

## **ACC SMP™ EP EF SP EPI Engineered Polymers Extra Flex with Silicone**

Category: Polymer, Thermoset, Silicone

## **Material Notes:**

EP EF SP, "Powered by Reactamine® Technology", is a two component 100% solid Silicone Polyurea with superior performance in industrial applications. EP EF SP displays extremely fast cure times with excellent adhesions to different substrates. EP EF SP can be spray applied at temperatures ranging from 20°F to 150°F. EP EF SP has better chemical and water resistance than conventional. EP EF SP has a temperature range of -60°F to 250°F. EP EF SP conforms to USDA and FDA guidelines for incidental food contact. Silicone Polyureas have better weatherability. Applications: EP EF SP adheres well to several substrates including concrete, steel, and wood. Some typical uses include: SECONDARY CONTAINMENT WASTEWATER LAGOON AND POOL LININGS TABLE EDGING COLD STORAGE AREAS WASH BAY AND SHOWER LININGS COOLING TOWERS PETROCHEMICAL REFINERIES OILFIELD PIPELINE COATINGS WATER PROOFING SEWER LINERS MANHOLE RESTORATION INDUSTRIAL FLOORING BRIDGE COATINGSPart of the Amber Chemical Group. Data provided by manufacturer.

## Order this product through the following link:

http://www.lookpolymers.com/polymer\_ACC-SMP-EP-EF-SP-EPI-Engineered-Polymers-Extra-Flex-with-Silicone.php

| Physical Properties | Metric | English | Comments |
|---------------------|--------|---------|----------|
| Viscosity           | 600 cP | 600 cP  | B Side   |
|                     | 800 cP | 800 cP  | A Side   |

| Mechanical Properties          | Metric      | English     | Comments  |
|--------------------------------|-------------|-------------|---|
| Hardness, Shore A              | 72          | 72          | ASTM D2240  |
| Tensile Strength, Yield        | 9.136 MPa   | 1325 psi    | ASTM D412   |
| Elongation at Break            | 950 %       | 950 %       | ASTM D412   |
| 100% Modulus                   | 0.00889 GPa | 1.29 ksi    | ASTM D412   |
| 300% Modulus                   | 0.0110 GPa  | 1.59 ksi    | ASTM D412   |
| Adhesive Bond Strength         | >= 1.72 MPa | >= 250 psi  | Wood (no primer), Delamination;<br>ASTM D4541 Elcometer         |
|                                | 2.07 MPa    | 300 psi     | Concrete (epoxy), Concrete Failure;<br>ASTM D4541 Elcometer     |
|                                | 2.76 MPa    | 400 psi     | Concrete (no primer), Concrete<br>Failure; ASTM D4541 Elcometer |
|                                | >= 6.21 MPa | >= 900 psi  | Steel (epoxy primer), Primer Failure;<br>ASTM D4541 Elcometer   |
|                                | >= 10.3 MPa | >= 1500 psi | Steel (no primer), Substrate Failure;<br>ASTM D4541 Elcometer   |
| Tear Strength                  | 80.6 kN/m   | 460 pli     | ASTM D412   |
| Taber Abrasion, mg/1000 Cycles | 22          | 22          | CS17 WHEEL, 1kg per 1000 cycles;<br>ASTM D4060                  |



| Mechanical Properties | Metric     | English   | Comments           |
|-----------------------|------------|-----------|--------------------|
| Thermal Properties    | Metric     | English   | Comments           |
| Flash Point           | >= 93.3 °C | >= 200 °F | ASTM Pensky-Martin |

| Processing Properties | Metric            | English                | Comments       |
|-----------------------|-------------------|------------------------|----------------|
| Cure Time             | 0.267 - 0.583 min | 0.00444 - 0.00972 hour | Tack Free Time |
| Gel Time              | 0.150 min         | 0.150 min              | Fast           |
|                       | 0.3667 min        | 0.3667 min             | Slow           |

