



**CAL551-005: SEALER AND JOINT COMPOUND**

**INDUSTRIAL MAINTENANCE COATING FOR METAL, CONCRETE AND SIMILAR SUBSTRATES**

**PRODUCT PROFILE**

**DESCRIPTION**

**CAL-551-005** 100% Solids Elastomeric Industrial Maintenance Coating for Metal, Concrete and similar Substrates

CAL551-005 is a versatile, elastomeric coating and joint compound that can be used as a:

- Sealant for secondary containment and other concrete structures.
- Crack-bridging concrete basecoat to protect less-flexible topcoats.
- Pourable joint compound for expansion joints or large stress cracks.
- Topcoat on substrates subject to cracking, high vibration or other movement.

CAL551-005 offers respectable chemical resistance and good UV stability.

CAL551-005 has outstanding adhesion, can be applied to a wide variety of surfaces and tolerates less-than-ideal surface conditions.

In secondary containment applications, CAL551-005 can be applied to both asphalt and concrete structures. It has also been successfully applied to plywood floor surfaces.

**TYPICAL APPLICATIONS**

|  |   |
|--|---|
| Concrete Base Coat<br>Concrete & Metal Topcoat<br>Expansion Joints | Large Stress Cracks<br>Secondary Containment Structures |
|--|---|

**TECHNICAL DATA**

**PHYSICAL PROPERTIES**

|                                     |  |
|-------------------------------------|--|
| Specific Gravity                    | Resin: 1.41; Hardener: 1.15              |
| Flash Point                         | > 240° F (115.5° C)                      |
| Volatile Organic Compounds (VOC)    | 0 grams/liter                            |
| Elongation                          | 150%                                     |
| Tensile Strength                    | 4000 psi                                 |
| Shore D Hardness at 80° F (26.5° C) | 66                                       |
| Impact Strength at 80° F (26.5° C)  | 65 ft lbs                                |
| Color                               | Gray                                     |
| Recommended Coverage                |  |
| Basecoat                            | 1 coat x 6 - 10 mils                     |
| Topcoat                             | 2 or 3 coats x 10 mils                   |
| Joint Compound                      | 75 linear feet @ 0.5" x 0.5"             |
| Coverage per Gallon (theoretical)   | 160 square feet per 10 mils of thickness |
| Container Size                      | Quart, Gallon and 2 Gallon               |

**CHEMICAL RESISTANCE**

|                             |                                  |                         |
|-----------------------------|----------------------------------|-------------------------|
| Ammonium Hydroxide 15%      | Phosphoric Acid up to 70% (fair) | Sour Crude Oil          |
| Ethyl Alcohol               | Sodium Hydroxide up to 50%       | Sulfuric Acid up to 60% |
| Hydrochloric Acid up to 37% | Sodium Hypochlorite up to 10%    | Toluene                 |
| Methyl Isobutyl Ketone      |                                  |                         |



**APPLICATION PREPARATION**

**SERVICE TEMPERATURE**

| Exposure                 | Maximum Recommended Temperature |
|--------------------------|---------------------------------|
| Dry Service              | 200° F (93.5° C)                |
| Spills, Splashes & Fumes | 200° F (93.5° C)                |
| Immersion Service        | 150° F (65.5° C)                |

**SURFACE PREPARATION**

**Note:** For optimal coating performance, take considerable care with surface preparation.

**Metal:** Remove all oil, grease or scale from the surface, then blast with sharp sand or grit to finish. Use a non-spherical blast medium to give a 2 - 3 mil (50 - 75 micron) profile and to achieve the following surface preparation standards or their equivalents:

|                               |  |
|-------------------------------|--|
| Non-chemical Service          | SSPC-SP 6 Commercial Blast (NACE 3)        |
| Intermittent Splash or Wear   | SSPC-SP 10 Near White Metal Blast (NACE 2) |
| Immersion or Abrasive Service | SSPC-SP 5 White Metal Blast (NACE 1)       |

**Aluminum and FRP:** Remove all contaminants from the surface using an alkaline detergent cleaner to provide a clean, uniformly textured surface.

**Concrete:** Concrete should be aged at least 28 days before coating and the surface should be clean, dry and free of form-release agents, silicone water proofers and/or curing agents. Sand blasting or scarification is recommended. Wash down old concrete to remove all residues and neutralize the pH before blasting or scarifying.

These products are normally self-priming. However, under certain conditions such as old, porous or poorly finished concrete, CAL551-102 primer/sealer is recommended to avoid bubbling caused by outgassing. If these conditions exist, call Calicorp for assistance as two coats of CAL551-105 may be indicated on air entrained concrete.

**MIXING PROCEDURES**

**Note:** Do not mix partial kits.

1. Thoroughly mix the resin before adding the hardener. **CAL551-005** is 100% solids and contains materials with high specific gravity.
2. Empty the entire amount of hardener into the resin container.
3. Mix thoroughly—until uniform in consistency—then continue to mix for an additional 2 - 3 minutes. Pay special attention to the bottom and sides of the container to insure complete mixing. Due to the high viscosity of this product, a mechanical mixer is preferred. Use at low speed and keep the mixing blade down in the product to avoid entrapping air. If mixing by hand, use a square-cornered, flat implement, such as a standard paint stirring stick.

