**Akzo Nobel Coatings Inc.**
Functional Powder Coatings

# Product Datasheet

## Resicoat® Primer
## Internal Pipe Coating
## Code: 596301 (Corvel EP-10 Primer 1P-0010)

| | | |
|---|---|---|
| **Product Description** | **Resicoat® Primer 596301 (Corvel EP-10 Primer 1P-0010) is a phenolic based-liquid coating designed for priming the inside of steel pipes prior to the application of high performance Resicoat® FBE powder coating.** | |

| | | Typical value | Method |
|---|---|---|---|
| **Powder Properties** | **Color** | red | |
| | **Density** | 1.15 – 1.25 g/cm³ | calculated |
| | **Weight / Gallon** | 9.9 lbs/gal. (1.15 kg/l) | |
| | **Viscosity** | 16 – 21 secs. | No. 2 Zahn Cup |
| | **% Solids by Weight** | 47.7 % | |
| | **Flash Point** | 64° F (18° C) | ASTM D93 |
| | **Storage stability** | 12 months at ≤ 74° F (23° C) | |
| **Application Data** | **Surface Preparation** | NACE #1 White Metal Blast<br>SA 2.5 – SA3 | |
| | **Anchor Profile** | Min. 1.5 mil (38 µm) sharp, dense | |
| | **Application Method** | Spray or brush at 14 – 170° F (-10° C – 77° C) | |
| | **Reducing Solvents** | Methanol, Ethanol, Butanol (as required by applicator) | |

| | |
|---|---|
| **Note** | Less than optimum adhesion may result if primed substrate is preheated longer than one hour at 320° F (160° C) or 10 minutes at 425° F (218° C). |
| **Caution** | Contact with Resicoat® 596301 (Corvel EP-10 Primer 1P-0010) may cause skin irritation. Synthetic gloves and organic vapor masks are recommended precautions. Keep away from sparks and open flames. Adequate ventilation is necessary in the workplace. |
| **Date of issue:** | **March 6, 2014** |
| **Authorized by:** | **GK** |
| **Revision no.:** | **3** |



20, Culvert Street
Nashville, TN 37210
USA

T+1 855-294-8934
F+1 615-564-4181
www.resicoat.com



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Akzo Nobel Coatings Inc.
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AkzoNobel

# Product data sheet

# Resicoat® HKH12QF (Corvel® 10-6051)
## Pipe Internal Coating

**Product Description**

**Resicoat® PI HKH12QF (Corvel® 10-6051 green) is a melt-mixed, 100% solids Novolac-modified epoxy designed for pipe internal coating. Resicoat® PI HKH12QF (Corvel® 10-6051 green) is used at elevated temperatures and pressures in drill pipe, production tubing, $CO_2$ injection tubing, valves and fittings. The product displayed no swelling, no blistering, no cracking, no detachment from the substrate, and nearly no color change when the coated substrate was exposed to controlled tests at temperatures of up to 300 °F.* Resicoat® PI HKH12QF (Corvel® 10-6051 green) offers a good combination of toughness and flexibility which will resist damage and cracking during handling and coupling operations. When applied, as recommended, over Resicoat® 596301 primer (Corvel® EP-10 1P-0010), Resicoat® PI HKH12QF is resistant to $H_2S$, $CO_2$, $CH_4$ and petroleum distillates.**

| | | Typical value | Method |
|---|---|---|---|
| **Powder Properties** | **Binder system** | Novolac-modified epoxy | |
| | **Specific gravity** | 1.65 – 1.75 | calculated |
| | **Coverage** | 112 $ft^2$/lb/mil | calculated |
| | **Gel time @ 400 °F (204 °C)** | 75 – 125 sec. | ISO 8130-6 |
| | **Storage stability** | 12 months at ≤ 74 °F (23 °C), stored in dry conditions | |
| **Application Data** | **Surface preparation** | All oil, grease, mill scale, and rust must be removed. A blast profile of 1.5 – 2.5 mils (38 – 64 µm) minimum NACE #1 is required. | |
| | **Anchor profile** | 1.5 sharp, dense recommended | |
| | **Resicoat® 596301 primer, dry thickness** | 0.5 – 1.0 mil (13 – 25 µm) | |
| | **Preheating** | 20 min. at 320 °F (160 °C) | |
| | **Post-curing** | 30 min. at 425 °F (218 °C) | |
| | **Recommended film thickness** | 8 – 12 mils (200 – 300 µm) | |
| | **Particle size distribution** | 70 Mesh: 3 % max.<br>140 Mesh: 15 – 30 %<br>325 Mesh: 50 – 65 % | ASTM D 3451 (% retained) |
| **Material Properties** | **Color** | green | |
| | **Flow** | smooth | |
| | **Direct impact resistance** | 100 in. lbs | ASTM D 2794 (5/8" intender) |

