Durex® Duracrete RGL Trowel System

Trowelled Epoxy Mortar Flooring System with Recycled Glass

Description

Durex® Duracrete RGL Trowel System is an extremely durable, single colour, trowel applied industrial floor overlay with recycled glass designed to restore damage concrete or protect new concrete from high impact, abrasion, wear and mild chemicals in institutional, commercial and industrial environments. Durex® Duracrete Trowel System consists of a tough silica sand mixture embedded in a 100% solids epoxy resin, which is finished to provide an extremely durable, extra heavy-duty flooring system.

Uses

Durex® Duracrete RGL Trowel System is used to protect new concrete which will be exposed to mechanical and chemical abuse, or to resurface, level, pitch or slope existing floor slabs in industrial applications while using recycled materials. Chemical resistance and UV resistance can be attained by applying customizable top coats.

Ideal For

- Heavy-duty processing areas
- High traffic lanes and aisles
- Heavy-duty production and assembly floors
- Wash-down stations, showers and locker rooms
- Warehouse floors where protection from mechanical abuse is desired and chemical exposure is not severe

Features

- Featuring Recycled Glass (up to 25%)
- Extremely durable, highly abrasion resistant
- Seamless
- 100% solids, VOC free resins
- Proprietary, tightly packed, easy to apply sand + glass mixture
- Can be hand or power troweled
- Will not support growth of fungus or bacteria
- Easy to clean and to maintain
- CFIA approved, USDA accepted

TECHNICAL DATA

PHYSICAL PROPERTIES			
Colour	Please see *Durex® Colour Selection Guide* for available colour options.		
Resin Type	**Primer**	Epotel Multi-Primer	5 m^2/L (200 ft^2/gal) @ 8 mils
	Trowel Mortar (Epotel TL + Durex® Duracrete)	Epotel TL Duracrete RGL Agg.	2.4kg kit mixed (Part A & B) 15kg (33 lbs) bag
	Grout Coat	Epotel GSC	3 m^2/L (160 ft^2/gal) @ 10 mils
	Top Coat	Epotel GSC	3 m^2/L (160 ft^2/gal) @ 10 mils
Ratio	Durex® Epotel TL - 2:1 by volume		
Pot Life @ 23°C	Durex® Epotel TL+ RGL Aggregate - 20 minutes		
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	9.800 psi
Tensile Strength	ASTM C 307	1,700 psi
Flexural Strength	ASTM C 580	3,900 psi
Flexural Modulus of Elasticity	ASTM C-580	2.1 x 10^6 psi
Bond Strength	ASTM D4541	400 psi concrete fails
Thermal Coefficient of Expansion	ASTM D 696	0.00006 mm/mm per 0°C (0.000025 in./in)
Coefficient of Friction	ANSI A137.1 / ANSI A326.3	0.73 WET
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	0.15%
Flammability	ASTM D 635	Class 1
Impact Resistance	MIL D-3134F	+160 in/lbs concrete fractures
Hardness	ASTM D-2240, Shore D	85
Indentation	MIL D-3134F	No indentation

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 RGL Trowel Aggregate is packaged in 15kg (33 lbs) bags. Durex® Epotel TL Epoxy Trowel Binder is packaged as a kit (Part A and Part B) in 18.9 L (5 gal) and 2.4kg units. 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 Conditions

For improved performance, Durex® Duracrete Trowel 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 prepared to ICRI CSP 3-4. Preferred method includes shot-blasting or heavy grinding. Do not apply this or any impermeable finish over an on-grade slab with high moisture or RH levels. Consult Durabond for complete details.

Application

Durex® Duracrete Trowel System is installed at a nominal 6 mm (1/4 in.) thickness; consisting of a 100% solids epoxy primer, Durex® Epotel Multi-Prime, and a trowel-applied high-density epoxy mortar (Durex® Epotel TL and Durex® RGL Aggregate). Optional seal coats and aggregates are available for specified texture and finish. Once the impact resistant mortar has been installed, a variety of top coat components can provide a solid in gloss, matte and light dissipative sheens. These finishes will improve resistance to chemical attack and wear. Contact a Durabond Technical Representative for further information.

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 and apply with squeegee. Do not allow material to pond. Durex® 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 **EPOXY MORTAR**: Premix Durex® Epotel TL components, blending parts A and B with a low speed drill for two minutes. Fill mortar mixer or KOL-type mixer with Durex® Epotel TL liquids and add Durex® Duracrete RGL Aggregate as supplied as a kit at 15kg of aggregate per 2.4kg of mixed Durex® Epotel TL. Mix for an additional one to two minutes until all materials are thoroughly wetted. Screed to level, and finish by hand or power trowel. Apply at 1/4" (6mm) thick. Allow to cure. If using seal coats, grind out ridges or trowel marks as necessary and vacuum debris completely.

Step 3 **GROUT COAT**: Premix Durex® Epotel GSC components, then blend coating components A and B for two minutes. Pour onto floor, distribute with a notched squeegee, and lightly back roll with a lint free roller to smooth out roller marks, applying the materials at 10 mils.

Step 4 **TOPCOAT**: Apply Durex® Epotel GSC at 10 mils DFT by squeegee and back roll. Optional topcoats are available subject to environment and usage. Contact a Durabond Representative for more details.

ESTIMATING & APPLICATION GUIDELINES				
SYSTEM	**STEP 1 Primer**	**STEP 2 Epoxy Mortar**	**STEP 3 Grout Coat**	**STEP 4 Topcoat**
Product	Durex® Epotel Multi-Prime	Durex® Epotel TL + Durex® RGL Aggregate	Durex® Epotel GSC	Durex® Epotel GSC
Mix Ratio	2A : 1B	2.4kg (mixed) to 15kg Duracrete RGL Agg.	2A : 1B	2A : 1B (all)
Coverage*	200 ft²/gal	18 ft² / mix @ 1/4 in.	160 ft²/gal	160 ft²/gal
Requirements* Per 1000 ft²	5gal	56 x mixes	6.25 gal	6.25 gal
Pot Life @ 70°F	20 min.	20 min	30 min	30 min
Cure to Next Step @ 20°C	None	5-8 hours	8 hours	10-16 hours Full chemical cure: 3-5 days
***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:

- Remove spills at the earliest opportunity
- Sweep or vacuum loose dirt and debris
- Clean floor with an industrial detergent, dissolved in water as directed by cleaner manufacturer. A mild, moderately alkaline, non-sensing detergent is generally best.
- Power scrub surface, then rinse with a pressure washer. **CAUTION**: Certain stiff-bristled brushes can affect gloss of finish when used with power scrubbing tools. Consult with janitorial supplier for brush recommendation.
- Change soap solution and rinse water frequently. Remove rinse water with a wet vacuum or squeegee. Keep mop heads and maintenance equipment free of accumulated dirt.
- Floors can be sealed, waxed and buffed, if desired. A local janitorial supply house is a good source for supplies. **All materials for cleaning and sealing should be tested in a small area prior to use.**

Limitations

Durex® Duracrete RGL Trowel 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. 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.