

CODE: PU-860

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**PRODUCT NAME:**

**Solvent-free Aromatic Polyurethane**

**Selection & Specification Data**

**Description:**

PU-860 is high performance 100% solids structural polyurethane that is designed to provide superior corrosion protection for steel, ductile iron and concrete pipe. Tenacious adhesion and high impact resistance allow its use in the harshest environments. It forms a dense, long-term impermeable barrier that is ready for service moments after application through a snap-set cure mechanism. No primer is required. PU-860 is available in snap, fast, medium and slow set times.

**Features:**

- Rapid curing to increase through put.
- Excellent abrasion resistance for use as a rock shield, slip bore and directional drill applications .
- Superior wetting properties for outstanding adhesion.
- Mix ratio of 1:1 and user friendly application properties.
- Can be top coated by Pedram series of products.
- Unlimited build with single multi-pass coats.

**Color:** Standard colors are: Grey, Black and Brown

**Finish:** Gloss

**Primers:** No primer needed, direct to steel.

**Dry Film Thickness:**

500 to 1000 $\mu$  for most applications on steel.

650-3300  $\mu$  for interior lining

650-3300  $\mu$  for other applications on steel, depending of service condition.

**Solids Content:** By Volume: 100%

**Theoretical Coverage Rate:** 4 m<sup>2</sup>/l at 250 microns

Allow for loss in mixing and application

**VOC Values:** As supplied: 0 g/l

**Limitations:** Due to its aromatic composition, PU-860 will tend to yellow or darken in exterior UV exposure. This will not affect performance.

**Substrates & Surface Preparation**

**General Guidelines (steel or ductile iron):**

The following recommendations are provided as a guideline for optimum performance of PU-860.

- Remove dirt/dust/grease/oil following SSPC-SP1  
Abrasive blast to SSPC-SP10
- Achieve a 75 to 125  $\mu$  "angular" anchor profile
- Ensure dust/smut from blasting operation does not interfere with adhesion, prefer 2 maximum on ISO 8502-3 test
- Apply PU-860 prior to any flash rusting or contamination fall – out.



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Performance Data	
TEST DESCRIPTION	RESULT
Adhesion to Steel ASTM D4541	Minimum 8mpa
Hardness ASTM D2240 Shore D	70+ Shore D
Water Absorption ASTM D570	<1.2%
Abrasion Resistance ASTM D4060 5	50 mg loss
Flexibility ASTM D522	Pass 3 inch 180°
Cathodic Disbondment ASTM G-95	≤9 mm
Tensile Strength ASTM D412	2 mpa
Dielectric Strength D149	>700 V/mil
Impact Resistance ASTM G14	80 in-lbs
Impact Resistance ASTM D2794	100 in-lbs
Chemical Resistance ASTM D543	Pass 30 day immersion

## Product Uses

PU-860 is a high performance coating that provides long term protection for steel, ductile iron and concrete pipe

Steel Pipeline

Exteriors Steel Valves and Fittings

Steel Pilings

Steel poles (below and above ground)

Buried tank exteriors

Penstocks

Other applications where it would require high abrasion resistance,

rapid cure and superior corrosion protection for steel

## Application Equipment

### General:

Applicators must be knowledgeable with the proper safety guidelines, operation, and maintenance of the spray equipment (pumps, hoses, heaters, and spray gun).

### Spray Equipment:

Use only heated plural component airless equipment. • Plural airless pump must have 1:1 ratio capability along with 1.25 gallons per minute with a fluid pressure up to 3000 psi. • Paint system setup that can transfer coatings from heated drums to the proportioners and maintain heated material to the spray tips. Contact Pedram technical Service for specifics.

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## Mixing & Thinning

### General Mixing Guidelines:

- Power mix Part B until the pigments are dispersed in to a homogenous liquid.
- Do Not Batch Mix A & B.
- Do Not Thin 860.

Application Conditions				
Condition	Material (°C)	Surface (°C)	Ambient (°C)	Humidity (%)
Optimum	54-60	21-32	21-32	0-50
Minimum	52	-18	2	0
Maximum	66	49	49	85

Industry standards are for substrate temperatures to be 3°C above the dew point. Caution: This product in the liquid stage is moisture sensitive and needs to be protected from high humidity, dew and direct moisture contact until cured to a firm state. Application and/or curing in humidity above maximum, or exposure to moisture from rain or dew may result in a loss of gloss, micro bubbling, and/or blistering of the product.

Note: For applications on concrete please contact your Pedram Representative for proper application procedures.

Cure		
	Dry to Touch (24°C)	Dry to Handle (24°C)
Medium-Set	2.5-3 minutes	13-15 minutes
Slow-Set	5-7 minutes	18-22 minutes

Lower metal temperatures will slow the dry time and higher metal temperatures will speed up dry times. PU-860 is ready for holiday testing as soon as it reaches its dry to handle state.

PU-860 can be top coated by Pedram aliphatic polyurethane as soon as it is dry to touch. Maximum recoat time with Pedram series is 28 days. To topcoat pass the maximum recoat time, the surface must be abraded and cleaned.

Maximum recoat with PU-860 with itself is two hours

Packaging, Handling & Storage	
Packaging	220 & 220 kg
Shipping Weight (Approximate)	1.10 ± 0.1 kg/lit
Flash Point (Seta flash)	>163°C
Storage Temperature	16-32°C
Part A	ISO
Part B	Resin
Shelf Life*	Part A or B: 12 months



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\*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers. Storage Condition: Store indoors and keep dry. Blanket all partial drums with nitrogen gas to prevent moisture contamination. Avoid freezing. Do not open until ready to use.

## Cleanup & Safety

### Cleanup

Use Thinner 860 solvents. To clean lines, use Thinner 860 followed by pedram's PU-860 Line Stabilizer for long term storage. Contact pedram Technical Service for cleaning recommendations. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

### Safety

Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Persons should wear proper personnel protection equipment.

### Caution

This product does not contain flammable solvents; however, clean-up solvents that may be used do contain flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.



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