***This statement is specifically limited to the evaluation conditions specified in the autoclave test section of this product data sheet. This is not a guarantee of actual performance at the operating temperature. This representation is also subject to the disclaimer contained on Page 3 of this product data sheet.***

20 Culvert Street
Nashville, TN 37210
USA

T+1 855-294-8934
F+1 615-564-4181
www.resicoat.com



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| | | Typical value | Method |
|---|---|---|---|
| **Material Properties (continued)** | **Taber abrasion** | | ASTM D 1044 |
| | | < 100 mg | CS-10, 1000 g, 5000 cycles |
| | | < 140 mg | CS-17, 1000 g, 5000 cycles |
| | | | ASTM D 4060 |
| | | 64 mg | CS-17, 1000 g, 1000 cycles |
| | **Cathodic disbonding*** | 1.5 mm | ASTM G 8<br>23° C, -1.50 V, 30 d<br>1% sodium chloride, 1 % sodium sulfate, 1 % sodium carbonate |
| | **Pull-off strength*** | 45.2 MPa | ASTM D 4541 |
| | **Hardness, Shore D** | > 90 | |
| | **Flexibility at 74° F (23° C)** | pass 1° | CSA Z245.20-10 |
| | **Edge coverage** | 30 % at 8 – 15 mils (200 – 375 µm) | MPTM, Method B:<br>Preheat: 15 min. at 320 °F (160 °C)<br>Dip cycle: 2 sec.<br>Post-heat: 15 min. at 425 °F (218 °C) |
| | **Salt spray resistance** | ≤ 1/8" undercut at 1700+ hours | ASTM B 117, X-Scribe |
| | **Adhesion shear** | > 4000 psi | ASTM D 1002, ½" overlap. |
| | **Elongation** | | ASTM D 2370 |
| | | 11 % | 10 – 15 mils on steel dogbone |
| | | 2.4 % | 10 – 15 mils on free film |
| | **Tensile strength free film** | > 7,500 psi | ASTM D 2370 |
| | **Water immersion** | < 0.30 % wt.gain | Room temp., 24 h |
| | **Hot water immersion** | No blisters, good adhesion | 190 °F (88 °C), 120 days |
| | **Dielectric strength** | | ASTM D 149 |
| | | > 1000 volts/mil | In oil at 10 – 15 mils (250 – 375 µm) |
| | | > 600 volts/mil | In air at 10 – 15 mils (250 – 375 µm) |
| | **Atlas cell*** | | ASTM C 868 |
| | | no blisters, no corrosion, no cracks<br>Pull-off strength 44.9 MPa | 40° C, 2000 h, pH 5 |
| | | no blisters, no corrosion, no cracks | NACE TM 0185<br>150° C, 1000 h, pH 5<br>Gas phase 96 % of $CO_2$, 4 % $H_2S$ |

* Results are based on Resicoat® PI HMH12QF (Corvel® 10-6051) applied over primer 596301

| | | Typical value | Method |
|---|---|---|---|
| **Chemical Resistances** | 100 % relative humidity | No visible change | ASTM D 2247 (104 °F, 2000 h) |
| | Distilled water | No visible change | ISO 2812-2 (104 °F, 2000 h) |
| | NaOH 30 % | No visible change | ISO 2812-1 (77 °F, 2000 h) |
| | $H_2SO_4$ 40 % | No visible change | ISO 2812-1 (77 °F, 2000 h) |
| | Xylene | No visible change | ISO 2812-1 (77 °F, 2000 h) |
| | Coke naphtha | No visible change | ISO 2812-1 (77 °F, 2000 h) |
| | Fuel ethanol | No visible change | ISO 2812-1 (77 °F, 2000 h) |

Chemical resistance results are based on Resicoat® PI HMH12QF (Corvel® 10-6051) applied over primer® 596301

