



INSTALLATION SOLUTIONS

GB-0140-1.1, Rev. 2

**SHIP-SAFE STANDARD V-100 EPOXY GROUT PRODUCT DATA**

Ship-Safe Standard V-100 Epoxy Grout is a reformulated version of the original V-100, now classified as non-hazardous for shipping. This eliminates hazmat fees and delays, making transportation easier and more cost-effective.

As with all V-100 grouts, Ship-Safe delivers excellent physical properties, easy mixing, and smooth placement. This 100% solids, two-component epoxy system is designed for high-strength applications where impact and chemical resistance are essential. Unlike concrete or lower-grade grouts, it won't crack or fail under heavy, concentrated loads.

**Packaging/Yields:**

- Ship-Safe Standard V-100® Epoxy Grout, 11# Kit (0.10 Cu. Ft.)
- Ship-Safe Standard V-100® Epoxy Grout, 22# Kit (0.21 Cu. Ft.)
- Ship-Safe Standard V-100® Epoxy Grout, 55# Kit (0.53 Cu. Ft.)



Ship-Safe Standard V-100® is an ideal choice for:

- Grouting machine bases
- Installing anchor bolts
- Setting of Fixators and other leveling devices
- Placing of sole plates
- Repairing deteriorated foundations

Ship-Safe Standard V-100 is engineered for rapid strength development, allowing equipment to be loaded much sooner after grouting compared to traditional materials. This feature alone can significantly reduce downtime during installations and repairs, making it an ideal choice for operations where time is critical.

One of the standout qualities of Ship-Safe Standard V-100 is its long-term durability. Unlike conventional grouts that may require periodic reapplication, Ship-Safe is designed for permanence. This eliminates the need for repeated regrouting, which in turn saves labor, reduces equipment downtime, and minimizes production loss over time.

Its performance extends beyond strength and longevity. Ship-Safe offers exceptional resistance to oils, greases, acids, alkalis, and solvents—far surpassing the chemical resilience of typical cement-based products. Mechanically, it delivers superior strength, boasting tensile strength at least ten times greater than concrete and compressive strength approximately five times higher.

In terms of application, Ship-Safe Standard V-100 is highly versatile. It flows easily into tight spaces as small as 1/2 inch beneath machinery, filling voids completely before setting. It supports pour thicknesses ranging from 1/4 inch up to 1 inch in unconfined areas, and up to 1 1/2 inches under base plates. For thicker pours, multiple layers can be applied without compromising integrity. Even in regrouting scenarios, the process is simple—there's no need to disconnect or relocate equipment. A slight lift is all that's required to re-grout efficiently in place.

**Physical Properties @ 72°F (22°C)**

<b>Compressive Strength</b>		
(ASTM D-695)	8 hours	4,000 psi
	1 day	9,200 psi
	3 days	13,000 psi
	7 days	15,000 psi
<b>Compression Modulus</b>		
		348,000 psi
<b>Tensile Strength</b>		
(ASTM D-638)		3,900 psi
<b>Heat Deflection Temperature</b>		
(ASTM D-648)		135°F
<b>Maximum Service Temperature</b>		
		175°F
<b>Hardness (Shore D)</b>		
(ASTM D-2240)		86
<b>Mixed Viscosity</b>		
(ASTM D-2196)		10,000 cps
<b>Specific Gravity</b>		
(ASTM D-792)		105 lbs./Cu. Ft.
<b>Placement Time</b>		
		10-15 min.
<b>Tensile Modulus</b>		
		362,000 psi
<b>Coefficient of Thermal Expansion</b>		
(ASTM D-696)		2.0 x 10 <sup>-5</sup> in./in./°F
<b>Creep Test (ASTM C-1181)</b>		
	600 psi @ 150°F cured 24 hours @ 70°F 16 hours @ 150°F	1.98 x 10 <sup>-2</sup> in./in.

**IMPORTANT ADVANTAGES: PERMANENCE**

Ship-Safe Standard V-100® is durable materials that will maintain machine alignments for a long time. Saves downtime, labor, and lost production. Resistance to oils, greases, acids, alkalis and solvents is much greater than that of cement-based materials. Tensile and flexural strengths are at least 15 times that of concrete and compressive strength is about 5 times that of concrete.

**PACKAGING/CONVENIENCE**

Ship-Safe Standard V-100® is packaged in a kit with the base resin packed in an oversized container large enough to serve as a mixing vessel. The hardener portion of the kit is added to the base resin on-site. A Traditional Epoxy Mixing Paddle can be purchased separately to fit a standard 1/4" electric drill. After a mix time of 2-3 minutes a 15 minute working time remains for placement of the material.

**EASY, FLOW-INTO-PLACE INSTALLATION**

Flows into spaces under machines of 1/2" or less and fills completely before solidifying.

**RE-GROUTS**

When required due to soil and foundation settlements, regrouting is as simple as breaking any rigid connections from our facility to the equipment and raising it to the correct elevation and/or alignment. Establish a proper minimum section and regrout with Ship-Safe Standard V-100® Epoxy Grout.

