



RapidShield™ 1001 WB Matte Topcoat

Application

RapidShield™ 1001 WB Matte Topcoat is a low gloss, waterborne, UV cured, permanent industrial floor coating intended for use on concrete floors. The RapidShield™ product range is cured using proprietary Quaker UV curing units.

RapidShield™ 1001 WB Matte Topcoat is a low VOC coating that complies with European directive 2004/42/CE, which limits volatile solvent contents in paints and varnishes.

Product Suitability

RapidShield™ 1001 WB Matte Topcoat is used as a final topcoat over top of RapidShield™ 0007 Clear (applied as a primer/sealer), RapidShield™ 0008 High Build, or RapidShield™ Colors.

RapidShield™ 1001 WB Matte Topcoat is designed to provide a light to medium duty, low gloss, easily cleaned surface in commercial and industrial environments. Tire marks left by fork lift truck traffic are easily removed. It is suitable for use in commercial stores, industrial workshops, production warehouses and processing areas.

Benefits

- VOC Compliant (<140 g/l)
- Excellent chemical and mechanical durability
- Excellent cleaning
- Low gloss film to hide defects on floor
- Rapid drying and immediate return to service after UV curing
- Applied with standard application equipment
- Single component
- Excellent wear resistance

Property	Test Method	Typical Value
Typical Properties - Product as Received		
Appearance	GTM 2240	White Liquid
Specific Gravity	GTM 1510	1.06 +/- .1
Viscosity (#3 Zahn S90)	GTM 1626	23 +/- 2 s @ 77°F
VOC (less water and exempts)	Theoretical	1.12 lbs/gal
Volume Solids	Theoretical	31.2 +/- 2% volume
Coverage (@6 mils wet)	Theoretical	270 ft ² /gal
Recommended Thickness	Wet Dry	5.0 - 7.0 mils 1.6 - 2.3 mils
Typical Properties - Cured Film (at 1.9 mils dry)		
Appearance	GTM 2240	Clear Film
MEK Resistance*	ASTM D 5402	>25 Double Rubs
Pencil Hardness	ASTM D 3363	>= 2H
Gloss (at 60° observation)	ASTM D 523 - 08	25 - 50 Gloss Units
Intercoat Adhesion**	ISO 2409, ASTM D3359	100% Adhesion
Permeability to Water Vapor	ISO 7783-1 & -2	TBD
Pendulum Slip Resistance (dry)	BS 7976-1:2002	TBD
Coefficient of Friction (for lb-f)	ASTM D 1894-08, ASTM F 609-05, ASTM C 1028-07	>= 0.65
Abrasion Resistance (1000 cycles, CS17, 100 g)	ISO 5470-1, ASTM D 4060	<175 mg wt. loss

* Refer to our Chemical Resistance Sheet for additional information.

** on top of properly applied and cured RapidShield™ Colors, RapidShield™ 008 High Build, RapidShield™ 0008-2 Concrete Primer or RapidShield™ 0007 Clear applied as primer



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Slip Resistance

Static COF (Coefficient of Friction) measurements performed indicate RapidShield™ 1001 WB Matte Topcoat is compliant with the United States Occupational Safety and Health Administration recommendation that walking surfaces have a static coefficient of friction of 0.5 or greater. In addition RapidShield™ 1001 Matte Topcoat conforms to the United State's Americans with Disabilities Act Accessibility Guidelines (ADAAG), Appendix A, A4.5 that recommends a static COF of 0.6 or greater. See the Typical Properties table for detailed information. If additional anti-skid resistance is required, please contact your Quaker representative or local CFC (Certified Flooring Contractor) for advice.

Limitations

The minimum floor application temperature for RapidShield™ 1001 WB Matte Topcoat is 10°C and 3°C above dew point. Optimum application temperature is 20°C. Maximum relative humidity is 85%.

Where high impact and/or aggressive wear resistance is required, please consult your Quaker representative or local CFC.

RapidShield™ 1001 WB Matte Topcoat should not be applied to new or wet concrete floors. Floor humidity above 200m (CR1.5, 75RH) would not be suitable for the RapidShield™ product.

Check For Moisture: Concrete moisture testing must occur. Calcium chloride testing or in-situ relative humidity testing is strongly recommended. Readings must be below 3 pounds per 1000 ft² over a 24-hour period on the calcium chloride test, or below 70% relative internal concrete humidity [not to exceed 2.0% Core Moisture (CM)]. Test methods can be purchased at www.astm.org, see ASTM F1869 or F2170, respectively or follow manufacturer's instructions.

Note: Although testing is critical, it is not a guarantee against future problems. This is especially true if there is no vapor barrier or the vapor barrier is not functioning properly and/or you suspect you may have concrete contamination from oils, chemical spills or excessive salts.

