Product Data Sheet
Edition 4.4.2011
Identification no. 322
Sikadur 22, Lo-Mod

Construction

Sikadur® 22, Lo-Mod

Low-modulus, medium-viscosity, epoxy resin binder

Description	Sikadur 22, Lo-Mod is a 2-component, 100% solids, moisture-tolerant, epoxy resin binder. It conforms to the current ASTM C-881, Type III, Grade-2, Class-C and AASHTO M-235 specifications.
Where to Use	Use neat as the binder resin for a skid-resistant broadcast overlay. Use also as the binder resin for epoxy mortar and concrete for patching and overlays.

Typical Data *[Material and curing conditions @ 73°F (23°C) and 50% R.H.]*

Shelf Life	2 years in original, unopened containers.
Storage Conditions	Store dry at 40°-95°F (4°-35°C). **Condition material to 65°-85°F (18°-29°C) before using.**
Color	Clear to light amber.
Mixing Ratio	Component 'A':Component 'B' = 1:1 by volume.
Viscosity	Approximately 2,500 cps.
Pot Life	Approximately 30 minutes. (200 gram mass)

Tack-Free Time	**40°F (4°C)**	**73°F (23°C)**	**90°F (32°C)**
	21 hours	4 hours	2 hours

Traffic Time 4-6 hours

Tensile Properties (ASTM D-638)		**Mortar 1:2.25**	**Neat**
14 day	Tensile Strength	2,200 psi (15.2 MPa)	5,900 psi (41.0 MPa)
	Elongation at Break	1.1 %	30 %
	Modulus of Elasticity	4.78 x 10^5 psi (3,240 MPa)	1.9 x 10^5 psi (1,310 MPa)
	(Neat tested @ 0.5 in/min.)		

Flexural Properties (ASTM D-790)		**Mortar 1:2.25**	**Neat**
14 day	Flexural Strength (Modulus of Rupture)	4,300 psi (29.7 MPa)	6,800 psi (47.0 MPa)
	Tangent Modulus of Elasticity in Bending	9.0 x 10^5psi (6,205 MPa)	2.7 x 10^5 psi (1,910 MPa)

Shear Strength (ASTM D-732)		**Mortar 1:5**	**Neat**
14 day	Shear Strength	3,300 psi (22.7 MPa)	5,400 psi (37.2 MPa)

Water Absorption (ASTM D-570)		**Neat**
14 day	(24 hour immersion)	0.23 %

Bond Strength (ASTM C-882): Hardened concrete to hardened concrete

2 day	**(dry cure)**	Bond Strength	1,100 psi (7.5 MPa)
14 day	**(moist cure)**	Bond Strength	1,600 psi (11.0 MPa)

Abrasion (Taber Abrader)		**Mortar 1:2.25**
14 day	Weight loss, 1,000 cycles (H-22 wheel; 1,000 gm weight)	1.61 gm

Compressive Properties (ASTM D-695) Mortar 1:2.25
Compressive Strength, psi (MPa)

	40°F* (4°C)	**73°F * (23°C)**	**90°F* (32°C)**	**73°F* (23°C) NEAT**
4 hour	-	-	-	-
8 hour	-	70 (0.48)	3,500 (24.1)	-
16 hour	-	1,850 (12.8)	4,400 (30.3)	2,100 (14.5)
1 day	60 (0.40)	3,150 (21.7)	4,600 (31.7)	3,400 (23.4)
3 day	1,700 (11.7)	6,900 (47.6)	5,000 (34.5)	6,500 (45.0)
7 day	6,700 (46.2)	7,500 (51.7)	5,400 (37.2)	7,800 (53.8)
14 day	8,400 (58.0)	7,800 (53.8)	5,900 (40.7)	8,200 (56.5)
28 day	8,450 (58.3)	7,850 (54.1)	6,300 (43.4)	8,200 (56.5)

Compressive Modulus

7 day	1.25 x 10^5 psi (862 MPa)
28 day	1.66 x 10^5 psi (1,145 MPa)

* Material cured and tested at the temperatures indicated.

