

Properties are based on the mixed material without Polygem Thickener.

* From date of manufacture when stored at 73 °F (23 °C) in unopened containers.

Manufactured By Polygem | 5600 Lower Macungie Rd. | Macungie, PA 181062 | 630-231-5600 | Made in USA

061725PA | Data sheets are subject to change without notice.

307FR LITE II™

LIGHTWEIGHT TROWELABLE SCULPTING EPOXY THAT IS E-84 CLASS A FLAME-RATED

PROJECT PREPARATION

BEST PRACTICE: CONDUCT A SMALL-SCALE TEST.

Before mixing substantial amounts of epoxy, always conduct a small-scale test to ensure the planned material & process yields desired results.

- 1. Storage** – Store and use product at room temperature 73 °F (23 °C) **DO NOT USE** below 60 °F (16 °C).
- 2. Safety** – Use in a well-ventilated area (“room size” ventilation). If you use any epoxy system regularly, wearing a NIOSH-approved respirator is advised. Wear safety glasses, long sleeves, and rubber gloves to minimize skin contact. Wear nitrile or vinyl gloves only.
- 3. Plan Your Project & Rate of Coverage** – Recommended minimum thickness is ¼ in (6.35 mm).
- 4. Prepare Your Substrate/Surface** –
If applying to smooth surfaces such as plastics, glass, etc., surface may be roughened with sandpaper (120 grit) to aid adhesion. Clean surface thoroughly to ensure it is free of dust, oils, release agents, etc.

For Metal Substrates– Abrade the surface to a white metal finish, then wipe down and clean it thoroughly. Apply a fiberglass sheet saturated in a laminating epoxy to the surface. When possible wrap the sheet around the substrate to ensure a good mechanical bond before applying **307FR LITE II**.
- 5. Measure & Mix**– After pre-mixing Parts A and B, measure out equal parts 1A:1B by volume. Combine and mix material thoroughly until “streak-free”. Large volumes can be mixed on a flat surface using two trowels. **DO NOT** mix more than can be applied within the working time of 1 hour.
- 6. When using with Polygem’s Thickening Agent** – Thoroughly coat gloves and working area with **Thickening Agent** to prevent sticking. Knead Parts A & B together while folding small amounts of powder into the mixture. The amount of powder to add depends on the desired working consistency. Continue to fold mixture repeatedly until it is streak-free.
- 7. Application:** Trowel or spread by gloved hand onto your substrate. **DO NOT** apply to a surface that is less than 60 °F (16 °C).

WORKING TIME - MATERIAL IS MASS SENSITIVE.

More Mass = Less Time to Work.

Apply and spread quickly to achieve the maximum working time. Temperatures above 73 °F (23 °C) will reduce working time.



SCULPT | STAMP | TEXTURE

SCULPT: Sculpt using a gloved hand and/or tools to shape material to your desired form. Water may be used to minimize material build up on gloves and/or tools.

STAMP: When stamping, we recommend using a flexible rubber stamp. Using a spray bottle filled with water, lightly dampen your stamp, and press it firmly into the material. Once the impression has been made, peel the stamp away carefully. There should be minimal transfer of material onto the stamp.

NOTE: Thickened 307FR LITE II will need to cure for awhile before it can be stamped. Thickening the material with Polygem’s Thickening Agent will allow stamping sooner with less of a wait time.

TEXTURE: Smooth Glass-Like Surface

Apply clear plastic food wrap to the uncured epoxy and smooth it to eliminate all wrinkles. Leave the wrap in place until the epoxy cures. Once cured, the plastic wrap can be peeled away easily; leaving a high gloss finish.

Rough, Distressed or Patterned Surface

A gloved hand or tools may be used to roughen or distress the surface. Small amounts of water applied to the tools or surface before & during texturing will minimize material build up.

FINISHING, PAINTING, AND CLEAN UP

Finishing – Cured material may be finished either by hand or with power tools. For best results & to minimize build up of material, use power tools at lower speeds.

NOTE: Wearing a dust mask is recommended when machining this material.

Painting – Cured **307FR LITE II** can be painted with any water or solvent based paint system available from your local distributor. Follow paint manufacturer’s instructions.

Sealing – For outdoor or post-finish applications, 307 LITE **must be sealed** with a commercially available, UV-resistant 2K clear coat. Apply in accordance with the clear coat manufacturer’s instructions to ensure long-term performance and environmental resistance.

Clean Up – Uncured **307FR LITE II** can be cleaned up easily with just water.

Cleaning – When cleaning cured **307FR LITE II** wipe with a mild solvent followed by a water rinse. **DO NOT** allow water or solvent to pool on the surface.



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