| Descriptive Properties                 | Value                                 | Comments  |
|--|---------------------------------------|---|
| Color                                  | Most primary colors, including white. |   |
| Flexibility                            | Pass                                  | ASTM D1737, 1/8"Mandrel                                 |
| Resistance to 1,1,1-Trichlorethane     | Conditional                           |   |
| Resistance to Acetic Acid (100%)       | Conditional                           |   |
| Resistance to Acetone                  | Conditional                           |   |
| Resistance to Ammonium Hydroxide (50%) | Recommended Conditional               |   |
| Resistance to Benzene                  | Conditional                           |   |
| Resistance to Brine-Saturated H2O      | Recommended                           | Resistance to Brine-Saturated H <sub>2</sub> 0 (310g/l) |
| Resistance to Chlorinated H2O          | Recommended                           |   |
| Resistance to Clorox® (10%) H2O        | Recommended                           |   |
| Resistance to Diesel Fuel              | Recommended Conditional               |   |
| Resistance to Gasoline                 | Recommended Conditional               |   |
| Resistance to Gasoline/ 5% Methanol    | Recommended Conditional               |   |
| Resistance to Gasoline/5% MTBE         | Recommended Conditional               |   |
| Resistance to H2O                      | Recommended                           |   |
| Resistance to H2O (14 days at 82°C)    | Recommended Conditional               |   |
| Resistance to Hydraulic Fluid (oil)    | Recommended Conditional               |   |
| Resistance to Hydrochloric Acid (20%)  | Recommended                           |   |



