SEMPOXY BC

TWO COMPONENT SOLVENT FREE INTERLAYER EPOXY COATING

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DATE: 05.10.2022
REV DATE: 01.01.2025. REV:02

1 DESCRIPTION

It is a solvent-free, self-leveling, epoxy-based intermediate coat material with high mechanical strength and chemical resistance, applied after the primer.

2 ADVANTAGES

- Resistant to chemicals.
- Resistant to abrasion and friction.
- It is hygenic, doesn't require long term maintanence.
- Easy to apply and clean
- Solvent free,

3 USES

- Factories, warehouses, shopping malls, workshops,
- Aircraft hangars, schools, hospitals,
- Pharmaceutical industry, and food industry,
- Laboratories, parking lots, water treatment plants,

4 TECHNICAL SPECIFICATIONS

Density (Mixture) : 1,45±0,05 gr/cm³ 20 °C TS EN ISO 2811-1
Solid Content (%) :100 By weight
Shore D : 75-80 (7 gün sonunda)
Diluting : Not recommended
Mixing ratio (A/B) : 19/5
Pot Life : 30-40 min /23 °C, 200 g. DIN 16945
Application Method : Trowel
Consumption : 1,5 kg for 1 mm thickness

5 CURING TIME

Temp.	Pedestrian Traffic	Mechanical Strength	Chemical Strenght
+10 °C	72 saat	5 gün	10 gün
+20 °C	24 saat	4 gün	7 gün
+30 °C	18 saat	2 gün	5 gün

6 RECOATING TIME

Temp.	Pedestrian Traffic	Mechnanical Strenght
+10 °C	30 saat	3 gün
+20 °C	24 saat	2 gün
+30 °C	16 saat	1 gün

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7 CHEMICAL RESISTANCE TABLE

CHEMICAL NAME	RESULT
Sulfuric Acid (H2SO4) 10%	3
Sulfuric Acid (H2SO4) 20%	3
Hydrochloric Acid (HCL) 10%	3
Hydrochloric Acid (HCL) 20%	3
Nitric Acid (HNO3) 10%	3
Nitric Acid (HNO3) 20%	2
Sodium Hydroxide (NaOH)	3
Xylene	3
Ethyl Alcohol	3
Solvents	3

*3- Very Durable 2- Durable 1- Non-durable - Tendency

8 MECHANICAL STRENGHT

Compressive Strength (N/mm2) (DIN EN 196)	~50
Adhesion Strength (N/mm2) (EN 1542, EN ISO 4624, EN 12118)	>1,5 (Concrete Surface)
Flexural Strength (N/mm 2) (DiN EN 196)	~25
Shore D	75-80
Abrasion Resistance (DIN 53 109 (Taber Abrasion Test)	70mg ((CS10/1000/1000) (8days23°C)

9 APPLICATION PROCEDURE

SURFACE PREPARATION

For metal surfaces **:** In order to achieve top level performance, sandblasting should be done at Sa 2 ½ level. The sandblasted surface should be primed with a dust rich epoxy primer or phosphate rich epoxy primer to form the required dry film before recording product identification information.

For concrete surfaces **:** The concrete surface must be clean, solid and have sufficient compressive strength (>25N/mm2), and tensile strength must be >1.5N/mm2. The concrete floor to be insulated must be solid and there must be no movement on the surface. The grout layer on the surface must be removed. The concrete to be insulated must be at least C25 and preferably C30 – C35 standard.

Concrete standards **:** The surface should be cleaned with pressurized water and freed from oil, grease, dirt, mortar particles and dust. Concrete surfaces should be prepared to obtain an open porous surface by removing cement grout using abrasive equipment.

It should also be completely cleaned from mold release agents, cement residues, shavings, loose particles and uncured membranes. The grout layer on the surface must be removed. (Shot-Blast, Rota Tiger etc.) If the surface is too shiny, it should be roughened with milling or sandblasting. Concrete cracks should be cut in a V shape, cleaned and false joints should be cleaned.

Surface Temperature: Min + 10 °C / Max + 30 °C
Ambient Temperature: Min + 10 °C / Max + 30 °C
Material Temperature: Must be between + 10 °C and + 30 °C.

Surface Moisture Content: The moisture content in the concrete must be max. 4%.
Relative Humidity: Must be max. 80%
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Dew Point: The ground temperature must be at least 3 oC above the dew point during application.

Application Procedures

Mixing Ratio	: A/B =19/5 (ağırlıkça)
Mixing	:Component A is mixed with a low speed (300-400 rpm) mechanical mixer until it becomes homogeneous. Component B is then added to component A and the mixture is mixed continuously for 2 minutes until it becomes homogeneous. Avoid over-mixing to minimize air entrainment.
Application Conditions	: Please check the relative humidity and dew point before application. If the conditions are suitable, start the application. Solvent-free epoxy BC is poured onto the primed surface and spread on the surface by a notched trowel. Then, a spiked roller is passed over it to remove the entrained air. The prepared mixture should be consumed within a maximum of 40 minutes. Repair and leveling operations are carried out at least 8 hours after the previously applied epoxy primer.

Application Restrictions
Please do not apply the product on the high moisture surfaces.
Freshly applied Sempoxy BC should be kept away from moisture, condensation and water for at least 24 hours.

Weak and dirty areas cannot be covered with thin coatings. For these reasons, both the surface and the adjacent areas should always be prepared for application and cleaned thoroughly before application. In order to have color match in the coating the same batch numbered buckets should be applied in same area. If it is necessary to heat the environment, use electric systems. Fossil fuel systems affect the surface appearance. SEMPOY BC shouldn't been exposed to sunlight, it will loose its mechanical properties.
The product should be brought to the application area 1-2 days before in order to get suitable application conditions.
Resin based epoxy systems' service time is related to the relative humidty , temperature and moisture of the surface. At low temperatures, the chemical reaction slows down, which extends the usage time, the coating time and the working time. At the same time, consumption increases as the viscosity increases. High temperatures increase the speed of the chemical reaction and the times described above are shortened accordingly. For complete curing the ambient and ground temperatures should not fall below the minimum allowed temperature. After the application is completed, the coating should be protected from direct water contact for at least 24 hours. If there is contact with water, this will cause carbonation and softening on the coating and this will cause the coating to lose its properties. In such a case, the entire coating should be removed from the ground and renewed.

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12 STORAGE AND SHELF LIFE

Can be kept for minimum 12 months in the original unopened pails in dry places and at temperatures of 5-25 oC. Once a pail has been opened, use as soon as possible.

10 PACKAGING

19+5 (24) kg set in metal buckets

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11 PRECUATIONS

Flammable and exploision products should be kept away during the application. Protective gloves and masks should be used for hands anzd eyes during application. The product should be used in well ventilated environments.If the material comes into contact with eyes, it should be washed immediately with sucient water. Childrens should kept away from the product. For more detailed information, ask for the Safety Data Sheet (MSDS).

CE

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