

PolyArmor® 490-572

HIGH ELONGATION POLYUREA

Product Data

Polyarmor® 490-572 high elongation polyurea has excellent physical properties, 100% solids, is chemical resistant, abrasion resistant, tough, two part spray coating giving rapid and consistent cure in applications ranging from -20° F to over 300 ° F. "490-572" is specifically designed to be used in demanding installations requiring a flexible coating with very high elongation and moderate chemical resistance. Consult Visuron for guidance. Applications can normally be reopened to traffic and service in minutes. More demanding use should be allowed to cure for at least eight hours.

Polyarmor® 490-572 is well suited as a concrete sealing material. It is a good sealant for metal roofing. It is very fast cure and permits extremely short down times with no VOC's and extremely low odor.

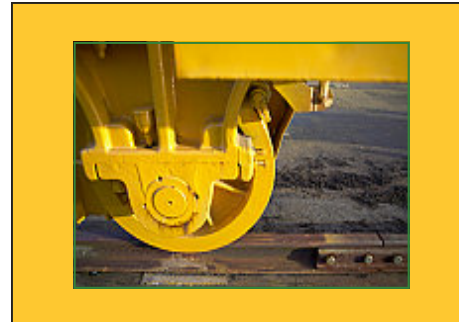
- ◆ Good chemical resistance
- ◆ 100% solids, no VOC's
- ◆ 800 % elongation
- ◆ Excellent thermal stability
- ◆ Shock resistant
- ◆ Abrasion resistant
- ◆ Low perm rate
- ◆ Cures -20° F to 300° F
- ◆ Return to service in 60 min.
- ◆ High strength
- ◆ Bridges gaps up to 1/16 inch wide



Typical Uses

All applications where flexible monolithic membrane is required.

- ◆ Concrete sealer
- ◆ Secondary Containment Areas
- ◆ Tank Linings
- ◆ Waster Water Linings
- ◆ Digester Linings
- ◆ Mechanical Rooms
- ◆ Pulp & Paper Mills
- ◆ Fertilizer Plants



Typical Application Properties

POLYARMOR® 490-572 is a plural-component, fast cure, spray polyurea system. Equal volumes of parts "A" and "B" are proportioned and dispensed through high pressure, high temperature spray equipment. Consult Visuron for correct machine conditions.

- ◆ Gel time: 8-9 sec.
- ◆ Tack-free time: 30 sec.
- ◆ Open to traffic: 60 min.
- ◆ Open to more demanding exposure: 8 hr.
- ◆ Bond Strength (ASTM D-4541) (primed substrate)
- ◆ Concrete: 500-700 psi (concrete failure)
- ◆ Steel: exceed 1400 psi
- ◆ Wood: 200-250 psi (wood failure)

COLOR AVAILABILITY: black, light gray, dark gray and beige

"Custom colors available at additional charge"



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► Typical Physical Properties

Typical Physical Properties	Test Method	Value
Tensile Strength (psi)	D-638	1800
Elongation (%)	D-638	800
Tear Strength (pli)	D-624	325
Shore Hardness ("A" scale)	D-2240	80-85
Moisture Vapor Transmission	E-96	(perm. In.) 0.025
Abrasion Resistance (wt. Loss-mg.) H-18, 1000g, 1000 rev.	D-6040	280
Flash Point, components (°F)		>200
Coefficient of Thermal Expansion (in/in/oC)		approx. 4×10^{-5}
Gel Time / Tack Free		8-9 sec. / 30 sec.
Flame Spread	E-108	Class A (Comparable to UL 790)
Flexibility Test Gardner impact, in.-lbs. (on 1/32" steel panels) Direct and Indirect	D-2794	Pass

► Installation/Surface Preparation

Concrete — Do not apply in wet conditions. Concrete must be structurally sound, free of large voids, honeycombs, bug holes and delaminations. Concrete must have at least a 3000 psi minimum compressive strength. An effective vapor barrier must be present for below grade and slab-on-grade projects. Do not apply over unvented steel pan decks or sandwich slab membranes. Maintain all expansion joints. Abrasive blast or etch to remove surface laitance. Emulsifying soaked in contaminants may be required. Consult Visuron Technologies. High degree of cleanliness is necessary. Surface must be dry and sound.

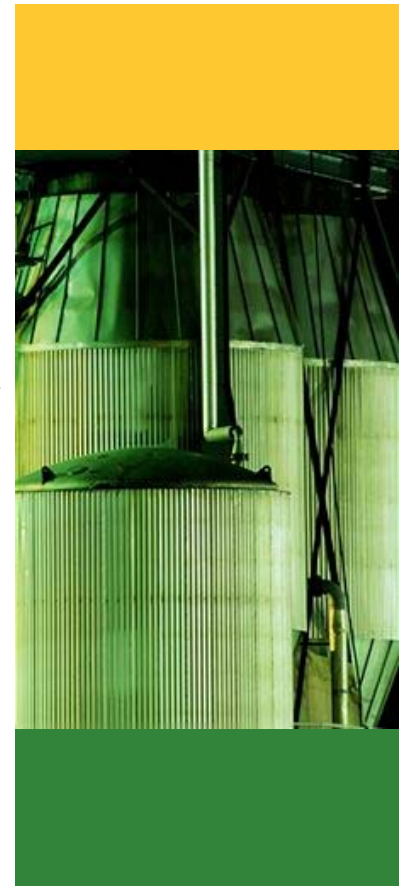
Substrate Repairs — All spalls and delaminations must be rehabilitated per ICRI and ACI standards. Rout and seal all cracks over 1/16" with appropriate joint sealants. Pre-fill all large bug holes.

Steel General — Do not apply in wet conditions. Any dissolved salts must be removed to current NACE specifications. Steel must be cleaned and blasted to SSPC-SP-10 or NACE 2 "Near White Metal" with a 4 mil anchor profile for immersion service, 3 mil for less severe conditions. All welds must be ground smooth. Immersion service requires a primer.

General Surface Preparation — Mechanical methods such as sandblasting is preferred. Any weak or damaged existing coatings must be removed Sound existing coatings can possibly be overcoated following abrading and application of Visuron Lap Prep. Verification trials are recommended. Consult Visuron Technologies.

► Shelf Life & Storage

Six months in sealed unopened containers. Keep away from extreme heat, freezing and moisture.



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▶ **CASE STUDY 1: Metal Roof Restoration**

PROJECT: Restore Badly Leaking Corrugated Metal Roof

OWNER: Pepsi Cola Co., Grand Rapids, Michigan

INSTALLER: ReNew Roof Co.

SYSTEM: POLYARMOR® 490-572

COLOR: Charcoal

AREA: 54,000 sq. ft.



Preparation and Coating

- ◆ Power washed - 3000 psi.
- ◆ Wirewheel brushed all areas to be coated - removed all loose rust.
- ◆ Tightened all loose screws.
- ◆ Acid etched all areas to be coated.
- ◆ Applied proprietary galv. primer.
- ◆ Sealed all horizontal and vertical lap joints, all screw heads and all protrusions with POLYARMOR® 490-572 plural under private brand.
- ◆ Overcoated all areas with aluminized asphaltic paint

DISCUSSION: This corrugated metal style roof was over ten years old at the time of restoration by ReNew. There were over sixty-five separate leaks by count prior to re-sealing. When done, there was one very small drip that was easily repaired. Over two million sq. ft. of metal roof has been restored by ReNew since 1992 using POLYARMOR coatings exclusively. (covered by U. S. Patent 5,392,583)