| Resistance to Isopropyl Alcohol Resistance to MEK Resistance to MEK Resistance to MEK Resistance to Methylene chloride Resistance to Methylene chloride Resistance to Methylene chloride Resistance to Methylene chloride Resistance to Motor Oil Resistance to Mineral Spirits Recommended Conditional Resistance to Motor Oil Resistance to Mineral Spirits Recommended Conditional Resistance to Motor Oil Resistance to Muriatic Acid (10%) Recommended Resistance to Muriatic Acid (10%) Recommended Resistance to NacI/H2O (10%) Recommended Resistance to NacI/H2O (10%) Recommended Resistance to Phosphoric Acid (10%) Recommended Resistance to Phosphoric Acid (10%) Recommended Resistance to Phosphoric Acid (50%) Recommended Resistance to Potassium Hydroxide Resistance to Potassium Hydroxide Resistance to Propylene Carbonate Resistance to Propylene Carbonate Resistance to Sodium Hydroxide (20%) Recommended Resistance to Sodium Hydroxide (25%) Recommended Resistance to Sodium Hydroxide (25%) Recommended Resistance to Sodium Hydroxide (25%) Recommended Resistance to Sodium Hydroxide (50%) Recommended Resistance to Sudium Hydroxide (50%) Recommended Resistance to Sudi | Descriptive Properties               | Not Recommended<br>Value   | Comments |
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| Resistance to MEK Resistance to Methanol Recommended Resistance to Methylene chloride Conditional Resistance to Mineral Spirits Recommended Resistance to Mineral Spirits Recommended Resistance to Motor Oil Resistance to MTEB Conditional Resistance to MTEB Conditional Resistance to MITEB Resistance to Muriatic Acid (10%) Recommended Resistance to NaCI/H2O (10%) Recommended Resistance to Nitric Acid (20%) Not Recommended Resistance to Nitric Acid (20%) Not Recommended Resistance to Phosphoric Acid (10%) Recommended Resistance to Phosphoric Acid (50%) Recommended Resistance to Potassium Hydroxide (20%) Resistance to Potassium Hydroxide (20%) Resistance to Potassium Hydroxide Resistance to Sodium Bicarbonate Recommended Resistance to Sodium Bicarbonate Recommended Resistance to Sodium Hydroxide (50%) Recommended Resistance to Sudium Hydroxide (50%) Recommended   | Resistance to Isopropyl Alcohol      | Recommended                |          |
| Resistance to Methanol Recommended Resistance to Methylene chloride Conditional Resistance to Mineral Spirits Recommended Conditional Resistance to Motor Oil Recommended Resistance to Motor Oil Recommended Resistance to Muriatic Acid (10%) Recommended Resistance to Muriatic Acid (10%) Recommended Resistance to NaCl/H2O (10%) Recommended Resistance to Nitric Acid (20%) Not Recommended Resistance to Phosphoric Acid (10%) Recommended Resistance to Phosphoric Acid (50%) Not Recommended Resistance to Phosphoric Acid (50%) Not Recommended Resistance to Potassium Hydroxide Recommended Resistance to Potassium Hydroxide (20%) Recommended Conditional Resistance to Sodium Bicarbonate Recommended Resistance to Sodium Hydroxide (25%) Recommended Resistance to Sodium Hydroxide (50%) Recommended Resistance to Sudiuri Acid (50%) Recommended Resistance to Sudiuri Acid (50%) Recommended Resistance to Sudiuri Acid (50%) Recommended Resistance to Sudiuric Acid (50%) Recommended   | Resistance to Lactic Acid            | Recommended Conditional    |          |
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| Resistance to Mineral Spirits Recommended Resistance to Motor Oil Recommended Resistance to Motor Oil Recommended Resistance to MTEB Conditional Resistance to Muriatic Acid (10%) Recommended Resistance to NaCI/H2O (10%) Recommended Resistance to Nitric Acid (20%) Not Recommended Resistance to Phosphoric Acid (10%) Recommended Resistance to Phosphoric Acid (50%) Not Recommended Resistance to Potassium Hydroxide (10%) Recommended Resistance to Potassium Hydroxide (20%) Recommended, Discoloration Resistance to Propylene Carbonate Recommended Resistance to Sodium Bicarbonate Recommended Resistance to Sodium Hydroxide (25%) Recommended Resistance to Sodium Hydroxide (25%) Recommended Resistance to Sodium Hydroxide (50%) Recommended Resistance to Sudium Hydroxide (50%) Recommended   | Resistance to Methanol               | Recommended                |          |
| Resistance to Motor Oil Recommended Resistance to MTEB Conditional Resistance to Muriatic Acid (10%) Recommended Resistance to NatCl/H2O (10%) Recommended Resistance to Nitric Acid (20%) Not Recommended Resistance to Phosphoric Acid (10%) Recommended Resistance to Phosphoric Acid (50%) Not Recommended Resistance to Phosphoric Acid (50%) Not Recommended Resistance to Potassium Hydroxide (10%) Recommended Resistance to Potassium Hydroxide (20%) Recommended, Discoloration Resistance to Propylene Carbonate Recommended Conditional Resistance to Sigdrof® Conditional Resistance to Sodium Bicarbonate Recommended Resistance to Sodium Hydroxide (25%) Recommended Resistance to Sodium Hydroxide (50%) Recommended Resistance to Sudiuric Acid (50%) Recommended Resistance to Sudiuric Acid (50%) Recommended Resistance to Suduric Acid (10%) Recommended Resistance to Suduric Acid (10%) Recommended  | Resistance to Methylene chloride     | Conditional                |          |
