

TEST REPORT

Sample: Cementitious tile adhesive

Customer: Adstud Chemicals (I) Pvt Ltd

Date: 10.03.2021

Tested by: Technical Centre Bangalore

1. Introduction

- In compliance with the customer, 2 samples of CTA “Adstud Chemicals” are tested as per IS 15477: 2018 –
 1. Tensile adhesion strength
 2. Open time
 3. Adjustment time
 4. Slip resistance
- Curing condition for test specimen:
At Standard Condition: 27 ± 2 °C, 65 ± 5 % RH for 28 days (Dry Condition).
- Test Conditions: 27 ± 2 °C, Water immersion (Wet Condition),
Speed of air in testing area < 0.2 m/s.

2. Test Results

2.1 The Physical and application properties of CTA sample are as given below:

SL No.	Properties		Observations	
			Type 1	Type 2
1.	Appearance		Powder	Powder
2.	Colour		White	White
3.	Water demand for 100 g of sample		36	36
4.	Application		by notch trowel	by notch trowel
5.	Tensile Adhesion strength on concrete block as per IS 15477 (N/mm ²)	28 d SC (Average)	1.28	0.88
		Failure Pattern Observed	AF – 60% CF – 40%	AF – 75% CF – 25%
		7 d SC + 21 d water immersion (Average)	0.82	0.80
		Failure Pattern Observed	AF – 99% CF – 1%	AF – 99% CF – 1%
6.	Open Time as per IS 15477 (min)		< 10	< 10
7.	Adjustment Time as per IS 15477 (min)		>30	>30
8.	Slip Resistance as per IS 15477		< 0.5 mm, pass	< 0.5 mm, pass

Note - Given Tensile Adhesion strength readings are an average of five values. Where, **d= days**, **SC** = standard climate (27 ± 2 °C, 65 ± 5 % RH), **CF**= Cohesive Failure, **AF**= Adhesive failure, **TAS** = Tensile adhesion strength

