

KRYSTALSEAL™ DATA SHEET

CHEMICAL & FUEL IMPERVIOUS, VAPOR BARRIER, HIGH-SOLIDS, DEEP-PENETRATING EPOXY SEALANT

KRYSTALSEAL™ is an easy-to-apply, high-solids, deep-penetrating sealer for most porous masonry surfaces. **KRYSTALSEAL™** has very low viscosity and high polarity. This combination results in the deepest possible, continuous penetration, and provides an excellent impunity to water, acids, chemicals & solvents. A **KRYSTALSEAL™** treated surface will have markedly improved resistance to:

- Acids, alkalis & caustic chemicals
- Water damage/staining
- Fuels, oils, petro-chemicals & solvents
- CCA & all wood preserving chemicals
- Perchloroethylene (Perc) & related solvents
- Impact and abrasion
- Thermal expansion and contraction
- UV and IR exposure

Penetration

One gallon of **KRYSTALSEAL™** seals an area of @ 125 - 150 sq.ft., averaging 3/8-inch penetration, ranging from 1/8-inch to 1/2-inch depth for most masonry, such as cinder block, floor tile, construction grade concrete and natural rock. For coverage estimation, figure 137 sq.ft./gallon.

Surface Preparation

KRYSTALSEAL™ must be applied to a clean, dry surface (no paint, oil, rust, grease, dust or any contaminants). The performance of this product is completely dependent on the amount of penetration, which is determined by the porosity and the moisture content of the surface. Shot-blasting or high pressure water blasting may be needed, if the existing surface is painted. After Shot-blasting, rinse surface to remove dust, then let completely air dry.

Mixing

KRYSTALSEAL™ is supplied in two parts, which must be well mixed before use. **KRYSTALSEAL™** comes pre-proportioned, by weight, at one part Curing Agent to two parts Base Compound. Approximately 5-minutes of medium speed, mechanized, impeller-mixing is recommended. Mixing should be done on-site, with forced air (fan) ventilation. A mild, harmless, exothermic reaction will take place, causing the mix to heat. Example: from 75°F ambient, a 100-gram sample reached 110°F in two hours. Larger amounts will warm faster & heat to a higher temperature. Thinning in cold temperatures is recommended (See separate "Application Guidelines").

Application

The surface must be absolutely dry for maximum penetration and effectiveness. Standard painting equipment can be used to apply the mixed product. Spray, roll, brush, or squeegee a generous coating onto the surface to be sealed. Within 30 minutes, **KRYSTALSEAL™** will have fully penetrated. Check for integrity with a 15X lighted magnifier. A micro-pocket does not cause a problem, if the bottom is sealed. If there are still open pores, apply an additional coat. If there is any doubt, drill a 1/2" diameter hole about 1/8" deep. There should be no exit holes out of the bottom or the sides. Fill the test hole with **KRYSTALSEAL™**.

Approved Uses

KRYSTALSEAL™ has certified test results for use as a Drip Pad sealant for **CCA (Type C) 60%** wood preservative. Engineer-specified as a railroad concrete abutment & concrete bridge sealer, and as a concrete vault lining/sealer for **UST** fuel, potable and waste water, primary & secondary containment. Applicable in Poultry & Livestock production farms, grading/packaging rooms, bulk storage, slaughterhouses and meat & food processing, packaging, and cold-storage facilities. **KRYSTALSEAL™** is compatible with *FedSpec EPOXIPATCH™/Kote™* concrete repair & patch compound, *FedSpec TWI-500™* expansion joint & core packing compound, *CalTrans- & USDA-Approved KRYSTALKOTE™* anti-microbial, architectural coating, and *USDA-Approved KRYSTALTRED™* non-slip, anti-microbial floor, ramp, and walkway coating.

Cleanup

Tools and equipment may be cleaned with Acetone, M.E.K., Toluene, Lacquer Thinner, or an approved low-V.O.C. thinner/cleaner.

Chemical Resistance

(minimum in weeks)

<u>Reagents</u>	<u>Weeks</u>
	NO FAIL
Water	52
Hydrochloric Acid (HCl) 10%	52
Hydrochloric Acid (HCl) 36%	14
Sulfuric Acid (H ₂ SO ₄) 20%	52
Sulfuric Acid (H ₂ SO ₄) 50%	14
Ammonia 25%	14
Sodium Hydroxide (NaOH) 50%	52
Xylene	52
Gasoline	52
Diesel Fuel	52
Skydrol	52
Isopropanol Alcohol	52
Ethanol 50%	52
Methyl Ethyl Ketone	(Failed in 12)

Packaging

KRYSTALSEAL™ is a tintable clear liquid, normally supplied in 1-gallon can kits (4/case), 5-gallon pail kits, 14-gallon multiple pail kits, and 55-gal drums. Pre-measured Curing Agent included. Custom tinting color specified at time of order.

Properties

Viscosity of Base Compound:	14 poise
Viscosity of Curing Agent:	1 poise
Viscosity of mixed product:	5 poise
Weight ratio of base to cure agent:	2:1
Volume ratio of base to cure agent:	2:1
Total volatiles in mixed product: (0.55 lbs/gal)	7% by wt.
Total solids in mixed product	93% by wt.
Penetration (porosity dependant):	1/8" to 1/2"
Maximum crack bridging (single coat):	1/32"
Appearance of normal mix:	Clear light amber
Pot-life (all times at 77°F):	@ 2 hours
Dry-time for "light" vehicular traffic:	24 hours
Resumption of normal traffic:	48 hours
Full cure-time prior to coating:	72 hours

With optimum penetration and curing of brick, concrete or masonry:

- 1.) The **shock resistance** of the surface will be doubled to quadrupled;
- 2.) The **compressive strength** can be doubled; and
- 3.) The **tensile strength** will be doubled to tripled.

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