| Resistance to MTEB Conditional  Resistance to Muriatic Acid (10%) Recommended  Resistance to NaCl/H2O (10%) Recommended  Resistance to Nitric Acid (20%) Not Recommended  Resistance to Phosphoric Acid (10%) Recommended  Resistance to Phosphoric Acid (50%) Not Recommended  Resistance to Potassium Hydroxide (50%) Recommended  Resistance to Potassium Hydroxide (20%) Recommended  Resistance to Potassium Hydroxide (20%) Recommended  Resistance to Potassium Hydroxide (20%) Recommended (20%)  Resistance to Sodium Hydroxide (20%) Recommended (20%) Resistance to Sodium Bicarbonate Recommended (20%) Resistance to Sodium Hydroxide (50%) Recommended (20%) Recommended (20%) Resistance to Sodium Hydroxide (50%) Recommended (20%) Recommended (20%) Resistance to Sugar/H2O Recommended (20%) Re | Resistance to Mineral Spirits        | Recommended Conditional    |          |
| Resistance to Muriatic Acid (10%) Recommended  Resistance to Nitric Acid (20%) Not Recommended  Resistance to Phosphoric Acid (10%) Recommended  Resistance to Phosphoric Acid (10%) Recommended  Resistance to Phosphoric Acid (50%) Not Recommended  Resistance to Potassium Hydroxide (10%) Recommended  Resistance to Potassium Hydroxide (10%) Recommended  Resistance to Potassium Hydroxide (20%) Recommended Conditional  Resistance to Sydrol® Conditional  Resistance to Sodium Bicarbonate Recommended  Resistance to Sodium Hydroxide (25%) Recommended  Resistance to Sodium Hydroxide (50%) Recommended  Resistance to Sudium Hydroxide (50%) Recommended  | Resistance to Motor Oil              | Recommended                |          |
| Resistance to NaCl/H2O (10%) Recommended  Resistance to Nitric Acid (20%) Not Recommended  Resistance to Phosphoric Acid (10%) Recommended  Resistance to Phosphoric Acid (50%) Not Recommended  Resistance to Potassium Hydroxide (10%) Recommended  Resistance to Potassium Hydroxide (20%) Recommended  Resistance to Potassium Hydroxide (20%) Recommended Conditional  Resistance to Skydrol® Conditional  Resistance to Sodium Bicarbonate Recommended  Resistance to Sodium Hydroxide (25%) Recommended  Resistance to Sodium Hydroxide (50%) Recommended  Resistance to Sudium Hydroxide (50%) Recommended  Resistance to Sudar/H2O Recommended  Resistance to Sudfuric Acid (10%) Recommended  Resistance to Sulfuric Acid (10%) Recommended  | Resistance to MTEB                   | Conditional                |          |
| Resistance to Nitric Acid (20%) Resistance to Phosphoric Acid (10%) Resistance to Phosphoric Acid (10%) Resistance to Phosphoric Acid (50%) Resistance to Potassium Hydroxide (10%) Resistance to Potassium Hydroxide (20%) Resistance to Potassium Hydroxide (20%) Resistance to Propylene Carbonate Resistance to Skydrol® Conditional Resistance to Sodium Bicarbonate Resistance to Sodium Hydroxide (25%) Recommended Resistance to Sodium Hydroxide (50%) Recommended Resistance to Sodium Hydroxide (50%) Recommended Resistance to Sodium Hydroxide (50%) Recommended Resistance to Sudium Hydroxide (50%) Recommended  | Resistance to Muriatic Acid (10%)    | Recommended                |          |
| Resistance to Phosphoric Acid (10%) Recommended  Resistance to Phosphoric Acid (50%) Not Recommended  Resistance to Potassium Hydroxide (10%) Recommended  Resistance to Potassium Hydroxide (20%) Recommended, Discoloration  Resistance to Propylene Carbonate Recommended Conditional  Resistance to Skydrol® Conditional  Resistance to Sodium Bicarbonate Recommended  Resistance to Sodium Hydroxide (25%) Recommended  Resistance to Sodium Hydroxide (50%) Recommended  Resistance to Sodium Hydroxide (50%) Recommended  Resistance to Sodium Hypochlorite (10%) Recommended  Resistance to Sudium Hypochlorite Recommended  Resistance to Sudifuric Acid (-50%) Recommended  Resistance to Sulfuric Acid (10%) Recommended   | Resistance to NaCl/H2O (10%)         | Recommended                |          |
| Resistance to Phosphoric Acid (50%) Resistance to Potassium Hydroxide (10%) Resistance to Potassium Hydroxide Recommended, Discoloration Resistance to Propylene Carbonate Resistance to Propylene Carbonate Resistance to Skydrol® Conditional Resistance to Sodium Bicarbonate Recommended Resistance to Sodium Hydroxide (25%) Recommended Resistance to Sodium Hydroxide (50%) Recommended Resistance to Sodium Hydroxide (50%) Recommended Resistance to Sodium Hydroxide (50%) Recommended Resistance to Sudium Hydroxide (50%) Recommended Resistance to Sudium Hypochlorite (10%) Resistance to Sudium Hypochlorite Recommended Resistance to Sudium Hydroxide (50%) Recommended Resistance to Sudium Hypochlorite Recommended Resistance to Sudifuric Acid (>50%) Recommended Resistance to Sulfuric Acid (10%) Recommended   | Resistance to Nitric Acid (20%)      | Not Recommended            |          |