**Autoclave Tests**

**Resicoat® PI HKH12QF (Corvel® 10-6051 green) has been used for many years to coat mostly over phenolic primer drill pipe, production tubing and $CO_2$ injection tubing. It has been evaluated under various autoclave test conditions such as those referenced below:**

| | | |
|---|---|---|
| Autoclave #1 | | |
| Time: | 7 days | no swelling, no blistering, no cracking, no detachment from the substrate<br>Discoloration in the gas phase |
| Temp.: | 350 °F (177 °C) | |
| Pressure: | 5000 psi | |
| Discharge: | within 2-3 min. to 100 °F (38 °C) | |
| Immersion: | 50% in each phase | |
| Gas: | 3 % $CO_2$, 96.8 % $CH_4$, 0.2 % $H_2S$ | |
| Liquid: | Formation Water<br>Sodium Chloride, Calcium Chloride<br>Magnesium Sulphate, Hydrogencarbonate | |
| Autoclave #2 | | |
| Time: | 7 days | no swelling, no blistering, no cracking, no detachment from the substrate<br>Discoloration in the gas phase |
| Temp.: | 400 °F (204 °C) | |
| Pressure: | 5000 psi | |
| Discharge: | within 2-3 min. to 100 °F (38 °C) | |
| Immersion: | 50% in each phase | |
| Gas: | 3 % $CO_2$, 96.8 % $CH_4$, 0.2 %$H_2S$ | |
| Liquid: | Formation Water<br>Sodium Chloride, Calcium Chloride<br>Magnesium Sulphate, Hydrogencarbonate | |
| Autoclave #3 | | |
| Time: | 7 days | no swelling, no blistering, no cracking, no detachment from the substrate, no color change |
| Temp.: | 300 °F (149 °C) | |
| Pressure: | 6500 psi | |
| Discharge: | within 2-3 min. to 100 °F (38 °C) | |
| Immersion: | 50% in each phase | |
| Gas: | 3 % $CO_2$, 92.0 % $CH_4$, 5.0 %$H_2S$ | |
| Liquid: | Formation Water<br>Sodium Chloride, Calcium Chloride<br>Magnesium Sulphate, Hydrogencarbonate | |

20 Culvert Street
Nashville, TN 37210
USA

T+1 855-294-8934
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| | | | |
|---|---|---|---|
| **Autoclave Tests (continued)** | Autoclave #4 | | |
| | Time: | 120 days | no swelling, no blistering, no cracking, no detachment from the substrate |
| | Temp.: | 302 °F (150 °C) | |
| | Pressure: | 70 psi | |
| | Discharge: | within 10 min. to 100 °F (38 °C) | |
| | Immersion: | 100% in water | |
| | Autoclave #5 | | |
| | Time: | 30 days | Aramco 09-SAMSS-091 laboratory panels |
| | Temp.: | 150° F (65° C) | |
| | Pressure: | 285 psi | no swelling, no softening, no blistering, no loss of adhesion |
| | Discharge: | 1 – 3 min. | |
| | Immersion: | 50 % immersed in each phase | |
| | Gas: | 100 % $CO_2$ | Pass X Scribe Adhesion |
| | Liquid: | Wasia Water: Na = 2500 ppm, Ca = 600 ppm, Mg = 120 ppm, Cl = 4000 ppm, $SO_4$ = 1000 ppm, $HCO_3$ = 200 ppm, pH = 6.8 – 7.2 | 1200 psi pull off gas phase<br>1250 psi pull off liquid phase |
| | Autoclave #6 | | |
| | Time: | 30 days | Aramco 09-SAMSS-091 laboratory panels |
| | Temp.: | 150° F (65° C) | |
| | Pressure: | 3000 psi | no swelling, no softening, no blistering, no loss of adhesion |
| | Discharge: | 1 – 3 min. | |
| | Immersion: | 50 % immersed in each phase | |
| | Gas: | 100 % $CO_2$ | Pass X Scribe Adhesion |
| | Liquid: | Wasia Water: Na = 2500 ppm, Ca = 600 ppm, Mg = 120 ppm, Cl = 4000 ppm, $SO_4$ = 1000 ppm, $HCO_3$ = 200 ppm, pH = 6.8 – 7.2 | 1050 psi pull off gas phase<br>1260 psi pull off liquid phase |

| | |
|---|---|
| **Recommended Repair Material** | Enviroline 2960 |
| **Date of issue:** | **July 13, 2015** |
| **Authorized by:** | **GK** |
| **Revision No.:** | **8** |

# 3M™ Scotchkote™ Fusion-Bonded Epoxy Coating 134

**Data Sheet and Application Guide** **February 2016**

**Handling and Safety Precautions**: Read all Health Hazard, Precautionary and First Aid, Material Safety Data Sheet, and product label prior to handling or use.

