

KEY UNIVERSAL HIGH TEMP COATING

Product Data Sheet



DESCRIPTION

KEY UNIVERSAL HIGH TEMP COATING is a one component, moisture cured polyurethane coating designed primarily as a high temperature protective coating for exterior metal surfaces of all types including walls, roofs and structural elements. **KEY UNIVERSAL HIGH TEMP COATING** has excellent adhesion to sound, tightly adhered rusty steel, other marginal or poorly prepared metal surfaces and properly prepared concrete. **KEY UNIVERSAL HIGH TEMP COATING** undergoes a rapid molecular weight change as it polymerizes into a high molecular weight finish with excellent corrosion and abrasion resistance and high temperature resistance. **KEY UNIVERSAL HIGH TEMP COATING** may also be used as a primer for all Key or FlowResin MMA Systems and Key Vinyl Ester Systems. **KEY UNIVERSAL HIGH TEMP COATING** must be used as a barrier primer applied in one or two coats as needed to achieve a pinhole free finish when applying Key or FlowResin MMA or Key Vinyl Ester materials over an existing epoxy basecoat.

KEY ADVANTAGES

- High temperature resistance up to 400°F
- Excellent primer and finish for all types of surfaces
- Barrier primer for applying MMA/vinyl ester over epoxy
- Superior "wetting out" properties over sound, rusty steel
- Can be recoated in 1 to 2 hours and can be top coated with most generic type coatings
- Cures down to 25°F on dry surfaces
- Corrosion resistant: Passes 12,000 hrs in salt cabinet

KEY CONSIDERATIONS

- Do not apply over frost, wet/damp surfaces, or in very high humidity conditions
- Clear formulation will yellow over time if used as a finish coat
- Must be recoated within 24 hours
- Seal partially used containers to prevent material from reacting with moisture in air
- Must be tacky when topcoated with Key Vinyl Ester or poor adhesion will result

COLOR SELECTION

KEY UNIVERSAL HIGH TEMP COATING is available in Aluminum or Clear only. Refer to VOC figures in chart.

COVERAGE

Concrete primer/barrier primer (2 coats recommended):

250-300 ft²/gal yields 2.9-3.4 mils DFT.

Steel primer/finish: 300-400 ft²/gal yields 2.2-3.4 mils DFT.

Volume Solids: 54%

COMPOSITION

Aluminum or clear polyurethane.

CURE/DRY TIME

| | |
|-------------------------|-------------------------|
| Working Life | 1-2 hrs @ 75°F, 50% RH |
| Recoat | 2-24 hrs @ 75°F, 50% RH |
| Service Temperature | up to 400°F dry |
| Application Temperature | 25°F to 140°F dry |

SURFACE PREPARATION

- **Concrete:** Shot blast or grind to a medium grit texture similar to 60 grit sandpaper or CSP-3.
- **Steel:** Sand blast to a SSPC-SP6 "commercial" blast finish. When blasting is not appropriate, remove all loose rust and mill scale by power wire brushing or hand tool cleaning. A tightly adherent rusty surface is acceptable.
- **Galvanized Steel:**
 - **New:** Brush blast per SSPC-SP7.
 - **Old, Weathered, or Rusty:** Remove all oil, grease, dirt, and other foreign matter. Surface should be reasonably clean, dry, and free of contaminants. Remove all loose rust, etc., as outlined above under Steel.
- **Previously Painted Surfaces:** Remove all loose, peeling, or blistered paint, and any other surface contaminants. Make sure surface is sound and dry.

INSTALLATION

Mix **KEY UNIVERSAL HIGH TEMP COATING** so that the aluminum pigment is thoroughly dispersed in the resin and a uniform "silver" color is achieved. When using **KEY UNIVERSAL HIGH TEMP COATING** over an extended period, stir occasionally to maintain uniform mixing of the material. Normally, it is not necessary to thin **KEY UNIVERSAL HIGH TEMP COATING**, contact **Key Resin Technical Service**.

