ChemShield 1642

Advanced Hybrid Epoxy Ceramic Novolac Topcoat

Technical Data Bulletin

PRODUCT DESCRIPTION

ChemShield 1642 is a thick-film, 100% solids reinforced, proprietary formulated epoxy-based internal lining designed for corrosion control and abrasion resistance in chemical plants, and any other areas requiring excellent chemical resistance in immersion conditions. **ChemShield 1642** may also be used for restoration and leak prevention of petroleum storage tank bottoms and pipelines where resistance to abrasion is needed. **ChemShield 1642** is spray-applied from 40–125 mils DFT depending on the extent of corrosion, and is flexibilized to reduce coating stress resulting from mechanical and physical forces exerted on the substrate. **ChemShield 1642** is a two-component system; Resin and Hardener.

TYPICAL USES

- Steel and fiberglass storage tank bottoms or pipelines
- High temperature tanks and process vessels
- Pipe internals carrying slurries & abrasive mixtures
- Chemical process floors & concrete containment areas
- Pulp and Paper Services

BENEFITS

- Fast Turnaround time (Cures in 12-14 hours at ambient temperature)
- Superior wide range chemical resistance
- High abrasion resistance
- Flexible to reduce coating stress caused by "oil canning" effects
- High-build, easy to install monolithic application process (40-125 mils DFT)
- Excellent adhesion to steel, concrete and fiberglass substrates
- Low cured shrinkage
- VOC compliant

CHEMICAL RESISTANCE

Summarized; for a more comprehensive list of chemical resistance, please refer to our Product Resistance Data Guide. Films cured for 7 (seven) days at 77ºF are unaffected after 1 (one) year immersion at ambient temperatures.

CHEMICAL RESISTANCE (continued)

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Benzene
Crude Oil, sweet or sour
Diesel Fuel
Fuel Oil
Gasoline, all grades
Gasoline, aviation
Gasoline, with 15% MTBE or TBA
Hydraulic Oil
Jet Fuel, all grades
Kerosene
Mineral Oil
Naphtha
Skydrol 500B
Water, distilled
Xylene

TECHNICAL DATA

Weight, lbs/gal. ..... 11.5 +/- 0.5
Recommended Thickness, mils DFT ..... 40 – 125
Theoretical Coverage, mil sq.ft./gal. 1604
(Depends on porosity)
VOC Content (mixed), g/l ..... <100
Flash Point (mixed),°F ..... >200
Pot Life, minutes @ 77°F ..... 32 - 34
Pot Life, minutes @ 100°F ..... 18 - 20
Barcol hardness, min. 65
Color(s) ..... Tile Red

Coverage to Achieve Dry Film Thickness, sq.ft./gal.
(Actual – allows for approximate loss of 10%)
@ 40 mils 36
@ 80 mils 18

Drying Time (@ 77°F and 50% relative humidity)
To Touch ..... 4 hours
To Handle ..... 4-6 hours
To Recoat ..... 2 to 6 hours

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TECHNICAL DATA (continued)

Cure Time* to Achieve a Minimum Barcol hardness of 65 (@ 77ºF and 50% relative humidity)

For Immersion Service.....12-14 hours
*Force curing is required for low temperature applications to expedite curing process.

APPLICATION INFORMATION

Method
Conventional or airless spray system (min. 45:1 compression ratio). For smaller areas and repairs, a trowel may be used. *Caution* This product contains special abrasion resistant fillers that can be abrasive to tips, pump, and spray equipment. Wolverine Coatings is not responsible for damage or premature wear to equipment. It is the applicators responsibility to take this fact into consideration when evaluating projects utilizing this technology.

Minimum Temperature of Application (Air)
45 ºF, otherwise force curing is required.

Thinning
Not recommended or desired.

Handling
Store at moderate temperatures (65-85ºF) prior to product application for ease of handling and mixing. Additional heating may be required and is recommended for spray application.

Pre-Heating
Heat each component to 95-120 ºF prior to mixing.

Mixing
Mechanically pre-mix each component; add the hardener into the resin and then mix the combined compound at 400-600 rpm for 3 to 4 minutes.

Surface Preparation
All surfaces shall be clean and dry, free of dust, dirt, oil or any other foreign matter. Steel surfaces shall be abrasive blasted to SSPC SP-5, or NACE #1 "white metal" finish with a minimum 2.5 mil surface profile. Concrete surfaces shall be abrasive blasted to remove all laitence and other surface contaminants. For additional information regarding surface preparation specifications and techniques, please contact our technical services department.

PACKAGING AND SHIPPING INFORMATION

All Wolverine Coatings Corporation's ChemShield products are packaged as two-component units consisting of a slack-filled pail of resin and a slack-filled pail of hardener. Kits are available in 1G, 4G, 15G, and 150G units.

DOT Class (resin) – Not regulated
DOT Class (hardener) –Paint Related Material, 8, DOT Number UN 3066, III

All shipments are freight collect, F.O.B. Shipping Point (Florida, South Carolina, Georgia, or Texas).

GENERAL SAFETY GUIDELINES

Wolverine Coatings Corporation products are for industrial use only and installed only by qualified coating and lining contractors. Store in a cool, dry area away from direct sunlight, sources of ignition and other hazards. Personnel shall wear protective clothing and eyewear, solvent-resistant gloves and OSHA approved respiratory equipment. Avoid contact with eyes and skin. Do not ingest or inhale. In some cases may cause skin irritation and allergic reactions. Refer to product Material Safety Data Sheets (MSDS) for information regarding emergency and first aid procedures, health effects, reactivity data and other special precautions. All work shall be performed in accordance with current OSHA regulations.