ChemShield 1642

Advanced Hybrid Epoxy Ceramic Novalac Topcoat
Technical Data Sheet (TDS)

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.

APPLICATION DATA SUMMARY

See Application Instructions for complete information on surface preparation, equipment, environmental conditions, application procedures, and safety precautions. For conditions outside the specifications or limitations described, contact Wolverine Coatings Corporation for details.

SURFACE PREPARATION

Coating performance is directly related to the quality and degree of surface preparation. Prior to overcoating, all surfaces must be clean, dry, undamaged, and free of all contaminants. For more specific information, consult the surface preparation section contained in the Application instructions.

SAFETY PRECAUTIONS

Read the Safety Data sheet carefully before use. Safety precautions in the SDS should be carefully followed during storage, handling and use. Improper use and handling can be hazardous to health and cause fire or explosion. For further information, please refer to our "Epoxy Resin Safety Handling Guide".

APPLICATION INFORMATION

Method: Single or Plural Component Airless Spray System (min. 45:1 compression ratio with 1/2 inch hoses). 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 °F, otherwise force curing is required.	
Thinning:	Not recommended or desired.
Pre-heating:	Heat each component to 95-120°F prior to mixing.
Handling: Store at moderate temperatures (65-85°F) prior to product application for ease of handling and mixing. Additional heating may be required and is recommended for spray application.	
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.	

APPLICATION INFORMATION (CONTINUED)

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 3.5 mil surface profile. Concrete surfaces shall be abrasive blasted to remove all laitance and other surface contaminants. For additional information regarding surface preparation specifications and techniques, please contact our technical services department.

TECHNICAL DATA

Weight, lbs/gal	11.5 +/- 0.5
Recommended Thickness, Mils DFT	40 - 125
Theoretical Coverage, mils sq.ft./ gal	1604
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.	
Mils	Ft / lb
40 Mils:	36
80 Mils:	18
(Actual - allow for approximate loss of 10%	

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

TECHNICAL DATA (CONTINUED)

Cure Time* to Achieve a Minimum Barcol hardness of 65: (@ 77°F and 50% relative humidity)	
For Immersion Service:	12 - 14 hours
*Force curing is required for low temperature applications to expedite curing process.	

TYPICAL USES

* High temperature tanks and process vessels
* Steel and fiberglass storage tank bottoms or pipelines
* Pipe internals carrying slurries & abrasive mixtures
* Chemical proess 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 77°F are unaffected after 1 (one) year immersion at ambient temperatures.

- Benzene	- Kerosene
- Crude Oil (sweet or sour)	- Mineral Oil
- Diesel Fuel	- Naphtha
- Fuel Oil	- Skydrol 500B
- Gasoline, all grades	- Water, distilled
- Gasoline, w/ 15% MTBE or TBA	- Xylene
- Hydraulic Oil	- Jet Fuel, all grades

SHIPPING DATA

Packaging:	3 Gal Kits, 15 Gal Kits, 152.5 Gal Kits
DOT Class (resin) - Non regulated DOT Class (hardener) - Paint Related Material, 8, DOT Number UN 3066, III	

SAFETY
For your safety, all required personal protection equipment should be used when operating machinery or handling chemicals. Concrete dust is a source of silica particles and other hazardous materials that can cause silicosis and other illnesses. Proper safety equipment and methods are the responsibility of the installation company, general contractor, and/or facility owner.

WARRANTY
Wolverine Coatings Corporation warrants its products to be free from defects in material and workmanship. Wolverine Coatings Corporation’s sole obligation and Buyer’s exclusive remedy in connection with the products shall be limited, at Wolverine Coatings option, to either replacement of products not conforming to this Warranty or credit to the Buyer’s account in the invoiced amount of the nonconforming products. Any claim under this warranty must be made by the Buyer to Wolverine Coatings in writing within five (5) days of Buyer’s discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life, or one year from the ship date, whichever is earlier. Buyer’s failure to notify Wolverine Coatings of such nonconformance as required herein shall bar Buyer from recovery under this warranty.

Wolverine Coatings makes no other warranties about the product. No other warranties, whether expressed, implied, or statutory, such as warranties of merchantability or fitness for a particular purpose, shall apply.

Any recommendation or suggestion relating to the use of the products made by Wolverine Coatings, whether in its technical literature, or in response to specific inquiry or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyers having requisite skill and know-how in the industry, and therefore it is for the Buyer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that Buyer has done so, at its sole discretion and risk. Variation in environment, changes in procedure of use, or extrapolation of data may cause unsatisfactory results.

LIMITATION OF LIABILITY
Wolverine Coatings Corporation’s liability on any claims based upon Wolverine Coatings Corporation’s negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allocable to the products or parts thereof which give rise to the claim. In no event shall Wolverine Coatings Corporation be liable for consequential or incidental damages.

LITERATURE REVISION - TDS: ChemShield 1642 - Rev. 230719
Published literature is subject to change without notice. Wolverine Coatings Corporation is constantly engaged in the testing of existing formulations, the development of new innovative technologies, and the evaluation of the latest practices. The latest literature should always be consulted at www.wolverinecoatings.com.

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