General Instructions

The following directions and recommendations are intended to serve as a guide and may require modifications to meet local needs:

Thinning: Use as received.

Mixing: RapidShield™ 1001 WB Matte Topcoat is designed to be used as supplied. Check to see if any material has soft settled to the bottom of the container. A five minute mix (or until all soft settled material has been reincorporated, whichever is longer) of the product with a power mixer is required. However one should avoid incorporation of excessive amounts of air during this process and may wish to wait for up to 30 minutes after mixing before applying on the floor to allow air release from the product.

Materials: RapidShield™ 1001 WB Matte Topcoat is designed for coating of concrete floors. Please contact your Quaker representative or local CFC for advice on any other substrates.

Surface Preparation: It is essential that RapidShield™ 0007 Clear (applied as a primer/sealer) or RapidShield™ 0008 High Build are applied to sound, clean and dry surfaces to ensure maximum adhesion.

RapidShield™ 0007 should only be used as a sealer when a thin coat application, typically 3-4 mils per coat is appropriate for the intended end use. Thin coatings will reflect the surface texture of the substrate and as such high spots must be removed to maintain a uniform coating thickness prior to UV curing. RapidShield™ 0008 High Build is typically the best sealer of choice for use with RapidShield™ 1001 WB Matte Topcoat.

The concrete surface should be hard, sound and free from dust and other barrier materials such as paint, wax, grease, oil and similar contaminants prior to mechanical preparation. Contaminated surfaces should be mechanically prepared, either by grinding or enclosed dust free shot blasting equipment (or similar) and vacuumed clean prior to applying. Ideally a combination of enclosed blasting and spiral/multi-headed grinding would leave a flat clean surface. The ideal substrate for application is a flat, lightly textured, clean concrete surface.



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General Instructions Continued

Any joints or cracks in the concrete base should be repaired and cleaned prior to application.

RapidShield™ 1001 WB Matte Topcoat may only be used as a final topcoat over top of RapidShield™ 0007 Clear (applied as a primer/sealer), RapidShield™ 0008 High Build or RapidShield™ Colors. RapidShield™ 1001 WB Matte Topcoat may not be used directly on the concrete surface.

Application: RapidShield™ 1001 WB Matte Topcoat may be applied by roller, squeegee or a micro-fibre pad. A lint free, 10 mm nap, roller is recommended for application by roller and for back rolling squeegee applied coating. Use with adequate ventilation. Avoid breathing mist or vapors. Consult Material Safety Data Sheet for handling and safety information.

Drying

RapidShield™ 1001 WB Matte Topcoat must be completely dry prior to UV curing of the coating. Drying time depends upon several variables including, but not limited to, wet film build applied, ambient temperature and humidity, and air flow over top of the coating. In its wet state, the coating is white and either completely or partially opaque. The film must be completely transparent with no white areas, and be completely tack free to the touch before it is cured with the UV unit. Blistering or lifting of the coating during UV curing is the result of the coating not being fully dried.

Curing Instructions

Only UV curing equipment authorized by Quaker Chemical Corporation and verified to be in proper operating condition may be used to cure RapidShield™ products. Curing instructions and parameters are supplied during the (CFC) Certified Flooring Contractor Training Session. Failure to comply with any of these conditions may impact product performance.

Care and Cleaning

RapidShield™ 1001 WB Matte Topcoat should be kept clean of dirt, rubber marks, etc. on a regular basis. A mild neutral to slightly alkaline cleaner may be used in conjunction with an orbital cleaner, fitted with white pads or light duty soft nylon brushes, to remove dirt and grime from the coating. Epmar's KEMIKO® NEUTRA CLEAN is recommended for cleaning RapidShield™ 1001 WB Matte Topcoat. See the RapidShield™ Cleaning Brochure for additional detail.

Storage, Safety & Disposal

Quaker supplies this quality product in pails; other packaging can be made available by Quaker or by your local CFC upon request.

RapidShield™ 1001 WB Matte Topcoat should be stored in dry conditions and protected from direct sunlight. Avoid temperatures below 10°C and above 35°C during storage or shipment. Note: RapidShield™ 1001 WB Matte Topcoat is not freeze thaw stable. Care must be taken during winter months to ensure the material does not freeze. In addition, RapidShield™ 1001 WB Matte Topcoat is sensitive to excessively high temperatures. Avoid prolonged exposure to temperatures above 35°C.

Shelf life is limited to one year in the original packaging and when stored under conditions described above.

RapidShield™ 1001 WB Matte Topcoat is unlikely to present any significant health or safety hazard when used as recommended by Quaker. Good standards of personal and industrial hygiene are to be maintained by the user.

Prior to using this product, consult the Material Safety Data Sheet for instructions regarding safe handling and environmental issues.



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