



*Chemical Resistant, Water Cleanable*

# **VISION EPOXY**

*Tile-Setting and Grouting Epoxy*

**Product Name:** Vison Epoxy

**Manufacturer:** Vison Tech Products LLC

## **Product Description**

VISON EPOXY is a professional formula with high chemical resistance and bonding strength. The water-cleanable, 100% solids epoxy formula has outstanding adhesion to concrete, plywood subfloors, fiberglass and metal surfaces. VISON EPOXY is also ideal for quarry, porcelain, glass tile and special bonding conditions of moisture-sensitive stone installations. It can be used in industrial, commercial and residential applications as a chemical and stain-resistant grout. VISON EPOXY can be used interior or exterior floors, walls or countertops. It can be used where harsh washing, sanitary requirements and/or spill resistance is required

## **Packaging**

**COLOR:** Available in 7- colors

**PACKAGING:** Pail contents A) 2-lbs Epoxy resin liquid, B) 1- lb Hardener resin liquid C) 10-lbs Powder consisting of specially graded silica quartz.

## **Area Of Use**

VISON EPOXY may be used for grouting and setting all tile types such as ceramic, mosaic, quarry, cement body tile, impervious tiles and natural stone. This product is ideally suited for bonding moisture sensitive stone (such as green marble). Vison Epoxy used as a grout can provide maximum chemical and stain resistance. Another feature of the grout is that it will require no sealers. The color of the Vison Epoxy will not change wet (darken) and dry (lighten) in installations such as a shower or pool water line. The color will remain consistent. Use with tile or natural stone with joints from  $\frac{1}{8}$ " to  $\frac{1}{2}$ ".

## **Key Benefits and Features**

- Excellent chemical and stain resistant grouting and bonding mortar
- Industrial, commercial and residential installation
- No additive or no sealer required
- All components are pre-measured and ready to mix
- Interior/Exterior use
- Meets and exceeds ANSI A118.3 specifications.

## **Limitations**

Should not be installed when ambient surface temperature is lower than 50°F (10°C) or higher than 95°F (35°C). Some ceramic tile, marble or stone can be scratched, stained or darkened by epoxy resins. Tile with high absorption, surface porosity or rough, textured surfaces and certain types of porcelain may require sealing prior to grouting to prevent staining. Color variation can occur due to tile type, tile porosity, jobsite conditions, application and cleaning techniques.

## **Applicable Standards**

Mixed and tested in accordance with ANSI A108.6 and A118.6 Specifications for Chemical Resistant, Water Cleanable Tile-Setting and Grouting Epoxy.

## **Mixing Ratios – A, B and C parts**

Mix in a clean water container: A) 2 lbs. -Epoxy resin liquid, B) 1 lb. - Hardener resin liquid to a uniform blend. Slowly add and stir C) 10 lbs. -Powder specially graded silica quartzes into a smooth, non- flowable paste.

## **Mixing Procedures**

Mix with a trowel or low speed mixer (less than 300 rpm) to achieve a smooth, lump-free consistency. The mixture can be immediately used. Periodically restir to keep the mixture workable, but do not add water, which can weaken the product, cause color variation and possible cause shrinkage, cracks and pinholes. Discard grout when it becomes too stiff to work. Use the mortar within the bucket life of 90-120 minutes based on ambient temperature. Best results occur when 80-90% mixed mortar is placed in cooler work areas and not left in the container to gain heat.

## **Installation: For Bonding**

### **General Surface Prep**

All surfaces must be dry, structurally sound. Remove all grease, oil, dirt, curing compounds, sealers, adhesives or any other contaminant that would prevent a proper bond. Glossy or painted surfaces must be sanded, and stripped of all contaminants. Concrete must be free of efflorescence and not subject to hydrostatic pressure. Concrete slabs should have a coarse finish to enhance the bond. Plywood flooring including those under resilient flooring must be structurally sound and meet all ANSI and deflection requirements. Ambient temperature should be maintained above 50° F (10° C) or below 100° F (38° C) for 72 hours to achieve proper grout and bond installation.

### **Cementitious Substrates**

Concrete or plaster must be fully cured and must accept water penetration. Contaminants should be mechanically removed before installation. Concrete must be free of efflorescence and not subject to hydrostatic pressure. Concrete slabs should have a coarse finish to enhance the grout and bond. Smooth concrete slabs must be mechanically abraded to achieve proper bond.

### **Non-Cementitious Substrates**

All non-conforming surfaces such as strip wood, old plaster or painted surfaces can be covered with a cleavage membrane topped with a  $\frac{3}{8}$ " -  $\frac{3}{4}$ " (10 - 20 mm) reinforced mortar bed for walls and a  $1\frac{1}{4}$ " (32 mm) reinforced mortar bed for floors. After a minimum of 20 hours, the epoxy mortar may be applied to the mortar bed. Plastic laminate shall be sanded and well bonded to its substrate.

### **Tile over Tile and Other Surfaces**

Surface must be Portland cement grout and bond compatible, the old surface must be well grouted and bonded and without waxes, sealer, or coatings. Smooth or slick surfaces will be heavily scratched, scarred, coarse sanded or abraded to provide mechanical bond.

