



**Wood Treatment and  
Preservation Products**

***We know wood rot  
and how to repair it!***

We are available 7 Days a week  
By Phone 206-364-2155  
and Email [drrot@rotdoctor.com](mailto:drrot@rotdoctor.com)

[Home](#) > [Product Line & Price List](#) > S-1 Clear Penetrating Epoxy Sealer



## **S-1 Clear Penetrating Epoxy Sealer**

---

After more than twenty years of dealing with wood rot, it is our experience that stabilizing the remaining material with a penetrating epoxy is the key to a permanent, high strength repair. Done properly, using high quality products, it is our opinion that the resulting repair can equal the strength and durability of replacement. Often at less cost. We are happy to put our decades of experience at your disposal, so that your project turns out to your satisfaction.

### **Description**

S-1 Epoxy Sealer is a 50% solids epoxy/polyamide system. Mixed at a simple 1:1 ratio, S-1 is extremely effective at prolonging the service life of all woods, concrete, metals and fiberglass reinforced polyester. S-1 is ready to use with no thinning required. It is completely waterproof suitable for use above or below the waterline. S-1 is a superb under-coat primer for most paints and clear finishes featuring strong adhesion to most substrates with minimal surface preparation.

S-1 does not require sanding between coats if recoat time is less than 24 hours. It is resistant to salt air and water, mild acids, alkalis, chemicals and solvents. S-1 is not recommended for gas tanks containing unleaded gasoline.

### **Packaging**

S-1 Epoxy Sealer is available in 2 Pints, 2 Quarts and 2 Gallons. 10 Gallon units are available by special order.

### **Product Uses**

**For Wood:** S-1 seals effectively against moisture, helping to protect against wood rot. When wood rot does occur, it is an excellent first step in wood rot repair, penetrating deep into the residual deteriorated material. It is an ideal primer on bare wood before topcoating.

**For Concrete:** S-1 is an excellent moisture barrier for walls and floors. It works well as a dustproofer for floors.

**For Metals:** S-1 helps to prevent oxidation and chemical exposure effects including staining and tarnish.

**For FRP (fiberglass):** Coat polyester laminates with S-1 to provide complete moisture resistance that the fiberglass by itself cannot provide. Use as a first sealer step in gelcoat blister

repair, after the blisters have been ground out.

## Advantages

- Ready-to-use viscosity, no thinning required
- Excellent wetting properties on most surfaces
- Applies by brush, roller, or spray
- Long pot life
- Waterproof
- Strong adhesion to most substrates with minimal surface preparation
- Non-brittle even at extremely low temperatures
- Resistant to salt air and water, mild acids, alkalis, chemicals, and solvents (Not unleaded gasoline-proof).

## Properties

Mix Ratio by Volume:	100:100
Mix Ratio by Weight:	100:94
Total Solids:	50%
Mixed Viscosity:	100cps (between cough syrup and tomato juice)
Density:	7.9 pounds/gallon
V.O.C. Content:	562 grams/liter (4.91 lb/gal)
Mixed Color:	Clear
Application Temperature Range:	50–95°F (10–35°C)
Coverage (wet) @ 250 microns (10 mils):	300–350 sq ft per gallon
Maximum Service Temperature:	-4–160°F (-20–72°C)
Pot Life @ 70°F (21°C):	24 Hours
Tack-free Time:	4–6 hours @ 77°F (25°C)
Recoat (Without Sanding):	up to 24 hours
Full Cure:	24–48 hours @ 77°F (25°C) Dry times will vary with temperature, humidity, and ventilation.

Thinning:	None required on subsequent coats or over sanded varnish or resin.
Clean Up:	Use lacquer thinner.

## Application

S-1 can be applied by brush, roller, spray or injected into drilled holes/cracks. For best results, apply S-1 between 50–95°F (10–35°C).

**GENERAL SURFACE PREPARATION:** Surfaces should be free of dust, grease, oil, wax, and any other foreign matter. Sand with 100–150 grit sandpaper, unless the surface is rotted wood. Use a tack rag to completely remove dust prior to application of S-1.

**OVER ROTTED WOOD:** Remove loose, well rotted wood if practical. Make sure remainder is dry. Apply S-1 Sealer repeatedly every 10–30 seconds, until absorption stops or slows significantly.

**OVER CURED EPOXY RESIN:** Sand epoxy substrate with 220 or 320 sandpaper to remove as much of the gloss as practical. Ensure surface is clean and dry then apply S-1. Resin surface may require up to 2 weeks prior to coating for all residual curing agent to be out of the surface.

**NEW WORK (BARE WOOD):** Apply 1–3 coats, depending on application. If S-1 is going to be exposed to UV light, a durable top coat is needed.

**OLD WORK:** If previously varnished surface is in good condition, sand and varnish. If old finish is not in good condition, remove and proceed as with new work.

**Mixing Containers:** S-1 can be mixed in polyethylene and polypropylene containers (plastic paint buckets, margarine tubs, cottage cheese tubs, etc.), and metal containers. Do **NOT** use paper containers (cardboard paint buckets), polystyrene (foam) containers, or any disposable drink containers.

