BUILDING TRUST

PRODUCT DATA SHEET

Sikadur®-22 Lo-Mod FS

Low-modulus, fast setting, medium-viscosity, epoxy resin binder

PRODUCT DESCRIPTION

Sikadur®-22 Lo-Mod FS is a 2-component, 100% solids, moisture-tolerant, fast setting epoxy resin binder. It conforms to the current ASTM C-881, Type III, Grade 1, Class C and AASHTO M-235 specifications.

USES

Sikadur®-22 Lo-Mod FS may only be used by experienced professionals.

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.

CHARACTERISTICS / ADVANTAGES

- Fast Setting for quick turn around
- Meets 3 h/1000 psi requirement when mixed as an epoxy mortar
- 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
- Successfully used in HFST applications. Refer to local DOT specifications for product acceptance

PRODUCT INFORMATION

Chemical Base	Epoxy Resin
Packaging	4 gallon (15 L) units / 110 gallon (416 L) unit / 660 (2498 L) gallon totes. **Note: Part A of the Sikadur® 22 Lo-Mod, Sikadur®-22 Lo-Mod FS and Sikadur® 21 Lo-Mod LV is a universal component of these three products.**
Color	Clear to light amber
Shelf Life	24 months in original, unopened containers
Storage Conditions	Store dry at 40–95 °F (4–35 °C) Condition material at 65–85 °F (18–29 °C) before using.
Volatile organic compound (VOC) content	<20 g/L
Viscosity	Approximately 2,000 cps

TECHNICAL INFORMATION

Shore D Hardness

72

(ASTM D-2240)
73 °F (23 °C)
50 % R.H.

Compressive Strength

	40 °F(4 °C)	73 °F (23 °C)	90 °F (32 °C)
3 hours	-	1750 psi	3600 psi
8 hours	2000 psi	4400 psi	6400 psi
1 day	4500 psi	6500 psi	8000 psi
3 days	5500 psi	7500 psi	8500 psi
7 days	8500 psi	8500 psi	9000 psi
14 days	9000 psi	9000 psi	9000 psi
28 days	9000 psi	9000 psi	9000 psi

Material cured and tested at the temperatures indicated and 50 % R.H.

(ASTM C-579)

Modulus of Elasticity in Compression

7 days	40,000 psi
28 days	40,000 psi

(ASTM C-579)
73 °F (23 °C)
50 % R.H.

Tensile Strength

	Mortar 1:3	Neat
7 day	1200 psi	2650 psi

(ASTM D-638)
73 °F (23 °C)
50 % R.H.

Elongation at Break

	Mortar 1:3	Neat
7 day	40 %	55 %

(ASTM D-638)
73 °F (23 °C)
50 % R.H.

Tensile Adhesion Strength

	Mortar 1:3	Neat
1 day	-	> 550 psi (concrete failure)
7 days	-	> 570 psi (concrete failure)

(ASTM C-1583; ACI 503R)
73 °F (23 °C)
50 % R.H.

Shear Strength

	Mortar 1:3	Neat
7 day	2600 psi	3430 psi

(ASTM D-732)
73 °F (23 °C)
50 % R.H.

Thermal Compatibility

Pass

(ASTM C-884)

Abrasion Resistance

	Mortar 1:3	Neat
14 day, Weight loss, 1,000 cycles*	2.0 grams	0.030 grams

* (H-22 wheel; 1,000 gm weight for mortar/ C-17 wheel, 1,000 gm wt for neat)

(Taber Abrader)
73 °F (23 °C)
50 % R.H.

Water Absorption

	Mortar 1:3	Neat
7 day (24 hour immersion)	-	< 0.20 %

(ASTM D-570)
73 °F (23 °C)
50 % R.H.

Rapid Chloride Permeability

0 coulombs

(AASHTO T-277)

APPLICATION INFORMATION

Mixing Ratio

Component 'A': Component 'B' = 1:1 by volume.

Coverage

1 gal. yields 231 in^3

Mortar Binder - 1 gal. of mixed Sikadur® 22 Lo-Mod FS with the addition of 5

	gal. by loose volume of an oven dried sand, yields approximately 808 cu. in. of epoxy mortar
Pot Life	Approximately 15–20 minutes (60 gram mass; ASTM C-881)

Waiting / Recoat Times

	60–64 °F (16-18 °C)	65–69 °F (19-21 °C)	70–74 °F (21-23 °C)
Coat 1	4–4 ½ h	2 ½–3 h	2–2 ½ h
Coat 2	5 ½–6 h	4 ½–5 h	4 h
	75–79 °F (24-26 °C)	**80–84 °F (27-29 °C)**	**85+ °F (29+ °C)**
Coat 1	2 h	1.5 h	1 h
Coat 2	3 h	3 h	2 ½–3 h

Average Substrate and Material Temperature. These set times were determined under laboratory conditions, actual set times may vary based on on-site conditions

APPLICATION INSTRUCTIONS

SUBSTRATE 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 blast cleaning or equivalent mechanical means.

Steel - Should be cleaned and prepared thoroughly by blast cleaning to white metal finish.

MIXING

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 mixed resin.

APPLICATION METHOD / TOOLS

Broadcast Overlay - Prime the prepared substrate with Sikadur®-22 Lo-Mod FS. While primer is still tacky, spread mixed Sikadur®-22 Lo-Mod FS with a 3/16 in. (4.7 mm) 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 lb./ft² (0.9 kg/m²) Remove excess broadcast aggregate after epoxy has set. Priming is an optional step in the broadcast overlay applications.

Epoxy Mortar - Prime prepared substrate with mixed Sikadur®-22 Lo-Mod FS. While primer is still tacky, apply epoxy mortar by trowel or vibrating screed. Finish with finishing trowel. Priming is mandatory when using the Sikadur®-22 Lo-Mod FS as an epoxy mortar.

LIMITATIONS

- Minimum substrate and ambient temperature 40 °F (4 °C).
- Minimum age of concrete before application is 21–28 days depending upon curing and drying conditions.
- For on grade, split-slab and unvented metal pan deck, please consult Sika Technical Service regarding moisture limitations.
- 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.
- For HFST applications, system and application details are governed by local DOT & AASHTO specification.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

OTHER RESTRICTIONS

See Legal Disclaimer.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

LEGAL DISCLAIMER

- **KEEP CONTAINER TIGHTLY CLOSED**
- **KEEP OUT OF REACH OF CHILDREN**
- **NOT FOR INTERNAL CONSUMPTION**
- **FOR INDUSTRIAL USE ONLY**
- **FOR PROFESSIONAL USE ONLY**

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