**Product Description**

3M Scotchkote Fusion-Bonded Epoxy Coating 134 is a one-part, heat curable, thermosetting epoxy coating designed for corrosion protection of metal. The epoxy is applied to preheated steel as a dry powder which melts and cures to a uniform coating thickness when properly applied. This bonding process provides excellent adhesion and coverage on applications such as valves, pumps, pipe drains, hydrants, pipes, tanks and porous castings. Scotchkote coating 134 is NSF/ANSI 61 certified for potable water applications and is also resistant to wastewater, corrosive soils, hydrocarbons, harsh chemicals, and sea water. Powder properties allow easy manual or automatic application by electrostatic or air-spray equipment.

**Product Features**

- No primer required for most applications.
- For electrostatic or air-spray application on preheated metal articles.
- Can be electrostatically applied to unheated metal parts and subsequently cured by baking.
- Long gel time allows application on large or complex articles, minimizing fear of runs, sags, laminations, or unsightly overspray.
- Especially useful for coating the inside of pipe or other fabrications where a smooth, corrosion resistant coating is required.
- Can be machined by grinding or cutting to meet close tolerance requirements.
- Allows easy visual inspection of coated articles.
- Can be painted with alkyd paint, acrylic lacquer, polyurethane, or acrylic enamel for color coding.
- Applied coating will not sag cold flow.
- Lightweight for lower shipping costs.
- Protects over wide temperature range.
- Resists direct burial soil stress.
- Resists cavitation and cathodic disbondment.
- Can be used for elevated temperature service in presence of $H_2S$, $CO_2$, $CH_4$, crude oil and brine when applied over phenolic primer such as 3M Scotchkote Liquid Phenolic Primer 345.
- Long-term performance history in water, sewage, and other service environments.
- Scotchkote coating 134 has been tested and certified to NSF /ANSI Standard 61, Drinking Water System Components. For NSF certified applications, the max approved thickness is 60 mil (1.5 mm) and the maximum approved operating temperature is 140°F/60°C. Primers may not be used for potable water applications.
- Scotchkote coating 134 meets the requirements of AWWA Standard C213 and C550.

**Temperature Operating Range**

For non-potable water applications Scotchkote coating 134, when properly applied to a nominal thickness of 15 mils, should perform on pipelines operating between -100°F/-73°C to 203°F/95°C. For temperatures reaching 230°F/110°C thicker coatings, greater than 30 mils, may improve the service capability. However, it is difficult to accurately predict field performance from the laboratory data due to the wide variations in actual field conditions. Soil types, moisture content, temperatures, coating thickness, and other factors specific to the area all influence the coating performance and upper temperature operating limits.

**General Application Information**

1. Remove oil, grease and loosely adhering deposits.
2. Abrasive blast clean the surface to NACE No. 2/SSPC-SP10 ISO 8501:1, Grade SA 2 ½ near-white metal.
3. Apply mechanical masks or mask with materials such as 3M Scotch® Glass Cloth Tape 361 or 3M Aluminum Foil Tape 425 as required.
4. Preheat article to the desired application temperature per cure specifications.
5. Deposit Scotchkote coating 134 by powder spray to the specified thickness.
6. Cure according to cure specifications.
7. Visually and electrically inspect for coating flaws after the coating has cooled.
8. Repair all defects.

**Cure Specifications**

Scotchkote coating 134 may be applied to metal articles which have been preheated to a temperature of 300°F/149°C to 475°F/246°C. After application, Scotchkote coating 134 must be cured according to the cure guide to achieve maximum performance properties.

If Scotchkote coating 134 is electrostatically applied to unheated parts, the cure time should be measured from the time the coated part reaches the cure temperature. After cure, the coating may be force cooled using air or water to facilitate inspection and handling.

## Product - Physical and Chemical Properties

### 3M™ Scotchkote™ Fusion-Bonded Epoxy Coating 134 Cure Guide

| Temperature of Article at Time of Powder Application | Typical Gel Time | Cure Time |
|---|---|---|
| 475°F/246°C | 40 seconds | 7 minutes |
| 450°F/232°C | 60 seconds | 10 minutes |
| 400°F/204°C | 120 seconds | 15 minutes |
| 350°F/177°C | 330 seconds | 25 minutes |
| 425°F/218°C | 90 seconds | 25 minutes for NSF/ANSI 61 approved applications |

