


Aditya Birla Chemicals (Thailand) Ltd. (Epoxy Division)
EPOTEC THW 4503
Description

Epotec THW 4503 is a water-based epoxy curing agent designed especially for use in civil engineering applications such as grouting. In this application epotec THW 4503 gives excellent performance in combination with liquid epoxy resin. Epotec THW 4503 is available as 70% solids in water. It offers capability to formulate zero V.O.C. systems for confined areas as well as primers and sealers for concrete wall / floors.

Although it has been recommended to avoid freezing of the material, it is observed during laboratory testing that the product passes more than 7 freeze thaw cycles.

Applications

- Water wipeable tile grouts
- Cement admixtures
- Trowelable floors
- Mortars
- Primer/Sealer for concrete floor

Advantages

- Water based, solvent free
- No fire hazard
- Easy to clean with water
- Good color
- Excellent Adhesion
- Good hardness and compressive strength development

Specification

Appearance	Visual	Translucent, medium viscous liquid
Colour	ASTM D 1544 (89)	5.0 G Max.
Viscosity @25°C	ASTM D 2196 (05)	2500 – 6000 cP
Pot life* (100 g mix) @ 25°C	TEC-AS-P-111	50 - 75 minutes
Non-volatiles	-	ca. 70 ± 2%

* with YD 128 (EEW = 186 g/eq)

Typical properties *

AHEW	-	130 g/eq
Mixing ratio with epotec YD 128 (EEW = 186 g/eq)	-	100 : 80
Density @25°C	ASTM D 1475	1.10 g/cc

Thin film set time @ 25°C	ASTM D 5895	6.5 hours
Freeze Thaw Test	ASTM D 2243 (95)	7 cycles pass
Flash point	ASTM D 93	> 100°C

* = Typical properties are indicated for information only

Guideline formulation :

Water wipeable tile grout

Sr. No.	RM	Qty. pbw
1.	Epotec THW 4503 ¹	73
2.	BYK 035 ²	1.37
3.	Water	89.7
4.	Silica flour M-10 ³	900
5.	Epotec YDFM 253 ¹	100

¹ = Aditya Birla Chemicals, Thailand

² = BYK Chemie, Germany

³ = Sibalco, Belgium

Performance data

Property	Test method	Unit	Value
Mixing ratio (resin:curingagent)	-	pbw	100 : 73
Pigment : Binder ratio	-	pbw	5.9 : 1
Solid content	-	wt %	90.4
Cure schedule	-	-	4 – 7 days
Hardness (Shore D) - 7 days	ASTM D 2240	-	82
Compressive strength (1 inch cube) - 1 day - 7 days	ASTM D 695 (96)	MPa	28 42

The use of THW 4503 in water wipeable tile grout gives better performance over cementitious grouts in terms of –

- Improved adhesion to concrete as well as tile
- Better resistance to household chemicals
- Increased resistance to cleaning chemicals
- Water proofing characteristics
- Ease of application and cleaning
- Resistance to cracking due to fluctuations in ambient temperature conditions



Packing

Epotec THW 4503 is packed and delivered in plastic drums, 200 kg as standard pack.
Other packs are available on request

Storage

Epotec THW 4503 is stable in normal storage conditions. The shelf life of epotec THW 4503 is 12 months from the date of manufacture when stored 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 to avoid freezing of the product.**

Handling

Please refer to the product MSDS for more information on safe storage and handling of epotec THW 4503.

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, Please Contact:

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