

Durex® Duracrete Broadcast System

High Build, Abrasion Resistant Broadcasted Epoxy Flooring System

Description	Durex® Duracrete Broadcast System is a high build, heavy duty, single colour, aggregate filled epoxy flooring system designed to protect concrete floors from heavy wear, impact, abrasion and mild chemicals in institutional, commercial and industrial environments. Installed at 80-120 mils (2-3mm), Durex® Duracrete Broadcast System offers excellent abrasion resistance for demanding floor areas.
Uses	Durex® Duracrete Broadcast System is used to protect concrete which will be exposed to heavy mechanical abuse and mild chemical attack while providing aggressive slip resistance for added safety. It is best used for heavy traffic industrial, commercial and industrial flooring applications where high abrasion resistance and durability is required.
Ideal For	<ul style="list-style-type: none"> • High traffic areas and corridors • Garbage rooms • Production, Mechanical Shops and assembly floors • Heavy duty manufacturing • Food processing plants • Shower rooms, lockers, service bays • Warehouse floors where protection from mechanical abuse is desired and chemical exposure is limited
Features	<ul style="list-style-type: none"> • High performance durable floor • Easy and quick to install • 100% solids, zero VOC • Will not support growth of fungus or bacteria • Excellent abrasion and slip resistance • Easy to clean and to maintain • CFIA Approved & USDA compliant for use in federally inspected meat and poultry plants

TECHNICAL DATA

PHYSICAL PROPERTIES			
Colour	Please see <i>Durex® Colour Selection Guide</i> for available colour options.		
Resin Type	Primer	Epotel Multi-Primer	5 m ² /L (200 ft ² /gal) @ 8 mils
	Broadcast (Epotel GSC + Silica Sand)	Epotel GSC Silica Sand #32 or #16	0.9 m ² /L (36 ft ² /gal) @ 35 mils DFT 5-10 kg/m ² (1-2 lb/ft ²)
	Topcoat	Epotel GSC	2-3 m ² /L (80-160 ft ² /gal) @10-20 mils DFT
Mix Ratio	2:1 by volume		
Pot Life @ 23°C	25 minutes (Epotel GSC)		
Service Temperature Range	Min. 0°C/Max. 50°C/Quick Term 95°C		
PERFORMANCE PROPERTIES	TEST METHOD	RESULTS	
Compressive Strength @ 7 days	ASTM C 579	10,500 psi	
Tensile Strength	ASTM C 307	2,100 psi	
Flexural Strength	ASTM C 580	850 psi	
Bond Strength	CSA/CAN 23.2-6B	400 psi concrete fails	
Thermal Coefficient of Expansion	ASTM D 696	0.000635 mm/inch per 0°C	
Abrasion Resistance CS-17 wheel, 1 kg. load, 1000 rev.	ASTM D 4060	35-45 mg maximum weight loss	
Thermal Shock Resistance	ASTM C 884	Passes	
Water Absorption	ASTM C 413	0.1%	
Flammability	ASTM D 635	Self-extinguishing	
Impact Resistance	MIL D-3134F	1.5 ft/lb	
Indentation	MIL D-3134F	3.6%	
Coefficient of Friction	ANSI A137.1 / ANSI 326.3	0.73 WET	
Flexural Modulus of Elasticity	ASTM D-790	5.1 x 10 ⁵	
Elongation	ASTM D638	5%	
Resistance to Fungi/Mold Growth	ASTM G21 / D3273	1 – Trace / 10 – Highest Resistance	
VOC Content		0g/L (not including optional topcoat)	

CHEMICAL RESISTANCE			
R – Recommended for continuous service		L – Limited recommendation, occasional spills	
REAGENT	RATING	REAGENT	RATING
Acetic Acid 5%	L	Lactic Acid 15%	L
Acetone	L	Methyl Ethyl Ketone	L
Bleach	L	Nitric Acid 10%	L
Citric Acid 20%	L	Skydrol	R
Crude Oil	R	Sodium Hydroxide 50%	R
Diesel Fuel	R	Sulfuric Acid 50%	R
Ethylene Glycol	R	Toluene	L
Fatty Acids	L	Urea	R
Gasoline	R	Vinegar	L
Hydrochloric Acid 15%	R	Xylene	L

This chart is intended as an aid in evaluating the performance of these systems in various chemical exposures at 75°F. The data is intended as a guide only. In severe or combination exposures, a sample should be tested under actual or simulated use conditions. Product data is revised as needed to reflect the most recent technology and field experience. Consult Durabond for current printing date of literature.

Packaging

Durex® Duracrete Broadcast System is packaged separately per individual product. Durex® Epotel Multi-Prime and Durex® Epotel GSC is packaged in 1 gallon (3.78L), 5 gallon (18.9L) and 15 gallon (56.7L) kits. Broadcasted Silica Sand packaged in 50 lb. bags. This product is available in multiple standard colours. Custom colour matching can also be attained at an additional cost. Please refer to the *Durex® Colour Selection Guide* for all available colour options.

Storage

For improved performance, Durex® Duracrete Broadcast System should be sealed and kept in a dry, vented, waterproof location, stacked off the ground, out of direct sunlight and other detrimental conditions. Store liquid materials in ambient temperatures above 10 degrees C and below 35 degrees C. **KEEP FROM FREEZING.**

Surface Preparation

Concrete must be shot blasted and prepared to ICRI CSP 3. Do not apply this or any impermeable finish over an on-grade slab with high moisture or humidity levels. Consult Durabond for complete details.

