



THERMO-SIL™ SP-11

TECHNICAL DATA SHEET

Silicone Epoxy Primer

Product Use and Design

SP-11 is a black, single-component epoxy primer. It incorporates state of the art water based technology to produce an extremely versatile product that penetrates and seals porous substrates. It is effective at increasing the bond of silicone topcoats to a variety of surfaces. It will also help to “solidify” punky or chalky surfaces. SP-11 is safe to use, has a very little odor, and is easy to clean. SP-11 is designed to penetrate and seal porous substrates to improve the adhesion of Huntsman Building Solutions Thermo-Sil series of silicone coatings. It develops a tenacious bond to concrete, wood, fiberglass, steel, galvanized and aluminum surfaces.

Although SP-11 will greatly enhance the adhesion of various topcoats over metal surfaces, it is not designed to add to the corrosion resistance of the system, beyond what the topcoat provides.

Advantages:

1. Adhesion: Penetrates and “wets” into porous surfaces, imparting a tenacious chemical and physical bond between the substrate and topcoat. It is also effective over damp concrete or wood surfaces.
2. Non-Dusting: Penetrates deeply to eliminate concrete dusting, providing for easy cleanup and minimum maintenance.
3. Deep Penetration: Its low viscosity allows SP-11 to penetrate into and preserve dense surfaces such as smooth troweled concrete floors, oriented strandboard, fiberglass and various types of metal surfaces.
4. Anti-Spalling: Applied to concrete decks, walkways, industrial areas, etc., SP-11 will effectively protect against the intrusion of destructive salts, oils, solvents and gasoline. It also prevents spalling and pitting caused by freeze/thaw cycling.

Application

SP-11 Epoxy Primer may be applied by brush, roller or by airless spray equipment. Airless spray equipment is the preferred method. Any airless spray equipment capable of 1,000 psi (6,980 kpa) and 1/2 gallon per minute (1.9 l/minute) delivery can be used. A reversible, self-cleaning spray tip with an orifice size of .015” to .027” (4 mm to .7 mm) and a minimum 40-degree fan angle is recommended. Before spraying, flush equipment with clean water to prevent contamination. Coverage rate will vary depending upon surface porosity. One coat is usually sufficient for sealing substrates when SP-11 is used as a primer. When used as a sealer/finish, two coats are required to achieve a uniform sheen. Two coats may also be required when sealing lightweight concrete or other highly porous surfaces. The following are approximate application rates:

Lightweight Concrete:	100 to 150 sq.ft./gal. (2.4 - 3.7 m2/l)
Wood:	300 sq. ft./gallon (7.3 m2/l)
Fiberglass:	300 to 400 sq. ft./gallon (7.3- 9.8 m2/l)
Metal:	300 to 400 sq. ft./gallon (7.3 - 9.8 m2/l)

Thin as necessary with water to achieve adequate penetration of the surface being sealed. When used as a sealer/finish apply a second coat of SP-11 at approximately 50% greater coverage rate than those listed above. When used as a primer on exterior applications, SP-11 should be top coated within 48 hours to ensure optimum bonding characteristics. Do not permit SP-11 to puddle or “glaze” over on top of the substrate. Allow to thoroughly dry prior to applying top coat. Do not allow SP-11 to be exposed for more than FIVE (5) days. If SP-11 is exposed for more than FIVE (5) days, reapplied SP-11 to the substrate to achieve optimal adhesion.

Contact Huntsman Building Solutions Technical Service personnel for specific recommendations, pricing and availability of spray and auxiliary equipment.

Physical Properties

Properties	Test Method/Requirements	Value
Color:		Black
Solids by Weight:	ASTM D 2369	10.6%(+/-1)
Solids by Volume:	ASTM D 2697	10.4%(+/-1)
Weight Per Gallon:	ASTM D 1475	8.4 lbs. (3.8 kg) (+/- .2)
Dry Time To Touch:	ASTM D 1640	30 minutes @ 75°F (24°C)
Cure Time:		8+ hrs.
Volatile Organic Compounds:		90 grams/liter
Low & High Temperature Limits:		-30°F to 150°F (-34°C to 66°C)

Surface Preparation

All surfaces must be clean and free of any dirt, oil, grease, soapy films, surface chemicals or other foreign contaminants. Slightly damp surfaces will not affect the performance of SP-11, provided there is no standing water or frost. New concrete should be water-cured in lieu of using a curing compound. Any form of curing compound or release agent on any surface to be sealed with SP-11 must be completely removed, along with any laitance. Prior to applying SP-11, all loose material, dirt and dust must be removed by use of a power vacuum, stiff-bristled broom or compressed air. If concrete is badly spalled, restore surface to a reasonable condition using cementitious patching or resurfacing compound. Fiberglass surfaces should be scuff-sanded prior to priming. Metal surfaces must be free of oily residue and loose rust. Previously painted surfaces should be brush blasted or mechanically abraded to remove the existing finish.

Existing concrete must be cleaned using biodegradable chemical cleaner and water. Cleaning shall be accomplished using mechanical scrubbers. Rinse thoroughly with fresh water to remove all traces of the chemical cleaner. If general cleaning is not adequate, then surfaces should be cleaned and etched as recommended for new concrete. If surfaces are highly contaminated, or if surfaces are to be subjected to unusual service conditions, consult Huntsman Building Solutions Technical Service Department for recommendations.

Limitations & Precautions

SP-11 is a thin penetrating sealer. It is not designed for use as a high-build surface coating. Do not use over metal under immersion conditions. SP-11 will freeze and become unusable below 32°F (0°C). Do not ship or store unless protection from freezing is available. Do not apply if conditions will not permit complete cure before rain, dew or freezing temperatures occur. Do not apply in the late afternoon if moisture condensation can appear during the night. Do not apply SP-11 at temperatures below 50°F (10°C). SP-11 may be an irritant to skin. Avoid breathing of vapor or spray mist. Approved MSHA/NIOSH chemical cartridge respirator must be worn by applicator. Avoid contact with eyes and skin.

Packaging & Mixing

SP-11 is a single-component material available in 5-gallon (19 liter) pails and 55-gallon (208 liter) drums. Stir material prior to application. SP-11 may be reduced with water for increased penetration over dense substrates. Shelf life in unopened containers is one year from date of manufacture. Store at temperatures between 50°F and 100°F (10°C and 38°C). Do not open containers until ready to use the material.

SHELF LIFE: 6 months from manufactured date when stored properly.

Packaging

U.S. MEASURES: 5-gal. pails, 55-gal. drums & 275-gal. totes.
WEIGHT PER U.S. GALLON: 11.65 lbs.

General Health & Safety Precautions

Material Safety Data Sheets are available on this coating material. Any individual who may come in contact with these products should read and understand the M.S.D.S. In case of emergency contact CHEMTREC EMERGENCY NUMBER at 800-424-9300.

WARNING: Avoid eye contact with the liquid or spray mist. Applicators should wear protective clothing, gloves and use protective equipment on face, hands and other exposed areas.

EYE PROTECTION: Safety glasses, goggles, or a face shield are recommended.

SKIN PROTECTION: Chemical resistant gloves are recommended. Cover as much of the exposed skin area as possible with appropriate clothing.

RESPIRATORY PROTECTION is MANDATORY! Respiratory protective equipment, impervious foot wear and protective clothing are required at all times during spray application. Contact Lapolla for a copy of the Respiratory Protection Program developed by OSHA.

INGESTION: Do not take internally. Consider the application and environmental concentrations in deciding if additional protective measures are necessary.

DISCLAIMERS

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