### Typical Properties

| Proerty | Value |
|---|---|
| Color Forest Green | Color Forest Green |
| Specific Gravity – Powder (Air Pycnometer) | 1.51 |
| Coverage | 127 $ft^2$/lb/mil (066 $m^2$/kg/mm) |
| Fluid Bed Density 33 lbs/$ft^3$ (530 kg/m3) | 33 lbs/$ft^3$ (530 kg/$m^3$) |
| Shelf Life at 80°F/27°C 18 months | Shelf Life at 80°F/27°C 18 months |
| Average Gel Time (400°F/204°C) | 120 seconds |
| Edge Coverage | 12% to 18% |
| Minimum Explosive Concentration | 0.03 oz/$ft^3$ (30,6 g/$m^3$) |
| Ignition Temperature | 986°F/530°C |
| V.O.C. (As Supplied) | 0 g/L, as calculated |

### Chemical/Pressure/Temperature Resistance

| Test Conditions | Gas Phase | Results |
|---|---|---|
| Autoclave, 120°F/49°C<br>48 hours, 1500 psi/10.3 MPa | 99.5% $CO_2$<br>0.5% $H_2S$ | Excellent adhesion, no coating loss or blisters in aqueous, hydrocarbon, or gas phase |
| Autoclave, 150°F/66°C<br>48 hours, 2200 psi/15.2 MPa | 80% $CH_4$<br>12% $CO_2$<br>8% $H_2S$ | Excellent adhesion, no coating loss or blisters in aqueous, hydrocarbon, or gas phase |
| Autoclave, 200°F/93°C<br>24 hours, 3300 psi/22.8 MPa | 86% $CH_4$<br>8% $CO_2$<br>6% $H_2S$ | Excellent adhesion, no coating loss or blisters in aqueous, hydrocarbon, or gas phase |
| Autoclave, 300°F/149°C<br>24 hours, 3000 psi/20.7 MPa | 90% CH<br>10% $CO_2$<br>Trace $H_2S$ | Excellent adhesion, no coating loss or blisters in aqueous, hydrocarbon, or gas phase |

All tests performed on 3M™ Scotchkote™ Fusion Bonded Epoxy Coating 134 applied over a 1 mil/25,4 µm phenolic primer. Liquid phase for all test conditions: 33% kerosene, 33% toluene, 34% brine solution of 5% NaCl.

## Continued Product - Physical and Chemical Properties

### Chemical Resistance Testing

**ASTM G20-10 Immersion Testing at 20°C**

| Solution | 30 days | 60 days | 90 days |
|---|---|---|---|
| Acetic Acid (5%) | No blistering or disbondment | No blistering or disbondment | No blistering or disbondment |
| Acetone | No blistering or disbondment, coating is slightly rubbery | No blistering or disbondment, coating is slightly rubbery | No blistering or disbondment, coating is slightly rubbery |
| Carbon Disulfide | No blistering or disbondment | No blistering or disbondment | No blistering or disbondment |
| Gasoline | No blistering or disbondment | No blistering or disbondment | No blistering or disbondment |
| Hydrochloric Acid (10%) | No blistering or disbondment | No blistering or disbondment | No blistering or disbondment |
| Kerosene | No blistering or disbondment | No blistering or disbondment | No blistering or disbondment |
| Lime Water, Saturated | No blistering or disbondment | No blistering or disbondment | No blistering or disbondment |
| Methyl Alcohol | No blistering or disbondment | No blistering or disbondment | No blistering or disbondment |
| Methyl Ethyl Ketone | No blistering or disbondment, coating is slightly rubbery | No blistering or disbondment, coating is slightly rubbery | No blistering or disbondment, coating is slightly rubbery |
| Nitric Acid (10%) | Discoloration; No blistering or disbondment | Discoloration; No blistering or disbondment | Discoloration; No blistering or disbondment |
| Sodium Carbonate Solution (20%) | No blistering or disbondment | No blistering or disbondment | No blistering or disbondment |
| Sodium Chloride Solution (10%) | No blistering or disbondment | No blistering or disbondment | No blistering or disbondment |
| Sodium Hydroxide Solution (10%) | No blistering or disbondment | No blistering or disbondment | No blistering or disbondment |
| Sulfuric Acid (30%) | No blistering or disbondment | No blistering or disbondment | Slight discoloration; No blistering or disbondment |
| Toluene | No blistering or disbondment | No blistering or disbondment | No blistering or disbondment |
| Trichloroethylene | No blistering or disbondment, coating is slightly rubbery | No blistering or disbondment, coating is slightly rubbery | No blistering or disbondment, coating is slightly rubbery |