### **Expansion Joints**

Install expansion joints around all perimeters or restraining surfaces where possible to allow for expansion movement. Expansion joints and cold joints, as described in ANSI A108.01, should never be bridged with setting material. They must be brought through the tile work and filled with an appropriate elastomeric sealant. Contact Vison Tech's Technical Services for the proper treatment of control or saw cut joints. Refer to TCNA Handbook EJ171

### **For Bonding; Application**

Use a properly-sized notch trowel to ensure proper coverage under tiles. Using the flat side of the trowel, apply a skim coat of the epoxy mortar to the surface. With the notch side of the trowel held at a 45° angle, apply additional mortar to the surface, combing in one direction. Press the tile firmly

# VISION EPOXY

*Chemical Resistant, Water Cleanable*

*Tile-Setting and Grouting Epoxy*



into place in a perpendicular motion across ridges, moving back and forth. The perpendicular motion flattens ridges and closes valleys, allowing maximum coverage. Tiles with deep patterns, high lugs or those with irregular texture on the back surface may require "back buttering" to ensure 100% coverage of back of tiles. Proper method of bonding of tiles requires embedding, pressing and sliding tiles perpendicular to wet mortar ridges to have a nominal mortar thickness of  $\frac{1}{32}$ " -  $\frac{3}{32}$ " (1 - 3 mm) and 100% coverage. During the setting of tile, it is advisable to occasionally remove a tile to be sure mortar has not skinned over and sufficient transfer is being made. Do not adjust tiles in mortar after they have been set past 10 - 15 min. When installing natural stone units, the best practice installation method is to check and remove bond surface dust or loose particle before bonding.

### Trowel Recommendation

Smaller tiles will use smaller notched trowels and larger tiles will require larger notched trowel suitable for providing a minimum  $\frac{1}{32}$ " -  $\frac{3}{32}$ " (1 - 3 mm) bed thickness after embedding the tile. Spot bonding or mortar dollops application does not meet installation trade practices and provide proper adhesion and impact support.

### Bond Coverage per unit

$\frac{3}{16}$ " x  $\frac{1}{4}$ " V-notch trowel = 36 sq. ft. (3.3 m<sup>2</sup>)

$\frac{1}{4}$ " x  $\frac{1}{4}$ " square notch trowel = 22 sq. ft. (2 m<sup>2</sup>)

### For Grouting; General Surface Prep

Tile or stone must be firmly bonded to a sound substrate, and setting material must be cured a minimum 24 - 48 hours before grouting. Grout joint must be free of excess setting materials and job site debris. Use sealer to seal tile or stone subject to staining. Care should be exercised when applying a sealer so that the surface and not the tile edges are covered.

### Application

Use an epoxy grout float/green rubber float to spread and fully pack the joints between the tiles. Work only a small area at one time. Apply in a diagonal direction across the joint lines to prevent the grout from being dragged out of the joints. Go over each area several times from all directions to make sure that the grout is fully packed in. Remove any excess grout from the surface of the tile by holding the float at a 90° angle to the surface and moving it diagonally across the joints. Repeat the entire process until all joints are grouted.

### Working Time

Approximately 90-120 minutes, depending on ambient temperature.

### Clean-up

Vison Epoxy should be cleaned immediately with fresh water during the installation process. Vison Epoxy should not be allowed to set or firm on the face/surface of the tile. Wet a grout sponge in a pail containing cool, clean water and place an additional water layer to wet the tile and grout surface. Move the water soaked sponge across the tiles diagonally to smooth and smooth the grout down to the proper tile height in the joint. Continue this procedure, repeatedly rinsing the sponge in clean water and re-wetting the sponge with clean liquid. After final finish of grout is achieved, wipe and remove all excess cleaning water or residue that remains on the surface of the grout joint and tiles. To prevent any grout haze or resin film, the tile surface should be wiped and rinsed with a fresh clean water dampened terry-cloth towel.

### Protection

Protect the finished installation from traffic or impact for at least 24 hours after the setting or grouting stages.

### Temperature Range for Installation

Do not grout below 50°F or above 90°F ambient temperature.

### Curing

Curing time is affected by ambient, temperature and humidity. Cover and protect surface from other trades traffic or debris. Light traffic can be allowed after 20-24 cure.

### Maintenance Cleaning

Do not use chemical cleaner containing acid for routine maintenance programs for the first 14 days. Vison Epoxy is resistant to mold and mildew growth, but the organic material on the surface can provide a food source. It is recommended periodically cleaning surface with T.S.P solution to remove dirt, food residues, and scums which prevented mold and mildew growth.

### Sealing and Staining

No sealers are required for Vison Epoxy grout. Light colored grout may show walking traffic due to traffic volume. It may be necessary to increase maintenance frequency to remove collected surface debris.

### Specifications: Technical Data

Test	Requirement	Typical Values
Bucket life	-	1-2 hours
Initial Set	-	> 2 hours
Tensile Strength (PSI)	1000	>1000
Compressive Strength (PSI)	3500	>3500
Water Absorption (%)	.10	<0.1
Hardness (Shore D)	65	>65
Shrinkage after 7 days	.25	<0.25%
Sag on vertical joints	None	Pass
Bond Strength (PSI) Vitreous Tile after 14 days	1000	>1000

### Storage Life

One year if kept dry in sealed bag.

**KEEP OUT OF REACH OF CHILDREN**

### Warranty

Vison Tech warrants to the original consumer purchaser that its product shall be free from defects in material and workmanship under normal and proper usage for a period of one year following the date of original purchase. Vison Tech's sole liability under this warranty shall be limited to the replacement of the product. Some states, countries or territories do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty will not extend to any product which has been modified in any way or which has not been used in accordance with Vison Tech's printed instructions. Vison Tech makes no other warranties either expressed or implied. This warranty gives you specific legal rights, and you may have other rights that vary from state to state or from one country/territory to another.