SLS-30™
BY CITADEL TECHNOLOGIES

Designed Solutions.

Ultra-Build Epoxy Lining System

Recommended Service

For industrial and aqueous service where strength and corrosion resistance are most critical.

Recommended Usage

- Waste Collection Systems
- Sewers
- Lift Stations
- Waste Treatment Facilities
- New Construction
- Cooling Water Lines
- Slurry Tanks
- Vaults
- Rehabilitaiton
- Manholes

What is SLS-30™?

SLS-30™ is a two component, 100% solids, no VOC epoxy system. It has been designed to provide the greatest structural strength and chemical resistance of any product in its class.

Engineering Data

	Metric System	English System
Mix Ratio (Resin/Hardner)	2.5:1*	2.5:1*
Combined Wt. Per Gallon	4.38 kg / gal.	9.6 lbs / gal.
Pot Life (100 g mass)	12 min @ 25°C	12 min @ 77°F
Set Time	3.0 hrs @ 2.54 mm @ 25°C	3.0 hrs @ 100 mils @ 77°F
Hardness	78-84 (Shore D)	78-84 (Shore D)
Compressive Strength	93,080 kPa	13,500 PSI
Compressive Str. Ult.	151,600 kPa	22,000 PSI
Tensile Strength	59,300 kPa	8,600 PSI
Tensile Elongation, % (resin)	>3.5	>3.5
Tensile Modulus	3.24×10^6 kPa	4.7×10^5 PSI
Flexural Strength	97,500 kPa	142,00 PSI
Flexural Modulus	3.5 x 106 kPa	5.0 x 105 PSI
Taber Abrasion	30mg	30mg
Adhesion (Concrete)	Substrate Failure	Substrate Failure
Adhesion (Steel)	1.2 kPa	1,200 PSI

** available in 2:1 and 3:1 ratios*

Why Use SLS-30™?

SLS-30™ provides both a structural, cured in place lining and a chemical protective barrier in one quick application. It can be applied to both old and new bricks, concrete and steel at a thickness of 40 mls. to over 275 mils.

Application

SLS-30™ can be applied at all ambient temperatures ranges; however, care must be taken not to apply over frost or active leaks. It must also be noted that when applied to very cold surfaces, set and cure times will be greatly increased. As with any cured in-place system that requires a good bond, the substrate must be free from all dirt, oil, grease, and rust.

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Testing

Schedule of Test Methods

Test Performed	Method/Standard Use
Tensile Strength / Elongation	ASTM D638
Flexural Strength	ASTM D790
Hardness, Shore	D ASTM D2260
Solids by Volume (%)	ASTM D2369
Weight per Gallon	ASTM D1475
Flash Point TOC	ASTM D1310
Dry Time	ASTM D1650
Chemical Resistance (30 Days)	ASTM D543
Chemical Resistance Flexural Strength (180 Days)	ASTM D790
Compressive Strength	ASTM D695
Freeze-Thaw	UL 76-63
Adhesion	ASTM D3983
Taber Abrasion, CS-17 Wheel	ASTM D4064, 1 Kg Load/1,000 cycles

Composite test data on SLS-30™ ultrabuild epoxy lining

Physical Data	Metric System	English System
Pot Life (100 g mass)	11 min 5 sec @ 25 ° C	11 min 5 sec @ 77 ° F
Set Time	2 hrs 47 min @ 2.54 mm @ 25°C	2 hrs 47 min @100 Mils @ 77°F
Hardness	78-84 (Shore D)	78-84 (Shore D)
Compressive Strength	91,650 kPa	13,292 PSI
Compressive Strength Ult.	151,600 kPa	22,000 PSI
Tensile Strength	60,000 kPa	8,695 PSI
Tensile Modulus	3.24×10^6 kPa	4.7×10^5 PSI
Flexural Strength	102,684 kPa	14,893 PSI
Flexural Modulus	3.5×10^6 kPa	5.0×10^5 PSI
Taber Abrasion	30mg	30mg
Adhesion (Concrete)	Substrate Failure	Substrate Failure
Adhesion (Steel)	1.2 kPa	1,200 PSI

Chemical Resistance

Chemical	Percent Weight Gain	#Days
Sulfuric Acid, 70%	0.270	28
Sodium Hydroxide, 50%	0.370	28
Ammonium Hydroxide, 5%	0.995	112
Nitric Acid, 1%	1.301	112
Ferric Chloride, 1%	1.227	112
Sodium Hypoclorite, 1%	1.100	112
Distilled water	1.015	112
Toluene	3.670	28

Chemical	Percent Weight Gain	#Days
Ethanol	3.250	28
Acetic Acid, 10%	1.020	28
Xylene	0.110	28
Butyl Cellusolve	4.650	28
Lactic Acid, 10%	1.090	28
Bleach	0.170	28
1, 1, 1 Trichloroerthane	0.040	28

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