**Brushing:** Use only natural bristle brushes, such as the [disposable brushes](#) sold by The Rot Doctor, or the ones found at home stores. Do not use foam brushes!

**Rolling:** S-1 can be easily rolled on any flat surface. Use a solvent-resistant roller with a medium nap.

**Spraying:** Use high quality insecticide spray bottles/equipment or the [spray bottle](#) we sell, which has been tested for handling strong carrier solvents. When spraying the nozzle should be set to coarse spray, and a [cartridge respirator](#) should be worn to protect against inhaling the solvent fumes.


**Injecting:** Use our special [nylon-bushing syringe](#), or a high quality medical or solvent syringe. We now offer [disposable syringes](#) as well.

**Cleaning:** All brushes/equipment can be cleaned with lacquer thinner.


### Application Guide

The following diagrams and steps show the application process based on the severity of rot. Of course, each rot situation is unique and what you do will depend on what you're dealing with—but these basic techniques will get you started. The folks at **THE ROT DOCTOR™** will answer any questions and give you technical advice via email or by phone if you can't find the answer on our web site. We will also examine photos of your project if they are sent to us as jpeg files.


**Light Rot**




**1** Brush or dab **Penetrating Epoxy** on surface of rot, allowing last area to absorb all the liquid it can.  
Let cure 1 to 3 days.




**2** Optional: Go back over surface with **Epoxy Filler, Putty or Paste** if required.



**Moderate Rot**




**1** Remove any badly rotted wood if necessary. Try to get the area as dry as possible. See Note 1.




**2** Brush or inject **Penetrating Epoxy** into and around rotted area. Apply all the liquid the area will accept.  
Let cure 1 to 3 days.

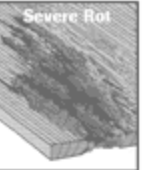
**3** Optional: Follow-up with **Epoxy Resin** if more fill is required.



**4** Apply **Epoxy Filler, Putty or Paste** into any remaining rotted area.




**Severe Rot**




**1** Remove chunks of rotted wood. Try to get the area as dry as possible. See Note 1.  
Drill holes for injection if large timber.

**2** Completely soak, spray and/or inject **Penetrating Epoxy** into the area. Apply generously. Make sure liquid flows into all cracks and grooves.  
Let cure 1 to 3 days.



**3** **Epoxy Resin** can be applied with a brush and/or caulking tube pumped into rotted area. Let cure 24 hours.


**4** Fill rotted areas with **Epoxy Filler, Putty or Paste** or a mixture of **Epoxy Resin** and fine sand/silica, etc. for special situations. See Note 2.



**NOTE 1:** In order to get the most out of your epoxy, the wood must be as dry as possible. If the wood is not dry, the epoxy will not penetrate and will not cure. In some critical applications, it is not recommended to use epoxy on wet wood.

**NOTE 2:** For special situations, such as filling large holes or deep cracks, a mixture of epoxy resin and fine sand/silica, etc. may be used. See Note 2.

**Click Image to Enlarge**



**Pouring out of the Gallon cans:** The initial pouring of S-1 from gallon cans can be difficult unless it is done correctly. We supply free pour spouts with all our gallon units. If you have a pour spout, do this: tilt can on broad side bottom wide edge with the opening at the top. Tip carefully with the container lip under the edge of the can opening/pour spout. S-1 will pour freely without gurgling or splashing.

### **As a general purpose sealant and preservative:**

We apply S-1 generously to any exposed wood that is in an area that is subject to heat and moisture. We inject it into nooks, cracks and crannies that are exposed when prepping for painting. We apply it to the end grain of all wood, especially in corner locations. Such as into cracks between the rub rail and the hull. We use it for any nailed or screwed wood interfacing, such as decking planks to joists. We inject it into fastening holes when hardware is removed or replaced. If there is bare wood around, it gets soaked in S-1.

***ALWAYS MIX THOROUGHLY!  
IMPROPER MIXING IS THE GREATEST CAUSE OF EPOXY SYSTEMS FAILURE.***

S-1 is a hazardous product. Check the [shipping options](#) page for details on shipping hazardous items. For additional information refer to the S-1 [Safety Data Sheet](#).

**NOTE: We are unable to ship S-1 to zip codes that fall within the South Coast Air Quality Management District (SCAQMD). The SCAQMD includes all of Orange County; and the non-desert regions of Los Angeles and Los Angeles County, San Bernardino County, and Riverside County.**



**The Rot Doctor, Inc.**  
**P.O. Box 30612**  
**Seattle, WA 98113**  
**Voice: 206.364.2155**  
**Fax: 206.364.4744**  
**E-mail: [drrot@rotdoctor.com](mailto:drrot@rotdoctor.com)**

Order by phone, fax, mail, or e-mail.



© 1997–2021 The Rot Doctor, Inc.

**All products ship within 2 business days from both coasts!**

**Our business hours are 6:30 AM to 5:30 PM Pacific Time, Monday–Friday.  
 Tech support is available over weekends and holidays.**