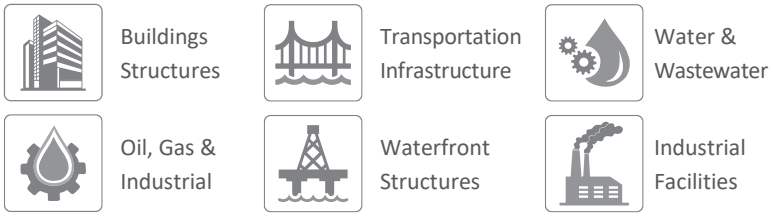
TechnoDur™ME

Medium Viscosity FRP Epoxy Gel Saturant

PRODUCT DESCRIPTION

TechnoDur™ME is medium viscosity epoxy matrix materials for saturating composite fibers and bonding applications. TechnoDur™ME is available in forms of gel. The reaction of epoxy with hardener results an outstanding durability material which is a proper matrix for all of the composite systems and structural strengthening works. TechnoDur™ME epoxy resins offer a wide range of high performance properties like excellent chemical and mechanical resistance and strong adhesion. TechnoDur™ME medium viscosity epoxy resins can be used in different fields like strengthening and retrofitting of structural members. This resin is also used for saturating of carbon and glass wrap and bonding FRP plates and FRP anchors (in NSM Methods).



TECHNICAL DATA

	Unit	TechnoDur™ME
Chemical Base	-	Epoxy Resin
Tensile Strength	MPa	<27.5
Tensile Modulus	GPa	<2.3
Elongation Percent	%	<1.1
Compressive Strength	MPa	<33
Compressive Modulus	GPa	<2.31
Net Weight	kg	Component A = 20, Component B = 10 Component A= 10, Component B = 5
Mixing Ratio	-	100:50 Part A:100 Part B:50
Color	-	Component A is grey paste Component B is white paste Mixed resin and hardener is grey paste
T_g	˚C	77
Application Methods	-	Hand lay-up
Shelf Time	month	18
Storage Conditions	-	Store dry at 4˚C -40˚C
Viscosity at 23° C	cps	Mixed product ≈ 6600
Pot Life at 35°C	min	35

ADVANTAGES

- Medium viscosity epoxy resin saturant.
- TechnoDur™ME epoxy resins have good strength compared with other epoxies.
- TechnoDur™ME epoxy resins are extremely durable and resistant to temperature and moisture. They also have high fatigue strength.
- TechnoDur™ME epoxy resins have good mechanical and chemical resistance.

TYPICAL USES

- TechnoDur™ME epoxy resins are high-performance adhesives which are widely used in strengthening and retrofitting of different types of structures and manufacturing composite products.
- Epoxy resins are electrical insulators, so they are highly used in electrical industry. TechnoDur™ME epoxy resins can be used in many of the electrical components.
- In addition to TechnoDur™ME standard series, other series (including S & W, etc.) are available to meet your specific requirements. Please contact the supplier for more information.

INSTALLATION PROCEDURE

SURFACE PREPARATION

- For retrofitting applications, substrate preparation can highly effect on the quality of the performance of CFRP and

GFRP composite systems.

- All the surfaces must be cleaned from dirt, grime, dust, curing compounds, oils, grease, waxes and all the other contaminated materials which may cause voids behind the Technopol composites.
- Repair mortar must be used to repair all the eroded or damaged concrete surfaces.
- An industrial vacuum cleaner must be used to remove dust and dirt.
- All the surfaces need grinding, sandblasting, shot blasting, pressure wash or other common mechanical methods to reach an even concrete substrate.
- The sharp edges must be smooth and rounded to a minimum radius of 30mm.

MIXING

Epoxy compounds are usually supplied in two different containers. Before pouring the contents of component B into contents of component A, each part should be stirred separately to avoid deposit in container. Then part A and B should be mixed together depending on the required quantity. Process of mixing should take 3-5 minutes with a low speed mixer. After mixing resin and hardener, you'll have about 35 minutes' time (at temperature 35°C) to apply the material. Clean mixing tools with a proper towel to reuse them.

APPLICATION

Surface of all the contaminated elements must be cleaned thoroughly. Prime the surface with a suitable type of Technopol primer. TechnoDur™ME epoxy resins are compatible with all types of Technopol fabrics, primers and mortars. Mix part A and B together with a low speed mixer. You can use saturators for impregnating fabrics or apply hand methods for some of the smaller projects. Using a roller can help to eliminate air bubbles in the resin and substrate, it can also ensure that there is a good bonding between them.

CLEAN UP

ENVIRONMENTAL PRECAUTIONS:

Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters and soils.

SMALL SPILLS

Soak up with an absorbent material, such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal.

CAUTION

COMPONENT A

May cause eye and/or skin irritation. Prolonged or repeated exposure may cause skin sensitization.

COMPONENT B

CORROSIVE! Severe irritation to eyes and skin. Prolonged or repeated exposure may cause skin sensitization. Components of this product may affect the central nervous system.

FAIRST AID

Skin

Wash fibers off skin with water and soap. If fibers are embedded in the skin, remove with tweezers. Discard clothing that may contain embedded fibers. Seek medical advice if exposure results in adverse effects.

Eyes

Immediately flush with a continuous water stream for at least 20 minutes. Washing immediately after exposure is expected to be effective in preventing damage to the eyes. Seek medical advice.

Inhalation

If there is inhalation exposure to the fibers of this product, remove source of exposure and move victim to fresh air. If victim is not breathing, give artificial respiration. If there is breathing difficulty, give oxygen. Seek medical advice for any respiratory problems.

Ingestion

Ingestion is not a likely means of exposure for this product. If ingestion does occur, do not induce vomiting. Give nothing by mouth if victim is unconscious. Seek medical advice.