**THINNING**

If thinning is necessary, especially at temperatures lower than 60° F (16° C), add 4 to 6 fl oz of MEK to the resin and mix thoroughly before adding the hardener. Note: **Do not** exceed 10% solvent by volume. Read the Material Safety Data Sheet for MEK (flammable liquid) before using it.

**POT LIFE**

| AMBIENT TEMPERATURE | TIME              |
|---------------------|-------------------|
| 40° F(4° C)         | 1 hour 40 minutes |
| 75° F(24° C)        | 1 hour            |
| 92° F(33° C)        | 44 minutes        |



**Do not** keep the blended coating in the original container: exotherm – heat created during the curing process – can considerably shorten the pot life. Pour the coating into a rolling tray or large aluminum basting pan. Try to keep the depth of the coating in the tray below 3/8".

**APPLICATION PROCEDURE**

**CAUTIONS**

1. If the ambient temperature is 85° F (29° C) or higher, pot life may be as short at 20 minutes. Have the working surfaces ready, and mix no more than one gallon of the coating at a time. To increase the pot life under these conditions, put the tray or pan on ice or in ice water. **Do not** get water or ice in the tray with the coating.
2. The substrate temperature must be at least 5° F (3° C) above dew point—the temperature at which moisture will condense on the surface of the substrate—during all blasting and coating procedures. To calculate the dew point, consult the chart below.

Example: if the ambient air temperature is 70° F—top row below—and the relative humidity is 65%—left column—the dew point is 57° F. Under these conditions, the substrate temperature would need to be at least 62° F before proceeding with blasting and coating procedures.

| %RH | Ambient Air Temperature, °F(°C) |         |         |         |         |          |          |
|-----|---------------------------------|---------|---------|---------|---------|----------|----------|
|     | 50 (10)                         | 60 (16) | 70 (21) | 80 (27) | 90 (32) | 100 (38) | 110 (43) |
| 90  | 47 (9)                          | (14)    | 67 (19) | 77 (25) | 87 (31) | 97 (36)  | 107 (42) |
| 85  | 45 (7)                          | 55 (13) | 65 (18) | 75 (24) | 84 (29) | 95 (35)  | 104 (40) |
| 80  | 44 (7)                          | 54 (12) | 63 (17) | 73 (23) | 82 (28) | 93 (34)  | 102 (39) |
| 75  | 42 (6)                          | 52 (11) | 62 (17) | 71 (22) | 80 (27) | 91 (33)  | 100 (38) |
| 70  | 40 (4)                          | 50 (10) | 60 (16) | 69 (21) | 78 (26) | 88 (31)  | 98 (37)  |
| 65  | 38 (3)                          | 48 (9)  | 57 (14) | 67 (19) | 76 (24) | 86 (30)  | 95 (35)  |
| 60  | 36 (2)                          | 46 (8)  | 55 (13) | 65 (18) | 74 (23) | 83 (28)  | 92 (33)  |
| 55  | 34 (1)                          | 43 (6)  | 53 (12) | 62 (17) | 71 (22) | 80 (27)  | 90 (32)  |
| 50  | 31 (-.5)                        | 41 (5)  | 50 (10) | 59 (15) | 69 (21) | 78 (26)  | 87 (31)  |

**APPLICATION**

CAL551-005 may be sprayed, brushed, rolled or applied by squeegee. Use a medium bristle brush or a non-shed roller—3/8" nap or shorter—designed for use with epoxies.

**MULTIPLE COATS**

Second and subsequent coats must be applied **before the previous coat has completely cross-linked**. Apply additional coats when the previous coat will still string out (pigtail) and hold its shape when touched. If only slight tack remains, allow the product to cure, then brush blast before applying the next coat.

The same requirement applies when overlapping the seams of adjacent coating sections to create a continuous protective film. If the coating surface to be overlapped at the seam cannot be brush blasted, use a non-impact means such as power brushing or sanding to create a mechanical profile.

**CURE TIME**  
(@ 70° F/21° C)

|                             |          |
|-----------------------------|----------|
| Re-coat Window              | 24 hours |
| Light Loading               | 48 hours |
| Immersion (Aqueous) Service | 7 days   |
| Full or Chemical Service    | 7 days   |



**SPEED CURING**

The cure time can be reduced and product performance enhanced by applying heat during the curing process of the final coat: 150° F (66° C) for 2 hours is recommended before placing the coating into full service.

**CLEAN-UP**

Use a mixture of MIBK and Xylene (50/50) or MEK for clean-up. Read the Material Safety Data Sheets for any of these products (flammable liquids) before using them. Skin can be cleaned with denatured alcohol, preferably ethanol.

**ORDERING INFORMATION**

For additional information, prices or to place an order, contact Calicorp or a Calicorp representative.

