

PRODUCT DATA

3 03 01 00 Maintenance of Concrete

SEWER GUARD[®] HBS 100 EPOXY LINER

Sprayable chemical-resistant epoxy coating

Description

Sewer Guard[®] HBS 100 Epoxy Liner is a 100% solids, sprayable, high-build chemical-resistant epoxy coating. It is used to provide resistance to hydrogen sulfide attack in the water and sewage – treatment industries. Sewer Guard[®] HBS 100 Epoxy Liner eliminates the need for prefabricated or cast-in-place manhole liners.

Yield

16 ft²/gallon at 100 mils (WFT)
(0.4 m²/L)

Packaging

4 gallon (15 L) kits

Color

Gray or white

Shelf Life

2 years when properly stored

Storage

Store and transport in a clean, dry area at temperatures from 45 to 95° F (7 to 35° C). Keep the epoxy inside at a minimum temperature of 60° F (16° C) for 24 hours before using.

Features

- High-build material
- Epoxy chemistry
- Moisture insensitive
- Low odor
- 100% solids

Benefits

- Sprayable up to 80 mils thick
- Excellent resistance to hydrogen sulfide and many industrial chemicals; high bond strength
- Cures well in damp environments
- Suitable for application in confined spaces
- Meets all federal and state VOC regulations

Where to Use

APPLICATION

- Applications requiring resistance to hydrogen sulfide
- Rehabilitating manholes
- Lining large diameter pipes
- Lift stations and pumping stations

LOCATION

- Vertical and overhead surfaces
- Nontraffic-bearing horizontal surfaces
- Interior and exterior below grade

SUBSTRATE

- Concrete and masonry

How to Apply

Surface Preparation

CURED CONCRETE

1. Surface must be clean, structurally sound, and fully cured 28 days.
2. Remove any loose or unsound brick or concrete.
3. Surface must be entirely free of oil, grease, paint, detergent, rust, laitance, or other surface contaminants. Surfaces can be damp but must be free of standing water.

4. Abrade the surface by abrasive blasting or other mechanical scarification techniques to profile of ICRI CSP 4. Water blasting is not recommended.
5. For full surface restoration 1/2 – 4" (13 – 102 mm) deep, use SP15 Spray Mortar. Trowel or spray SP15 onto prepared surface and finish with a wood or plastic float.
6. Allow the SP15 to cure a minimum of 4 hours at 70° F (21° C) before applying Sewer Guard[®] HBS 100. If the SP15 Spray Mortar cures for more than 12 hours, scarify surface to remove all laitance and prime the SP15 Spray Mortar with Nitoprime 60 before applying a coat of Sewer Guard[®] HBS 100 Epoxy Liner.

Mixing

1. Precondition all components to 70° F (21° C) for 24 hours before using.
2. If using a conventional airless sprayer, mix each component separately, then pour equal volumes of Part A and Part B into a clean pail. Scrape sides of containers to ensure correct mixing ratios.
3. Do not mix more material than is sprayable within the pot life of the mixed material.
4. Mix Part A and B together thoroughly for about 3 minutes using a slow-speed mechanical mixer to obtain a uniform color.

Technical Data

Composition

Sewer Guard® HBS 100 Epoxy Liner is a 100% solids cyclo-aliphatic amine-cured epoxy coating.

Typical Properties

PROPERTY	VALUE
Pot life , approx min, 20 4 gallons mixed, at 75° F (24° C)	
Mixing ratio , by volume (Part A to B)	1 to 1
Tack-free time , hrs, at 75° F (22° C)	3 – 5
Final cure , days	7

Test Data

PROPERTY	RESULTS	TEST METHODS
Mixed viscosity , cps, #6 spindle, 50 rpm	9,000 – 11,000	Brookfield
Adhesion to dry or damp concrete , psi (MPa)	350 (2.4); minimum substrate failure	ASTM D 4541
Adhesion to SP15 , psi (MPa)	350 (2.4); minimum substrate failure	ASTM D 4541
Tensile strength , psi (MPa)	3,000 (20.7)	ASTM D 638
Compressive strength , psi (MPa)	8,500 (58.6)	ASTM D 695
Hardness , Shore D	78	ASTM D 2240
Tensile elongation , %	3	ASTM D 638
Compressive modulus , psi (MPa)	5 x 10 ⁵ (3,400)	ASTM D 695
Flexural strength , psi (MPa)	4,300 (29.6)	ASTM C 580
Flexural modulus , psi (MPa)	3.5 x 10 ⁵ (2,400)	ASTM C 580
Weight change , after 1 year		
Sulfuric acid concentration	%	
pH 1	0.7	
pH 2	0.3	
pH 3	0.3	

All application and performance values are typical for the material, but may vary with test methods, conditions, and configurations.

