



Aditya Birla Chemicals (Thailand) Ltd. (Epoxy Division)

EPOTEC THW 4504

Description

Epotec THW 4504 is a water based epoxy curing agent designed especially for use in construction applications such as flooring. In this application Epotec THW 4504 gives excellent performance in combination with the liquid epoxy resin Epotec YD 128.

Epotec THW 4504 is available in water at 60% solids. It can be used to formulate V.O.C. free systems for confined areas as well as coatings and toppings for damp surfaces including green concrete. Epotec THW 4504 possesses excellent water vapour permeability and can also be formulated into high strength grouts, wear resistant concrete toppings and in epoxy modified cements.

Applications

- Self leveling floors
- Trowelable floors and floor toppings
- Grouts
- Cementitious products
- Primer/Sealer for concrete floor

Advantages

- Provides V.O.C. free product
- No additional emulsifier is required to emulsify liquid epoxy resin
- Early development of hardness and green strength
- Excellent adhesion to damp surfaces and green concrete
- Good slip resistance and scratch resistance
- Forms flooring with higher water vapour permeability compared to conventional solvent based or solvent free systems
- Can be mixed with cement
- No fire hazard
- Easy to clean with water

Specification

Appearance	Visual	Pale yellow liquid
Colour	ASTM D 1544-04	8.0 G max.
Viscosity @25°C	ASTM D 2196-05	1,500-2,500 cP
Pot life (150 g mix) @ 25°C	TEC-AS-P-111	55-70 minutes
Non-volatiles	TEC-AS-C-012	60±2 %
Amine value	DIN 16945	200-250 mgKOH/g

Typical properties *

AHEW	---	204g/eq
Mixing ratio with epotec YD 128 (EEW = 186 g/eq)	---	100 : 110
Density @25°C	ASTM D 1475	1.10 gm/cc
Thin film set time @ 25°C	ASTM D 5895	3-5 hours
Flash point	ASTM D 93	> 100°C

* = Typical properties are indicated for information only

Guideline formulation**Self leveling flooring**

Sr. No.	RM	Qty. pbw
1.	Epotec THW 4504 ¹	33
2.	BYK 380N ² BYK 012 ² BYK 037 ²	0.50 1.12 1.12
3.	TiO ₂ Rutile CaCO ₃ Silica flour M-10 ³	8 57 57
4.	Water	41
5.	Epotec YD 128 ¹	30

¹ = Aditya Birla Chemicals, Thailand

² = BYK Chemie, Germany

³ = Sibalco, Belgium

Performance

Property	Test method	Unit	Value
Mixing ratio (resin:curing agent)	-	weight	100 : 110
Pigment : Binder ratio	-	weight	2.45 : 1
Solids content	-	wt%	77
Density	ASTM D1475	g/cc	1.597

Pot life @ 25°C	-	minutes	60
Surface Appearance	-	-	Smooth
Hardness (Shore D) - 1 day - 7 days	ASTM D2240	-	60 75
Abrasion resistance (weight loss) (CS17, 500 g load, 1000 cycles)	ASTM D4060 ASTM F510 (grit feed method)	mg	100.6

Packing

Epotec THW 4504 is packed and delivered in plastic drums, 200 kg each as a standard pack.
Other packs are available on request.

Storage

Epotec THW 4504 is stable under normal storage conditions. The shelf life of Epotec THW 4504 is 12 months from the date of manufacture in original sealed container. It is advised to store the material in cool and dry place away from sources of heat, direct sunlight and ignition. **It is advised not to allow the product to freeze.**

Handling

Please refer to the product MSDS for more information on safe storage and handling of Epotec THW 4504.

Disclaimer

All recommendations for use of our products whether given by us in writing, verbally or to be implied from the results of tests carried out by us are based on the current state of our knowledge. Although, the information contained in this sheet is accurate, no liability can be accepted in respect of such information. We warrant only that our product will meet the designated specifications and make no other warranty either express or implied, including any warranty of merchantability or fitness for a particular purpose as the conditions of application are beyond our control.

For additional information:

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