## Continued Product - Physical and Chemical Properties

**3M internal – Historical Chemical Resistance testing based on similar, but not identical products.****
**Testing Temperature 73°F (23°C*)**

| | | |
|---|---|---|
| Acetic Acid up to 25% | Ferric Nitrate | Potassium Borate |
| | Ferric Sulfate | Potassium Carbonate |
| Aluminum Chloride | Ferrous Nitrate | Potassium Chloride |
| Aluminum Hydroxide | Ferrous Sulfate | Potassium Dichromate up to 10% |
| Aluminum Nitrate | Formaldehyde up to 100% | Potassium Hydroxide |
| Aluminum Sulfate | Formic Acid up to 10% | Potassium Nitrate |
| Ammonium Carbonate | Freon; gas and liquid | Potassium Sulfate |
| Ammonium Chloride | Gas (Mfg) | Propylene Glycol |
| Ammonium Hydroxide up to 100% | Gas (Natural) | Sewage |
| Ammonium Nitrate | Gasoline Leaded | Silver Nitrate |
| Ammonium Phosphate | Gasoline Unleaded | Soap Solution |
| Ammonium Sulfate | Glycerine | Soaps |
| Amyl Alcohol | Heptane | Sodium Bicarbonate |
| Barium Carbonate | Hexane | Sodium Bisulfate |
| Barium Chloride | Hexylene Glycol | Sodium Carbonate |
| Barium Hydroxide | Hydrochloric Acid up to 25% | Sodium Chlorate |
| Barium Nitrate | Hydrofluoric Acid up to 40% | Sodium Chloride |
| Barium Sulfate | Hydrogen Sulfide | Sodium Hydroxide |
| Benzene | Isopropyl Alcohol | Sodium Meta Silicate up to 5% |
| Boric Acid | Jet Fuel | Sodium Nitrate |
| Borax | | Sodium Sulfate |
| Butyl Alcohol | Linseed Oil | Sodium Thiosulfate up to 5% |
| Cadmium Chloride | Lubricating Oil | Stannic Chloride |
| Cadmium Nitrate | Magnesium Carbonate | Sulfur |
| Cadmium Sulfate | Magnesium Chloride | Sulfuric Acid up to 60% |
| Calcium Carbonate | Magnesium Hydroxide | Synthetic Sea Fuel (60% Naphtha, |
| Calcium Chloride | Magnesium Nitrate | 20% Toluene, 15% Xylene, |
| Calcium Hydroxide | Magnesium Sulfate | 5% Benzene) |
| Calcium Nitrate | | Synthetic Silage |
| Calcium Sulfate | Mercuric Chloride | Tetrapropylene |
| Calcium Disulfide | Methanol (softened) | Toluene |
| Carbon Tetrachloride | MIBK (Methyl Isobutyl Ketone) | |
| Caustic Potash | Mineral Oil | Triethylene Glycol |
| Caustic Soda | Mineral Spirits | Trisodium Phosphate |
| Chlorine 2% | Molasses | Turpentine |
| Citric Acid up to 25% | Motor Oil | Undecanol |
| Copper Chloride | Muriatic Acid | Urea |
| Copper Nitrate | Naphtha | Urine |
| Copper Sulfate | Nickel Chloride | Vinegar |
| Crude Oil | Nickel Nitrate | Water |
| Cyclohexane | Nickel Sulfate | Chlorinated |
| Cyclohexene | Nitric Acid up to 30% | Demineralized |
| Cyclopentane | Nonane | Distilled |
| Detergent | Octane | Salt |
| Diesel Fuel | Oxalic Acid | Sea |
| Diethylene Glycol | Pentane | Xylol |
| Dipropylene Glycol | Perchloroethylene | Zinc Chloride |
| Ethanol (softened) | Phosphoric Acid up to 50% | Zinc Nitrate |
| Ethylbenzene | Phosphorous Trichloride | Zinc Sulfate |
| Ethylene Glycol | Potassium Aluminum Sulfate | 10-10-10 Fertilizer, Saturated |
| Ferric Chloride up to 50% | Potassium Bicarbonate | |

**Tests conducted for two years. No effect unless otherwise stated.

| | |
|---|---|
| **Storage** | In a cool dry location less than 80°F (27°C) |
| **Shelf-Life** | 18 months from date of manufacture |
| **Availability** | For ordering, technical, product information, or the Safety Data Sheet, call:<br>Phone: 800-722-6721<br>Fax: 877-601-1305 |



| | |
|---|---|
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**Electrical Markets Division**
6801 River Place Blvd.
Austin, TX 78726-9000
800.722.6721
www.3M.com/corrosion

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