

## SELECTION & SPECIFICATION DATA

<b>Type</b>	Flake filled novolac epoxy lining
<b>Description</b>	Penncoat 227 is a 2-component high functional flake filled novolac epoxy lining system. It is applied in 2 coats at a nominal 10-12 mils (250-305 µm) per coat to achieve a 20-24 mil (500-610 µm) build thickness. For enhanced durability, crack bridging and film build the optional MR (mat reinforced) variant can be specified whereby a chopped strand mat is embedded into the fresh primer layer.
<b>Uses</b>	<ul style="list-style-type: none"> <li>• Secondary containment</li> <li>• Steel process vessels and storage tanks</li> <li>• Ducts, stacks and other corrosive flue gas handling equipment</li> <li>• Chemical immersion linings</li> <li>• Flooring subject to chemical splash and spill</li> <li>• Use as a topcoat for Penntrowel™ Surfacer and SB/SBR Lining systems</li> </ul>
<b>Features</b>	<ul style="list-style-type: none"> <li>• Flake filled to reduce permeation</li> <li>• Suitable for brush roller or spray application</li> <li>• Easy to use two-component proportioned kit packaging</li> <li>• Shelf stable</li> <li>• Contains no VOC's, 100% reactive</li> <li>• Broad chemical resistance, suitable for acids, alkalis, and salt solutions</li> </ul>
<b>Limitations</b>	Not for use beyond its chemical resistance capabilities. Not suitable for oxidizing acids. May discolor in certain chemical environments. Discoloration does not affect product performance. Consult Armor with specific questions.

## INSTALLATION GUIDANCE

<b>Reference Specification</b>	CES-342 Installation specification for Penncoat 210, 221 and 227/227MR Epoxy Linings
<b>Installation Conditions</b>	Penncoat 227 is formulated for ideal handling at 70°F (21°C). Materials and substrate should be acclimated to the air temperature prior to installation, and the air temperature should be between 50°F (10°C) and 90°F (32°C) during installation and cure.
<b>Mixing &amp; Application</b>	<p>Mix ratio Resin:Hardener by volume: 2.0:1.0</p> <p>Mix Part A Base for 1 minute to loosen.</p> <p>Continue mixing while slowly emptying the can of hardener into the center vortex, and mix thoroughly for 3 minutes, moving the mix blade up, down and around the pail to catch all the edges.</p> <p>Use Penntrowel™ Epoxy Primer or Novocoat™ SC1100 Primer/Sealer on concrete under lining to minimize outgassing and pinholes. Use Pennguard™ HP Epoxy Primer on steel to hold blast profile prior to applying membrane.</p> <p>Apply in two equal-thickness passes to insure a pinhole free lining.</p>
<b>Work Life</b>	50°F (10°C) 2 hours 70°F (23°C) 30 minutes 90°F (32°C) 20 minutes
<b>Cleanup</b>	Mek or xylene

## CURE TIME

<b>Temperature</b>	<b>Tack Free</b>	<b>Full Cure</b>
50°F (10°C)	16 hours	72 hours
70°F (23°C)	8 hours	48 hours
90°F (32°C)	6 hours	24 hours

## SAFETY

<b>Safety</b>	Mixes and applications of this product present a number of hazards. Read and follow the hazard information, precautions and first aid directions on the individual product labels and safety data sheets before using.
<b>Ventilation</b>	Provide thorough air circulation during and after application until the material has cured when used in enclosed areas.



# Penncoat™ 227/227MR Lining System

## PACKAGING, ESTIMATING & HANDLING

Product	Code	Packaging
Penncoat 227 Resin Gray	19589	3.0-gallon (11.3 l) pail
Penncoat 227 Resin Red	29602	3.0-gallon (11.3 l) pail
6711 Hardener	25999	1.5-gallon (5.6 l) pail
1 oz. chopped mat	19639	50-inch x 375-foot roll
Pentrowel™ Epoxy Primer (primer and mat saturant)	19676	4.0-gallon (15.1 l) unit

**Theoretical Coverage**

A 4.5-gallon (17.0 l) unit consists of 1 x 3.0-gallon (11.3 l) pail resin, and 1 x 1.5-gallon (5.6 l) pail hardener and will cover 603 sf (56.0 sm) per unit at 12 mils (305 µm) WFT. Allow for pail loss and wastage.

Allow 100 sf/gallon (2.46 sm/l) of Pentrowel Epoxy Primer when used as a mat saturant.

**Storage & Shelf Life**

Maintain products in original packaging and sealed until ready for use. Estimated shelf life of components is 18-24 months when stored in a dry area at 70°F (21°C). Actual shelf life may vary with storage conditions.

If there is any question with respect to the quality of the components check reactivity prior to use. For assistance consult with Armor.

## TYPICAL PHYSICAL PROPERTIES

Property	Typical Value
Color	Gray or red
Barcol hardness, shore D 48-hour	50-60
Flexural strength, ASTM D790	>400 psi (2.75 MPa)
Tensile strength, ASTM D638, 7-day	>2,500 psi (1.7 MPa)
VOC content	0.0 lb/gallon (0.0 gm/l)
Flash point, Pensky-Martens closed cup, ASTM D93	Penncoat 227 Resin >212°F (100°C) 6711 Hardener >212°F (100°C)
Mix ratio resin:hardener	2.0:1 by volume
Maximum service temperature	160°F (71°C) splash and spill 220°F (104°C) in flue gas service

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