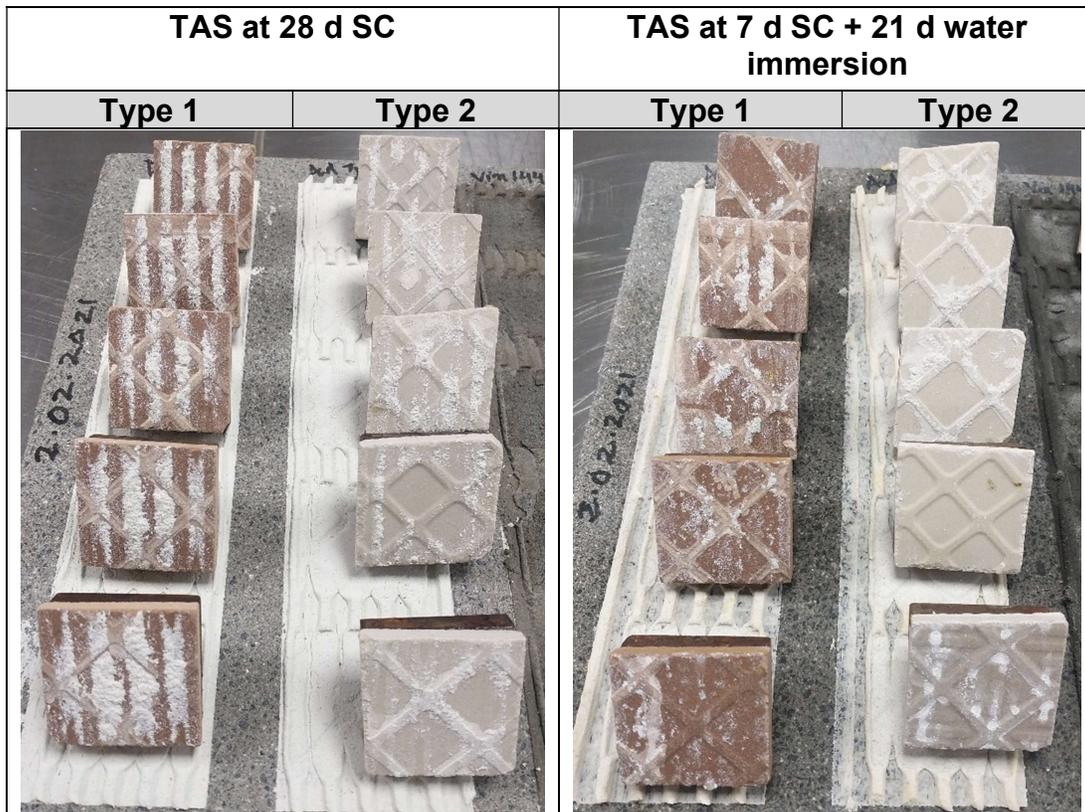
Observations

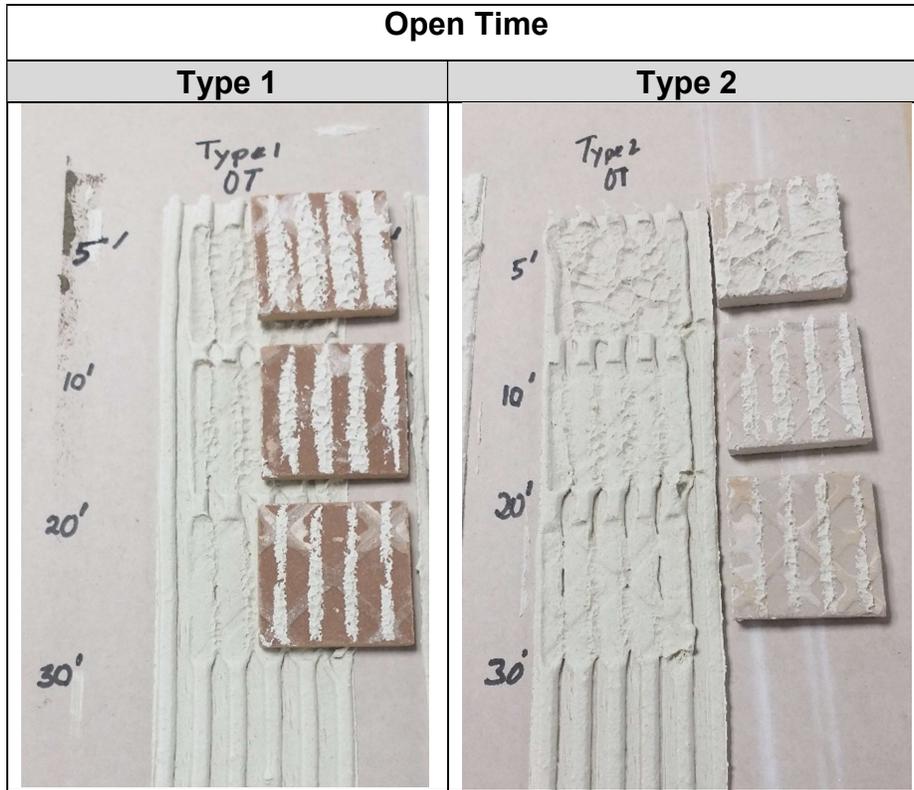
1. Tensile Adhesion strength of Type1 and Type 2 CTA is $> 0.5 \text{ N/mm}^2$ at both Dry & Wet condition. Both CTA samples pass TAS requirement of Type 1 class as per IS 15477.
2. Type1 and Type 2 CTA samples have an open time more than 10 mins.

Recommendations

1. To meet the requirement of Type 2 class of CTA as per IS 15477, increase Dispersible Polymer Powder dosage to get better Tensile adhesion strength results at dry and wet condition. The usage of VINNAPAS® E grades in the CTA formulation is recommended for improving wet adhesion.
2. Increase HPMC/MHEC dosage to improve the Open time.

Test Images





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