Chemical Resistance

Specimens cured 7 days at 75° F (24° C); 1 month immersion time

CHEMICAL	RESULTS
Bleach	Resistant*
Detergent	Resistant
Gasoline	Resistant
Sodium chloride (20% solution)	Resistant
Sodium hydroxide (20% solution)	Resistant
Sulfuric acid (5% solution)	Resistant
Sulfuric acid (10% solution)	Resistant

*Defined as no severe color change or deterioration of the samples.

Priming

Prime surface with Nitoprime 60. Apply Sewer Guard® HBS 100 after the primer has become tack free (3 hours at 70° F [21° C]). Recoat with Sewer Guard® HBS 100 no later than 48 hours after priming with Nitoprime 60.

Application

SPRAY APPLICATION

1. Spray apply with a Graco® HydraMax™ 350 (4,000 psi) airless sprayer or equivalent. Use a high-pressure spray hose with an I.D. of 3/8" and a Graco® Flex Plus gun with a heavy-duty RAC tip (0.025 – 0.031).
2. For moderate chemical conditions, apply Sewer Guard® HBS 100 Epoxy Liner at 30 mils (0.76 mm) at approximately 50 ft²/gallon (1.3 m²/L).
3. Harsh chemical environments require thicker applications at 80 – 125 mils (2.0 – 3.2 mm). Two coats may be required to achieve a void-free film on very porous surfaces.
4. Do not use this product if the air, substrate, or material temperature is below 45° F (7° C) or expected to fall below 45° F (7° C) within 12 hours of application.

ROLLER APPLICATION

Use a 1/4" (6 mm) nap synthetic roller. Only mix enough material that can be applied within 20 minutes. Be aware that spraying is the preferred method of application.

RECOATING SEWER GUARD® HBS 100

Recoat within 24 hours at 70° F (21° C). After 24 hours, mechanically abrade the entire surface of the coating and clean with acetone or MEK. Allow HBS 100 to dry and reapply coating within 1 hour.

Clean Up

Purge the airless system with xylene before material has time to set. Cured material must be removed mechanically.

For Best Performance

- Precondition all components to 70° F (21° C) for 24 hours before using.
- Do not use this product if the air, substrate, or material temperature is below 45° F (7° C) or expected to fall below 45° F (7° C) within 12 hours.
- Temperature variations affect nonsag properties of this product. Higher temperatures may cause the product to sag; lower temperatures will decrease workability of product by causing it to thicken.
- Do not thin; solvents will prevent proper curing.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current version.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety

SEWER GUARD® HBS 100 EPOXY LINER PART A

Warning

Sewer Guard® HBS 100 Epoxy Liner Part A contains epoxy resin, alkyl (C11-C14) glycidyl ether.

Risks

May cause skin, eye and respiratory irritation. May cause dermatitis and allergic responses. Potential skin and/or respiratory sensitizer. Ingestion may cause irritation.

Precautions

Use only with adequate ventilation. Avoid contact with skin, eyes and clothing. Keep container closed when not in use. Wash thoroughly after handling. DO NOT take internally. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product contains materials listed by the State of California as known to cause cancer, birth defects or other reproductive harm.

VOC Content

1.5 g/L or 0.01 lbs/gal less water and exempt solvents when components are mixed and applied per Manufacturer's instructions.

SEWER GUARD® HBS 100 EPOXY LINER PART B

Danger—Corrosive

Sewer Guard® HBS 100 Epoxy Liner Part B contains benzyl alcohol; Tetraethylene pentamine; nonylphenol; 2,4,6-Tris((dimethylamino)methyl)phenol

Risks

Contact with skin or eyes may cause burns. Ingestion may cause irritation and burns of mouth, throat and stomach. Inhalation of vapors may cause irritation. May cause dermatitis and allergic responses. Potential skin and/or respiratory sensitizer. Repeated or prolonged contact with skin may cause sensitization. Reports associate repeated or prolonged occupational overexposure to solvents with permanent brain, nervous system, liver and kidney damage. INTENTIONAL MISUSE BY DELIBERATELY INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

Precautions

DO NOT get in eyes, on skin or clothing. Wash thoroughly after handling. Keep container closed. DO NOT take internally. Use only with adequate ventilation. DO NOT breathe vapors. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

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**For medical emergencies only,
call ChemTrec (1-800-424-9300).**

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