**MINIMUM MATERIAL USAGE**

Maximum thickness of 1" (unconfined), up to 1 1/2" under a steel plate. Minimum thickness of 1/2". Contact Unisorb for assistance if your unique application requires thicknesses outside of these parameters.

**FAST CURE**

At 77°F, a 1/2" thickness will set up for use in 8 hours.

Physical properties shown are the result of laboratory testing performed per industry recognized test procedures. Laboratory properties aid in determining suitability of the product for the intended application. Field testing results may vary due to procedures or ambient conditions such as temperature and humidity. Laboratory reports are available on request.

*Consult the specific Safety Data Sheets (SDS) for all safety data.*

*Contact Unisorb for all application questions and grouting support.*



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**CONCRETE SURFACE PREPARATION**

Remove all oil, grease and contamination from concrete. Remove loose and weak concrete from the foundation surfaces. The concrete must be dry and have no standing water.

**METAL SURFACE PREPARATION**

Base plates or soleplates to be grouted should be clean and free of rust, dirt and other surface contaminants.

**FORMING**

Method of forming must provide for rapid continuous placement of grout. Adequate clearance for grout placement and head must be provided. Forms should be watertight and greased or waxed to allow easy removal.

**PREPARATION OF EPOXY GROUT**

All unmixed grout components (resin, hardener, and aggregate) must be stored inside a dry, temperature-controlled storage environment with an approximate temperature range of 75°F to 90°F until all three components exhibit temperatures within this range. This could take 24 to 72 hours depending on seasonal temperature conditions.

**MIXING INSTRUCTIONS**

Pre-mix the resin component to ensure that the constituent liquids and solids are fully incorporated. When ready to mix grout, pour the hardener into the resin container and mix with a paddle with a low-speed, high-power drill until thoroughly blended. Periodically

scrape the sides and bottom of the container to ensure that all the resin is incorporated into the mixture. The grout is fully mixed when it is a smooth, consistent color with no dark blue or brown streaks in evidence. Do not add water.

**POURING**

Only pour grout from one side. This is to prevent the formation of air pockets under the equipment being grouted. Continue pouring until the grout has completely flowed to the other side of the equipment and to an adequate depth to eliminate potential voids. The grout will self-level under most circumstances but may need to be agitated, pushed, strapped, etc. to help the material flow under the equipment and properly self-level, especially in cold weather

**PLACEMENT TIME**

The time you have before initial set depends on the air temperature, the ambient temperature of the foundation and equipment, and the temperature of the grout. In cooler conditions you will have more time to place the material, and in warmer temperatures you will have less time.

**CURE TIME**

The cure time (the time until the grout is strong enough for use) is temperature dependent. Special precautions must be taken when temperatures are below 70°F or above 90°F to assure the grout will properly cure. Consult the factory for details.

**TEMPERATURE CONSIDERATIONS**

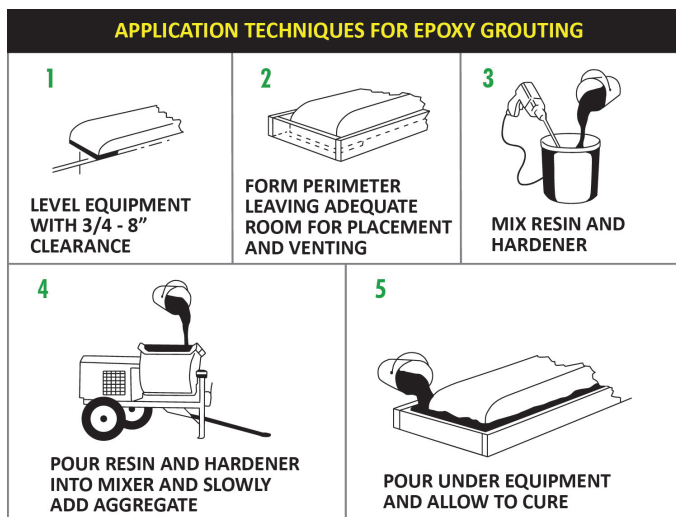
The temperature of the kit components (resin, hardener, and aggregate) at the time of mixing and placement have a significant effect on ease of mixing, placement of the mixed grout, and strength development. For optimum results it is very important all three unmixed grout components are within the 75-90 degree F temperature range. It is recommended that the grouting environment also be preconditioned to a temperature range of 70°F to 95°F to assure predictable results.

**CLEANUP**

Uncured grout may be cleaned from tools and mixing equipment with a mild solvent, detergent, or pressurized water rinse. For best results, clean mixing equipment and tools immediately upon completion of mixing activities.

**PRECAUTIONS**

Always wear appropriate Personal Protective Equipment (PPE). SDS are available on our website at [www.Unisorb.com](http://www.Unisorb.com). Avoid inhaling fumes and keep the work area well ventilated. Wash skin and clothes with soap and water immediately (before grout cures).



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