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Advantages

- Tolerant to moisture both before and after cure.
- Convenient easy mix ratio A:B = 1:1 by volume.
- Excellent strength development.
- Leveling viscosity for easy, efficient application of a broadcast overlay.
- Material is USDA-certifiable.

Coverage

1 gal. yields 231 cu. in.

Mortar Binder - 1 gal. of mixed Sikadur 22 Lo-Mod with the addition of 5 gal. by loose volume of an oven-dried sand, yields approximately 808 cu. in. of epoxy mortar.

Packaging

4 gal. units

How to Use

Surface Preparation

Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove dust, laitance, grease, curing compounds, impregnations, waxes and any other contaminants.

Preparation Work:

Concrete - Should be cleaned and prepared to achieve a laitance and contaminant free, open textured surface by blastcleaning or equivalent mechanical means.
Steel - Should be cleaned and prepared thoroughly by blastcleaning to white metal finish.

Mixing

Pre-mix each component. Proportion equal parts by volume of Component 'A' and 'B' into clean pail. Mix thoroughly for 3 min. with Sika paddle on low-speed (400-600 rpm) drill until uniformly blended. Mix only that quantity that can be used within pot life.
To prepare epoxy mortar - Slowly add 5 parts by loose volume of oven-dried sand to 1 part of mixed Sikadur 22 Lo-Mod until uniform in consistency.

Application

Broadcast Overlay - Prime the prepared substrate with Sikadur 22 Lo-Mod. While primer is still tacky, spread mixed Sikadur 22 Lo-Mod with a 3/16 in. notched squeegee.

When material levels, broadcast the oven-dried aggregate slowly allowing it to settle in the epoxy binder. Ultimately the broadcast aggregate should be applied to excess at a rate of 2 lbs./sq. ft.

Remove excess broadcast aggregate after epoxy has set.

Epoxy Mortar - Prime prepared substrate with mixed Sikadur 22 Lo-Mod. While primer is still tacky, apply epoxy mortar by trowel or vibrating screed. Finish with finishing trowel.

Limitations

- Minimum substrate and ambient temperature 40°F (4°C).
- Porous substrates must be tested for moisture-vapor transmission prior to application. (Ref. ASTM D-4263)
- Minimum age of concrete before application is 21-28 days depending upon curing and drying conditions.
- Do not use on exterior slab on grade.
- Maximum thickness 1/2 in. (13 mm) exterior exposed to thermal change.
- Do not dilute. Addition of solvents will prevent proper cure.
- Use oven-dried aggregates only.
- Material is a vapor barrier after cure.
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.

Caution

Component 'A' - Irritant; Sensitizer - Contains epoxy resin. Can cause skin sensitization after prolonged or repeated contact. Skin and eye irritant. High concentrations of vapor may cause respiratory irritation. Avoid skin contact. Use only with adequate ventilation. Use of safety goggles and chemical resistant gloves is recommended. In case of exceedance of PELs, use an appropriate, properly fitted NIOSH approved respirator. Remove contaminated clothing. Consult MSDS for more detailed information.

Component 'B' - Corrosive; Sensitizer - Contains amines. Contact with eyes or skin may cause severe burns. Skin and eye irritant. High concentrations of vapor may cause respiratory irritation. Avoid skin contact. Use only with adequate ventilation. Use of safety goggles and chemical-resistant gloves is recommended. In case of exceedance of PELs, use an appropriate, properly fitted NIOSH approved respirator. Remove contaminated clothing. Consult MSDS for more detailed information.

First Aid

Eyes: Hold eyelids apart and flush thoroughly with water for 15 minutes. **Skin:** Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. **Inhalation:** Remove person to fresh air. **Ingestion:** Do not induce vomiting. **In all cases, contact a physician immediately if symptoms persist.**

Clean Up

Ventilate area. Confine spill. Collect with absorbent material and transfer into suitable container. Avoid release into environment. Dispose of in accordance with current, applicable local, state, and federal regulations. Uncured material can be removed with approved solvent. Cured material can only be removed mechanically.

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