KEY UNIVERSAL HIGH TEMP COATING may be applied by brush, roller, or spray. Roller covers should have a phenolic core and brushes should have natural bristles. Sprayers should have a moisture/oil trap for incoming air. Flush fluid lines with an anhydrous (water free) solvent prior to spraying **KEY UNIVERSAL HIGH TEMP COATING**. Flush sprayer every 1 to 2 hours during use to keep lines free of material build-up.

KEY UNIVERSAL HIGH TEMP COATING may be applied at temperatures between 25°F and 140°F. **KEY UNIVERSAL HIGH TEMP COATING** cures to a tack-free finish in 1-2 hours and can be recoated between 2 and 24 hours @ 75°F with 50% Relative Humidity. **KEY UNIVERSAL HIGH TEMP COATING** must be tacky when topcoating with Key Vinyl Ester or poor adhesion will result.

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TECHNICAL DATA

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| Mixing Ratio | Single Component Mix well |
| Gloss | Low Sheen |
| Volatile Organic Content - Clear (VOC EPA Method 24) | 390 g/L, compliant to high temp coating VOC Rule 1113 |
| Volatile Organic Content - Alum. (VOC EPA Method 24) | 446 g/L, non-compliant to high temp coating VOC Rule 1113 |

AVAILABILITY

Key Resin materials are available throughout the United States and a number of other countries. Contact the **Key Resin Representative** in your area for details.

CLEANUP

Clean skin with soap and water. Tools and equipment should be cleaned with xylene or lacquer thinner. Consult Safety Data Sheet (SDS) for safety and health precautions.

CAUTION

Proper ventilation is necessary when coating indoors or in confined areas. Vapors and spray mist may cause eye/skin irritation as well as allergic reactions. Always wear protective clothing, goggles, and use NIOSH approved respirators. Combustible, keep away from all sources of ignition. For industrial use only. Keep out of reach of children.

Shelf Life: 6 month minimum in unopened containers stored below 90°F.

WARRANTY

Key Resin Company ("Key") warrants for a period of one (1) year that its products will be free of manufacturing defects and will be in conformity with published specifications when handled, stored, mixed, and applied in accordance with recommendations of Key. If any product fails to meet this warranty, the liability of Key will be limited to replacement of any non-conforming material if notice of such non-conformity is given to Key within (1) one year of delivery of materials. Key may in its discretion refund the price received by Key in lieu of replacing the material. No customer, distributor, or representative of Key is authorized to change or modify the published specifications of this warranty in any way. No one is authorized to make oral warranties on behalf of Key. In order to obtain replacement or refund the customer must provide written notice containing full details of the non-conformity. Key reserves the right to inspect the non-conforming material prior to replacement. EXCEPT FOR THE EXPRESSED WARRANTY STATED ABOVE, THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE. KEY'S OBLIGATION SHALL NOT EXTEND BEYOND THE OBLIGATIONS EXPRESSLY UNDERTAKEN ABOVE AND KEY SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO THE PURCHASER OR ANY THIRD PARTY FOR ANY LOSS, COST, EXPENSE, DAMAGE OR LIABILITY, WHETHER DIRECT OR INDIRECT, OR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

TECHNICAL SERVICE

Key Resin Company provides services and consultations on material selection, specification, troubleshooting, and other information on the proper repair and protection of concrete surfaces. **Key Resin Sales/Technical Representatives** are available to assist you. Telephone 888.943.4532 or visit www.keyresin.com.

MAINTENANCE

KEY UNIVERSAL HIGH TEMP COATING is typically used as a finish over steel or primer material underneath other **Key Resin** materials. Refer to **Key Resin Technical Bulletin #3** and **#3-A** if using **KEY UNIVERSAL HIGH TEMP COATING** as a finish coat or the appropriate system technical data sheet for maintenance instructions if used as a primer under other **Key Resin** materials.

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