| Resistance to Potassium Hydroxide (10%) Resistance to Potassium Hydroxide (20%) Resistance to Propylene Carbonate Recommended Conditional Resistance to Skydrol® Conditional Resistance to Sodium Bicarbonate Recommended Resistance to Sodium Hydroxide (25%) Recommended Resistance to Sodium Hydroxide (50%) Recommended Resistance to Sudium Hypochlorite (10%) Recommended Resistance to Stearic Acid Recommended Resistance to Sugar/H2O Recommended Resistance to Sulfuric Acid (-50%) Recommended Resistance to Sulfuric Acid (10%) Recommended   | Resistance to Phosphoric Acid (10%)  | Recommended                |          |
| Resistance to Potassium Hydroxide (20%)  Resistance to Propylene Carbonate Recommended Conditional  Resistance to Skydrol® Conditional  Resistance to Sodium Bicarbonate Recommended  Resistance to Sodium Hydroxide (25%) Recommended  Resistance to Sodium Hydroxide (50%) Recommended  Resistance to Sodium Hydroxide (50%) Recommended  Resistance to Sodium Hyproxide (50%) Recommended  Resistance to Sodium Hyproxide (50%) Recommended  Resistance to Sudium Hyproxide (50%) Recommended   | Resistance to Phosphoric Acid (50%)  | Not Recommended            |          |
| Resistance to Propylene Carbonate Recommended Conditional  Resistance to Skydrol® Conditional  Resistance to Sodium Bicarbonate Recommended  Resistance to Sodium Hydroxide (25%) Recommended  Resistance to Sodium Hydroxide (50%) Recommended, Discoloration  Resistance to Sodium Hypochlorite (10%) Recommended  Resistance to Stearic Acid Recommended  Resistance to Sugar/H2O Recommended  Resistance to Sulfuric Acid (>50%) Recommended  Resistance to Sulfuric Acid (>50%) Recommended   |                                      | Recommended                |          |
| Resistance to Skydrol® Conditional  Resistance to Sodium Bicarbonate Recommended  Resistance to Sodium Hydroxide (25%) Recommended  Resistance to Sodium Hydroxide (50%) Recommended, Discoloration  Resistance to Sodium Hypochlorite (10%) Recommended  Resistance to Stearic Acid Recommended  Resistance to Sugar/H2O Recommended  Resistance to Sulfuric Acid (>50%) Recommended Conditional  Resistance to Sulfuric Acid (10%) Recommended   |                                      | Recommended, Discoloration |          |
| Resistance to Sodium Bicarbonate Recommended  Resistance to Sodium Hydroxide (25%) Recommended  Resistance to Sodium Hydroxide (50%) Recommended, Discoloration  Resistance to Sodium Hypochlorite (10%) Recommended  Resistance to Stearic Acid Recommended  Resistance to Sugar/H2O Recommended  Resistance to Sulfuric Acid (>50%) Recommended  Resistance to Sulfuric Acid (10%) Recommended   | Resistance to Propylene Carbonate    | Recommended Conditional    |          |
| Resistance to Sodium Hydroxide (25%) Recommended Resistance to Sodium Hydroxide (50%) Recommended, Discoloration Resistance to Sodium Hypochlorite (10%) Resistance to Stearic Acid Recommended Resistance to Sugar/H20 Recommended Resistance to Sulfuric Acid (>50%) Recommended Resistance to Sulfuric Acid (10%) Recommended   | Resistance to Skydrol®               | Conditional                |          |
| Resistance to Sodium Hydroxide (50%) Recommended, Discoloration  Resistance to Sodium Hypochlorite (10%) Resistance to Stearic Acid Recommended  Resistance to Sugar/H2O Recommended  Resistance to Sulfuric Acid (>50%) Recommended Conditional  Resistance to Sulfuric Acid (10%) Recommended  | Resistance to Sodium Bicarbonate     | Recommended                |          |
| Resistance to Sodium Hypochlorite (10%)  Resistance to Stearic Acid Recommended  Resistance to Sugar/H2O Recommended  Resistance to Sulfuric Acid (>50%) Recommended Conditional  Resistance to Sulfuric Acid (10%) Recommended  | Resistance to Sodium Hydroxide (25%) | Recommended                |          |
| Resistance to Stearic Acid Recommended  Resistance to Sugar/H2O Recommended  Resistance to Sulfuric Acid (>50%) Recommended Conditional  Resistance to Sulfuric Acid (10%) Recommended   | Resistance to Sodium Hydroxide (50%) | Recommended, Discoloration |          |
| Resistance to Sugar/H2O Recommended  Resistance to Sulfuric Acid (>50%) Recommended Conditional  Resistance to Sulfuric Acid (10%) Recommended   |                                      | Recommended                |          |
| Resistance to Sulfuric Acid (>50%)  Recommended Conditional  Resistance to Sulfuric Acid (10%)  Recommended  | Resistance to Stearic Acid           | Recommended                |          |
| Resistance to Sulfuric Acid (10%)  Recommended   | Resistance to Sugar/H2O              | Recommended                |          |
| resistance to dunting Acid (10%)   | Resistance to Sulfuric Acid (>50%)   | Recommended Conditional    |          |
| Resistance to Toluene Recommended  | Resistance to Sulfuric Acid (10%)    | Recommended                |          |
|  | Resistance to Toluene                | Recommended                |          |



| Descriptive Properties # Phosphate | Value mended            | Comments |
|------------------------------------|-------------------------|----------|
| Resistance to Vinegar/ H20 (5%)    | Recommended             |          |
| Resistance to Xylene               | Recommended Conditional |          |

## **Contact Songhan Plastic Technology Co.,Ltd.**

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