

# **EnduraShield 2255**

High Solids Clear Hybrid Urethane Topcoat Technical Data Sheet (TDS)

#### PRODUCT DESCRIPTION

EnduraShield 2255 is a High Solids two component aliphatic clear gloss hybrid urethane applied over an epoxy primer or epoxy system. It can also be used to recoat an existing epoxy or urethane floor. Adding WearResist 105 additive will give a satin finish, increase the coefficient of friction (slip resistance), and increase abrasion resistance further. Adding SpheriTex 110 additive will increase the texture more than WearResist 105 but will maintain a glossier appearance.

#### **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**

Prior to commencing work, carefully read and follow all SDS (formerly MSDS), Technical Data Sheets, and any instruction manuals for products and equipment used during installation. Following the safety regulations of jobsite, local, state, and federal authorities is the responsibility of the installation company, general contractor, and/ or facility owner. 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.

#### **APPLICATION DATA**

Substrate:	Primed concrete, blasted steel		
Surface Preparation			
Steel	SSPC-SP5 Abrasive Blast		
Concrete	Properly prepared & primed		
Application Method:	Roller or brush		
*The application of urethane products through spraying poses significant health risks. If your project requires spray application of EndruaShield 2255, we recommend contacting your Wolverine Coating Representative for guidance and assistance.			
Induction Period:	None		
Mixing: Packaged in pre-measured containers consisting of Resin Part A and Hardener Part B which must be mixed together before use.			
Mix Ratio 1 Part "A" to 4 Part "B" (By Volume)			

## **APPLICATION DATA (CONTINUED)**

Application Environmental Conditions					
Temperature Range:		50-90°F			
Relative Humidity:		30-80%			
Surface Temperature:		50-90°F *Do not apply unless the surface temperature is more than five degrees above dew point.			
Thinner		Do not thin			
Equipment Cleaner		MEK			
PROPERTY	VA	LUE	TEST METHOD		
Components:	Two		N/A		
Volume Solids:	90-95% (Mixed)		N/A		
Total Coats:	1 or more		N/A		

## **SOLID (CURED) PHASE PHYSICAL DATA**

Application Thickness and Coverage				
Recommended Application Thickness:	4 mils (wet) 3.7 mils (dry) 400 Ft <sup>2</sup>			
Minimum Application Thickness:	3 mils* (wet)	2.78 mils (dry)	533 Ft <sup>2</sup> / gal	
*Material applied too thin may result in inadequate leveling and the formation of an irregular film.				
Maximum Application Thickness:	6 mils* (wet)	5.55 mils (dry)	266 Ft <sup>2</sup> / gal	
*When material is applied excessively thick, it can lead to the formation				

<sup>\*</sup>When material is applied excessively thick, it can lead to the formation of blisters, gas pockets, and a soft finish that fails to properly cure.

## **SOLID (CURED) PHASE PHYSICAL DATA**

PROPERTY	VALUE	TEST METHOD		
Finish:	Glossy (80-85)	ASTM D523		
Color:	Clear (CL0A)	ASTM D1544		
Elongation:	>31%	ASTM D638		
Hardness:	Pencil 3H	ASTM D3363		
Impact Resistance: (Inch Pounds)	Direct: >88* Indirect: >88*	ASTM D5420		
Abrasion Resistance (taber):	35 mg loss (CS-17, 1000 cycles)	ASTM D4060		
Bond Strength (concrete):	N/A	ASTM D4541		
Bond Strength (steel):	750-800 psi	ASTM D4541		
Coefficient of Friction	>0.5	ASTM D2047		
COF with SpheriTex 0110 (Application Dependant)	>0.8	ASTM D2047		
COF with WearRisist 0105-063 (Application Dependant)	>0.6	ASTM D2047		

## LIQUID PHASE PHYSICAL DATA

Viscosity Viscosity:

(@ 77°F / 50% RH)

Flashpoint:

Cure Schedule (@ 50% RH) (ASTM 5895)					
	55°F	77°F	90°F		
Tack Free	N/T	2.25 Hours	N/T		
Overcoat	N/T	4-24 Hours	N/T		
Through	N/T	8 Hours N/T			
WorkTime: 30 Minutes					
PROPERTY		VALUE	TEST METHOD		
VOC:		3.7g/l ASTM D39			

300-500 cps (#2

**ASTM D2196** 

ASTM D3278

Setaflash

spindle @ 10

Part B: 170°C

rpms): Part A: 84°C

## **SHIPPING DATA**

Packaging:	0.625 Gal Kit, 1.25 Gal Kit, 2.5 Gal Kit
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## **STORAGE**

Shelf Life (indoors @ 65-90°F):	1	year	from	date	of	manufacture	
	(factory sealed)						

Do not open containers until ready to use. Keep sealed containers in a cool, dry place. Avoid contact with sources of extreme hot or cold temperatures as well as direct sunlight. Containers should be stored at 65°F to 90°F. Shelf life is one (1) year if exposed to the above conditions.

## **GENERAL LIMITATIONS**

Do not apply directly to concrete. Surfaces should be primed with epoxy primer.

Touchup or repair of an existing coating is never aesthetically perfect.

Exceeding recoat window or contamination may cause disbonding, fish eyes, and / or crawling.

Although EnduraShield 2255 is a UV stable clearcoat, it may not protect underlying epoxy coats from UV degradation such as chalking and yellowing. If full UV exposure is required and/or more information is needed, contact your Wolverine Coatings representative.

#### 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: EnduraShield 2255 - Rev. 250203 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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