Application

Durex® Duracrete Broadcast System at a nominal 2-3mm (80-120 mils) thickness; consisting of a 100% solids epoxy primer, Durex® Epotel Multi Prime, a high-quality epoxy binder with Silica Sand Broadcasted to excess and topcoated with Epotel 100 GSC. A variety of top coat components can provide a solid or decorative colour scheme in gloss, matte, and light-dissipative sheens. These finishes will improve resistance to chemical attack and wear. Contact a Durabond Technical Representative for further assistance.

Step 1 PRIMER: Durex® Epotel 100 Multi Prime. Premix components A and B at a 2:1 ratio with a low speed drill for two minutes. Pour onto substrate in ribbons and apply with squeegee. Cut in with brush, and back roll with a short nap roller. Do not allow material to pond. Epotel 100 Multi Prime shall be applied to a thickness of 8 mils, but will vary depending upon the condition of the substrate.

Step 2 BROADCAST: While primer is still wet and tacky, premix Durex® Epotel GSC components, blending parts A and B with a low speed drill for two minutes. Once mixed, apply Durex® Epotel GSC at a thickness of 45 mils. Immediately broadcast Silica Sand to excess. Use #16 or #32 Silica Sand as broadcasting medium. Allow to cure. Sweep and vacuum clean loose aggregate.

Step 3 TOP COAT: Premix Durex® Epotel GSC (or recommended) components, and then blend coating components A and B for two minutes. Pour onto floor in ribbons, spread with a squeegee, and lightly back roll with a lint free, solvent resistant 10mm roller to smooth out roller marks.

Step 4 OPTIONAL – TOP COAT: Optional Topcoat for additional abrasion, chemical and UV resistance. Premix Durex® Durathane 90 (or recommended) components, and then blend coating components A and B for two minutes. Pour onto floor in ribbons, spread with a tight squeegee, and lightly back roll with a lint free, solvent resistant 5-10mm roller to smooth out roller marks.

ESTIMATING & APPLICATION GUIDELINES			
SYSTEM	STEP 1 Primer	STEP 2 Epoxy Broadcast	STEP 3 Top Coat
Product	Epotel Multi-Prime	Epotel GSC + Broadcasted Sand	Epotel GSC (or recommended)
Mix Ratio	2A : 1B	2A : 1B	2A : 1B
Coverage*	200 ft ² /gal	35 ft ² / gallon @ 45 mils + 1-2lbs/sq.ft. Silica Sand (#32 or #16)	80-160 ft ² /gal
Requirements* Per 1000 ft ²	5 gal	Epotel GSC: 29 gallons Silica Sand: 500 – 1000 lbs	6-8 gal
Pot Life @ 70°F	20 min.	20 min	6-8 gal
Cure to Next Step @ 20°C	None	5-8 hours	5-8 hours
Notes: *Coverage and requirements are dependent upon substrate condition and desired finish and texture. As is the case with all blended aggregates, it is recommended that Color Quart should be batch mixed prior to use.			

Care & Maintenance

Newly installed floors should be cured a minimum of 48 hours at 20°C (70°F) before wash-downs. Only warm water should be used to clean within the first week. If the use of a detergent is absolutely necessary during the first week, use only a non-chlorine cleaner dissolved in water. Sanitizing detergents containing chlorine or hypochlorite must not be used for at least 7 days. Good housekeeping practices and regulated spill removal will prolong the service life of the floor. While polymer flooring often requires less maintenance than other finishes, cleaning and stain removal must be performed. Stains should be removed as soon as possible. The following maintenance should be performed on a weekly basis or as needed:

Limitations

Durex® Duracrete Broadcast System is impermeable. Test all concrete slabs on grade for moisture content. Product should only be installed if moisture content falls within an acceptable range. Minimum application temperature is 8°C (45°F). Low temperature activators are available for application from 0°C - 10°C (32°F to 50°F). Below 15°C (62°F), handling characteristics are affected and cure times are lengthened. Chemical exposure, service temperatures, mechanical abuse, and housekeeping influence service life. The project depending on chemical exposure may require Durex® Chemical Resistant Coatings. Consult your Durabond Technical Representative for further details.

Health and Safety

Use under well ventilated conditions with appropriate respirator approved for organic vapours and rubber gloves when handling the product. Avoid contact with eyes and prolonged contact with skin. If contact occurs, flush immediately with water and seek medical attention if irritation occurs. Harmful if swallowed. Do not induce vomiting. Drink 1-2 glass of water or milk. Keep product out of reach of children. Read published Material Safety Data Sheet for additional information.

Warranty

Durabond warrants this product is free of manufacturing defects, and will replace at no charge, provided it has been applied within 12 months of purchase, it has been installed for uses suitable for this product and in accordance with the manufacturer's instructions.

Technical Services

Technical support is available upon request at info@durabond.com. For the latest version of this data sheet, please visit our website at www.durabond.com, call toll free at 1-877-DURABOND (387-2266) or speak with your Durabond Technical Coatings Ltd sales representative.

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