**MATERIAL SAFETY DATA**

**HAZARDOUS INGREDIENTS**

| RESIN  | HARDENER   |
|--|--|
| Novolac Resin<br>CAS #28064-14-4<br>10-40%<br>Exposure limits:<br>TLV<br>PEL: none established | Tris<br>(dimethylaminomethyl phenol)<br>CAS #90-72-2.<br>20% or less<br>eye irritant |
| Bisphenol A<br>CAS #25085-99-8<br>40-70%   | Polysulfide<br>CAS # 68611-50-7<br>85% or less<br>no established limit.              |

**PHYSICAL DATA**

|                                      | RESIN                  | HARDENER               |
|--------------------------------------|------------------------|------------------------|
| Specific Gravity                     | 1.41                   | 1.51                   |
| % Volatiles by volume                | Nil                    | < 0.5%                 |
| Appearance/Odor                      | Light Gray             | Yellow/Mercapton       |
| Melting Point                        | < 0 degrees F (-18o C) | < 0 degrees F (-18o C) |
| Solubility in Water<br>(% by weight) | Negligible<br>ca 5     | Negligible<br>ca 10    |
| pH                                   | > 300o F (149o C)      | > 200o F (93o C)       |

**FIRE AND EXPLOSION DATA**

|   | RESIN                                     | HARDENER         |
|---|---|------------------|
| Flash Point   | > 300o F (149o C)                         | > 200o F (93o C) |
| Extinguishing Media   | Carbon Dioxide, foam, dry chemical        |                  |
| Special Procedures  | Use a self-contained breathing apparatus. |                  |
| <b>NOTE: decomposition and combustion products may be toxic</b> |   |                  |

**HEALTH AND HAZARD INFORMATION**

|              | RESIN                                  | HARDENER   |
|--------------|--|--|
| Inhalation   | LC <sub>50</sub> (rabbits): 6000 mg/kg | LC <sub>50</sub> : possible respiratory irritant if atomized |
| Skin Contact | LD <sub>50</sub> (rabbits): 4000 mg/kg | Possible irritant, dermatitis in extreme                     |
| Eye Contact  | Irritating                             | Severe Irritant  |



|                      |  |  |
|----------------------|--|--|
| Ingestion            | LD <sub>50</sub> (rabbits): 4000 mg/kg | LD <sub>50</sub> (rats): 3000 mg/kg        |
| Acute Overexposure   | Irritation, possible sensitization     | Irritation, possible sensitization, nausea |
| Chronic Overexposure | Skin sensitization, dermatitis         | Skin sensitization, may be corrosive       |

**EMERGENCY  
FIRST AID  
PROCEDURES**

|            | <b>RESIN</b>  | <b>HARDENER</b>   |
|------------|---|---|
| Ingestion  | If large amounts are ingested, induce vomiting if conscious.      | Call physician immediately. Give generous amounts of water if conscious. <b>Do not</b> induce vomiting. |
| Inhalation | Remove to fresh air. Give oxygen if breathing is difficult.       |   |
| Eyes       | Immediately flush eyes with water for 15 minutes. Call physician. |   |
| Skin       | Promptly wash with mild soap and water.                           |   |

**REACTIVITY  
DATA**

|   | <b>RESIN</b>                               | <b>HARDENER</b>  |
|---|--|--|
| Conditions contributing to instability              | Stable                                     | <b>Do not</b> heat in bulk as dangerous decomposition may occur, liberating toxic fumes. |
| Hazardous Decomposition Products                    | Carbon Monoxide, Carbon Dioxide, Phenolics | Carbon Monoxide, Carbon Dioxide, Phenolic Nitrogen Oxides and Compounds                  |
| Conditions Contributing to Hazardous Polymerization | Will not occur                             | Heating in bulk  |
| Incompatibility                                     | Strong oxidizers, strong acids and bases   |  |

**DISPOSAL OR  
SPILL  
PROCEDURES**

|  | <b>RESIN</b>   | <b>HARDENER</b>  |
|--|--|--|
| Aquatic Toxicity                         | Not available at this time   | Not available at this time   |
| Steps to be taken if material is spilled | Shovel into closeable container for disposal.  | Absorb into sand or other absorbent material. Shovel into closeable container and dispose of in professional manner. |
| Waste Disposal Method                    | Not considered hazardous under RCRA (40CFR 261) Dispose according to state, federal and local regulations. |  |

**SPECIAL  
PROTECTION  
MEASURES**

|  |   |
|--|---|
| Ventilation Requirements               | Good general mechanical ventilation and local exhaust                 |
| Specific Personal Protective Equipment | Organic chemical cartridge respirator if needed in non-vented area    |
| Eyes                                   | Splash-proof chemical goggles   |
| Gloves                                 | Impervious gloves   |
| Other                                  | Appropriate equipment to prevent probability of skin and eye contact. |



**SPECIAL  
PRECAUTIONS**

Can cause irritation; wear protective skin and eye equipment.

**Do not** heat in bulk; dangerous decomposition may occur, liberating toxic fumes.

This product is not regulated by the DOT and is not considered a hazardous waste under the RCRA.

MSDS information provided by the manufacturer.

Please call Calicorp for additional information regarding this product or its application

All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed, and the following is made in lieu of all warranties, express or implied:

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