


Aditya Birla Chemicals (Thailand) Ltd. (Epoxy Division)
EPOTEC THW 4501
Description

Epotec THW 4501 is a water reducible epoxy curing agent designed especially for use in civil engineering applications such as flooring. In this application epotec THW 4501 gives excellent performance in combination with liquid epoxy resin. Epotec THW 4501 is available as 60% solids in water. It offers capability to formulate zero V.O.C. systems.

Epotec THW 4501 is recommended mainly for self leveling as well as trowelable floor toppings. It has ability to cure in thick coating (>10 mm thick) as well as under damp and humid conditions and gives low gloss finishes. It gives excellent adhesion even on one day cure concrete without impairing hardness or permeability.

Applications

- Self leveling / trowelable flooring
- Grout

Advantages

- Water based, solvent free
- No external emulsifier required
- No fire hazard
- Early development of hardness and green strength
- Good slip and scratch resistance
- Fast drying and thorough cure
- Good water vapour permeability

Specification

Appearance	Visual	Emulsion with medium viscosity
Colour	ASTM D 1544 (89)	Off white emulsion
Viscosity* @25°C	ASTM D 2196 (05)	15,000 – 25,000 cP
Non-volatiles	-	ca. 60 ± 2%
Po life (150 g mix) @25 °C	TEC-AS-P-111	25 – 35 minutes

* Brookfield viscosity

Typical properties *

AHEW	-	215 g/eq
Mixing ratio with epotec YD 128 (EEW = 186 g/eq)	-	100 : 115
Density @25°C	ASTM D 1475	1.07 g/cc

TECHNICAL DATA SHEET

Thin film set time @ 25°C	ASTM D 5895	3 – 5 hr
Freeze Thaw Test	ASTM D 2243 (95)	> 5 cycles pass
Flash point	ASTM D 93	> 100°C

* = Typical properties are indicated for information only

Guideline formulation :

White SL floor

Sr. No.	RM	Qty. pbw
1.	Epotec THW 4501 ¹	11.5
2.	BYK 035	1
3.	BYK 045	1
4.	TiO ₂ Rutile	6
5.	CaCO ₃	15
6.	Silica sand	35
7.	Water	17.7
8.	Epotec YD 128 ¹	10

¹ = Aditya Birla Chemicals, Thailand

Performance data

Property	Test method	Unit	Value
Mixing ratio (resin:curingagent)	---	pbw	100 : 115
Pigment : Binder ratio	---	pbw	3.37 : 1
DFT	---	mm	3
Hardness (shore D)	ASTM D 2240	-	75
Gloss 20/60°	---	GU	Matt / egg shell finish
Compressive strength	ASTM D 695-96	MPa	> 40
Water vapour permeability	ASTM D 1653-93	perms	0.21

Packing Epotec THW 4501 is packed and delivered in plastic drums, 200 kg as standard pack.
Other packs are available on request

Storage Epotec THW 4501 is stable in normal storage conditions. The shelf life of epotec THW 4501 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 4501.

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.

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