

TCSR-555

Two-Component Structural Repair

ASTRAL

TRUBUILD™

TECHNICAL DATA SHEET VER NO. N.1

PRODUCT DESCRIPTIONS

TCSR-555 is a two-component, solvent-free, epoxy system for repairing cracked and damaged concrete structures. It is used to bond new structural concrete to old concrete, bricks & steel component as it gives excellent bonding properties with various construction surfaces.



FEATURES & ADVANTAGES



EXCELLENT ADHESION

- It has excellent adhesion and strength on various construction substrates and is easy to apply
- It has very low shrinkage and high open time



EASY TO APPLY



LOW SHRINKAGE



HIGH MECHANICAL STRENGTH

- Easy to apply
- High density
- Free flowing
- High mechanical strength

AREA OF APPLICATIONS



AVAILABLE PACKING



Excellent system to bond old to new concrete/mortar, repair old concrete structures and it can be extended further.

METHOD OF APPLICATION

Surface preparation: Surface must be thoroughly cleaned. Remove all loose particles, dirt, dust, laitance, oil, grease, etc. by using wire brush, scrapping or grit blasting, pressurized air or water jet.

Holdfast grouting: Take Part-A, Part-B & silica powder (100 mesh) in 2:1:8 ratio. In a pail, mix Part-A & Part-B in the suggested ratio and mix with a slow speed mixture to avoid entrapping of air. Now charge Part-C and mix for 2-3 min until even colour is obtained. Do the masking of area in which grout is to be applied. Now pour material from one side to eliminate air entrapment.

Waterproofing: Take resin and hardener as per mentioned ratio, mix thoroughly, apply the mix on clean and concrete surface. 1 kg material will cover 1 sqmt. area at 1 mm thickness. Leave applied surface untouched for 24 hours. Apply second coat and sprinkle silica coarse sand. After drying, lay 1" thick layer of cement mortar to prevent the treated surface from the effect of ultra violet rays.

Old concrete to new concrete bonding: Take resin and hardener as per mentioned ratio, mix thoroughly and apply the mix on old concrete surface. Pour new concrete mix immediately over the area on which TRUBUILD TCSR 555 has been applied. Quartz and silica to be added as per requirement.

TECHNICAL PROPERTIES

PROPERTIES	STANDARD	RESULTS
PART-A		
Chemical base		Epoxy resin
Physical state		Viscous liquid
Appearance		Transparent
Color		Colorless
EEW	ASTM D-1652-11	170-190
Viscosity @25°C	ASTM D-4402	500-1000 cps
Sp. gravity		1.15
PART-B		
Chemical base		Polyamide hardener
Physical state		Viscous liquid
Appearance		Transparent
Color		Yellow
Amine value	IS 9162-1979	350-400
Viscosity @25°C	ASTM D-4402	8000-12000 cps
Sp. gravity		0.98

PROPERTIES	STANDARD	RESULTS
Mixing ratio		100:50
Mix viscosity @35°C	ASTM D 4402	500-1500 cps
Mix viscosity @40°C	ASTM D 4402	2000-3000 cps
Mix density		1.12 gm/cc
Pot life @ 30°C	Visual	150-180 min in 100 gm mix
Pot life @ 35°C	Visual	100-130 min in 100 gm mix
Hardening time		12-15 hrs
Curing time		24 hrs
Application temperature		10-35°C
Shore-D-hardness	ASTM D 2240	60-65
Compressive strength (after 24hrs)	ASTM C 579	45 N/mm ²
Compressive strength with silica in 2:1:8 ratio (after 7 days)	ASTM C 579	55 N/mm ²
Lap shear strength (after 24hr)	—	70-100 kg/cm ²

COVERAGE

15-20 sqft./kg per 2 coats @ 300 micron

STORAGE & HANDLING PRECAUTIONS

Product should be stored in a dry place in their original, properly closed containers at temperature between 2-40°C. Partially emptied container should be closed immediately.

SHELF LIFE

24 months from the date of manufacturing