

A blue-tinted photograph of an industrial facility, likely a refinery or chemical plant, showing a complex network of pipes, walkways, and structural steel. The image is used as a background for the top section of the document.

# STRONGBACK® GS-561 EPOXY

## PRODUCT DATA SHEET

**GS-561** is the first of just two components necessary to apply a standard StrongBack composite pipe reinforcement system. The GS-561 is a 2-part epoxy coating, which can be easily applied over a prepared pipe surface, by gloved hand, spatula or straight edged spreader. The epoxy coating acts as a corrosion inhibitor but also and primarily as a load transfer medium, transferring hoop stresses from the damaged pipeline to the second component of the system, the StrongBack tape.

GS-561 is based on a unique blend of liquid epoxy polymer and aliphatic polyamine curing agents which is able to displace water from wet surfaces in order to make a permanent bond. The formulation is solvent-free to ensure safety and maximum technical performance. Kevlar™\* fibers are incorporated for reinforcement and viscosity management to achieve high application rates—even underwater—and to provide permanent protection under the most adverse conditions. It uses advanced low toxicity curing agents. GS-561 can be shipped “Non-Regulated” by USDOT, IATA, and IMO.

### TECHNICAL INFORMATION

VEHICLE TYPE	Epoxy/Aliphatic amines
PIGMENTATION	Color/inert/fibrous reinforcement
COLORS	Green
FINISH	Semigloss
THINNER	Not required
CLEANER	GS Solvent 009-00000 or standard epoxy thinner
MIXING RATIO	1.0/1.0 (Volume)
INDUCTION	Not required
POT LIFE	40 minutes at 27°C (80°F)
FLASH POINT	38°C (100°F) (Closed cup)
SOLIDS BY VOLUME	100%
SPREADING RATE	12m/L (53.5 sq.ft./gal @ 30 mils)
DRY TIME (Touch)	4 hours at 27°C (80°F)
DRY TIME (Hard)	14 hours at 27°C (80°F)
STORAGE CONDITIONS	Normal, freezing OK

### RECOMMENDED USES

#### STRONGBACK PIPE REINFORCEMENT SYSTEM

Acts as the load transfer medium from the damaged or corroded pipe surface to the StrongBack Tape.

#### ANTICORROSIVE COATING

Splash zone, abrasion resistance above or below water.

#### REPAIR COMPOUND

Patching, leak sealing etc. above and below water.

#### FAIRING COMPOUND

Smoothing rough steel and concrete exposed to erosion.

#### ADHESIVE MORTAR

In dry, wet, or submerged situations.

#### UV PROTECTION

For exposed, above ground, or underwater substrates

## TECHNICAL INFORMATION (continued)

SHELF LIFE	12 months, minimum
VOC	Essentially zero

\*Kevlar is a trademark of El DuPont de Nemours Co.

## APPLICATION NOTES

### SURFACE PREPARATION

Remove marine biological settlement and corrosion by high-pressure water jetting with or without abrasive or by air/abrasive blasting at shallow depths. Hand held power tools such as needle guns or grinders can give good results if applied conscientiously in small areas but will be inadequate in large areas. Plan to apply the GS-561 within 30–45 minutes after surface preparation to minimize re-rusting or initial settlement of fouling slime, which interferes with initial adhesion.

Application above water requires high pressure water blasting or dry abrasive blasting to yield a firm, granular surface free of loose contamination. Wire brush, file or sand paper will provide adequate surface roughness in some situations.

### MIXING PROCEDURE

GS-561 is supplied in 2-part kits, each part being of equal quantities respectively of epoxy base and curing agent. These components are formulated in contrasting colors, yellow base, and blue curing agent, to facilitate complete mixing by yielding an olive green mixture. Using different spatulas, remove equal quantities of base and curing agent from their cans and place them side by side on a flat sheet of clean plastic, fiberboard, etc. Mixing is easily accomplished by folding the components into each other using a spatula or piece of wood. Visible streaks of either yellow or blue during the course of mixing indicate “hotspots” of unmixed components. More thorough mixing effort is required. Once mixing begins, there will be about 40 minutes of working time available. Working time can be extended by keeping the components and mixture cool.

### APPLICATION

Applicators, such as broad putty knives or plastic straight edged glue spreaders, work well on most surfaces. Painter’s mitts or gloves work well on small pipes when used with a smearing motion. Dip the applicator or gloves into mixed GS-561 and transfer to the surface. Applicators are used to spread out the coating by “buttering” to a uniform thickness. Thicknesses up to 1/4” (250 mils) are easily possible on vertical surfaces; however, experience has shown that 25–35 mils gives excellent protection on steel splash zones.

GS-561 is different from traditional coatings as it has a strong tendency to stick securely to underwater surfaces. Contact with diver’s equipment should be

minimized by providing protection with plastic bags, inexpensive rainsuits, etc. The mixed GS-561 should be taken underwater in a can or bucket. Make provision to hang the container on the structure using a hook or magnet, particularly if the visibility is poor.

### NOTE

Temperature has a significant influence on the rate of hardening of the GS-561. Generally, expect each 10°C (18°F) rise or fall in temperature to halve or double drying times and potlife. GS-561 may be applied in temperatures as low as -43°C (-45°F)—curing will be slow. However, the viscosity of the material will still be workable.

### CURING BEFORE SERVICE

GS-561 may be immersed in fresh or salt water immediately after application. It will cure to a hard film within about 14 hours and is suitable for traffic after this time. Allow at least three (3) days at (25°C) before subjecting to aggressive chemical service from industrial solvents and similar materials.

---

**WE URGE YOU TO READ THE MATERIAL DATA SHEET; (MSDS), BEFORE USING AND TO CALL NIXUS INTERNATIONAL AS NECESSARY FOR ADVICE OR INFORMATION BEFORE ANY ACTUAL OR CONTEMPLATED APPLICATION.**

### SAFETY

Read and understand the Material Safety Data Sheet (MSDS) before use.

### WARRANTY DISCLAIMER

The technical data given herein has been compiled for your help and guidance and is based upon the StrongBack Corporation’s experience and knowledge. However, as we have no control over the use to which this information is put, no warranty, express or implied is intended or given. We assume no responsibility whatsoever for coverage, performance or damages, including injuries resulting from use of this information or of products recommended herein.