DeSoto® HS 535K020 Fluid Resistant Primer

TECHNICAL DATA SHEET

Product Description

DeSoto® HS 535K020 fluid resistant primer is a high solids epoxy primer formulated to provide excellent fluid and corrosion resistance:

- Compatible with Desothane® HS polyurethane topcoats and Koropon® HS epoxy topcoats
- Excellent adhesion and corrosion resistance
- Excellent fluid resistance
- Can be applied with all current spray equipment
- Service temperature -54 °C to 177 °C (-65 °F to 350 °F)

Components

Mix ratio (by volume):
- 535K020 (base component) 2 parts
- 930K097 (activator component) 1 part

Specifications

535K020 primer is qualified to:
- EMS 53181 Type I Class A
- MCS 9010 Type I Class 2 Grade 2
- HMS 15-1100 Type 1

Note: PPG Aerospace recommends you check the most recent specification QPLs for updated information.

Product Compatibility:

535K020 primer is compatible with the following topcoat specifications:
- CMS-CT-203 Type I Class 3
- DMS 2115 Composition C Type I
- DMS 2433 Type 1 Composition C
- EMS 53181 Type II Class C
- GMS 5006 Type I
- HMS 15-1100 Type II Class 2
- MCS 9010 Type X Class 1 Grade 2
- MIL-PRF-85285
- MS 100014E Class HS
- ZMS 2433 Type 1 Composition C

Surface Preparation and Pretreatments

DeSoto® 535K020 fluid resistant primer can be applied over clean, dry, intact aluminum and composite surfaces. Aluminum surfaces shall be treated with materials conforming to MIL-C-5541 or equivalent.
Instructions for Use

Mixing Instructions:
Prior to mixing, thoroughly shake the base component. Add the activator to the base component and stir well, maintain constant agitation for 10 minutes to ensure proper mixing. Induction time is needed.

Note: It is important to condition the paint for 24 hours prior to mixing by placing all materials in the shop or hangar, with ambient temperatures between 13° and 35°C (55° to 95°F). The minimum temperature of the paint components should be 13°C (55°F) prior to mixing.

Induction Time:

<table>
<thead>
<tr>
<th>Temperature</th>
<th>13 - 21°C (55 - 70°F)</th>
<th>22 - 28°C (71 - 84°F)</th>
<th>&gt;29°C (&gt;85°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Induction Time Required</td>
<td>30 minutes</td>
<td>20 minutes</td>
<td>10 minutes</td>
</tr>
</tbody>
</table>

Viscosity: (23°C/73°F)
- #2 Signature Zahn cup: 15 to 35 seconds
- #4 Ford cup: 10 to 25 seconds
- ISO 4mm cup: 17 to 58 seconds
- BSB3 cup: 26 to 58 seconds
- BSB4 cup: 14 to 31 seconds
- AFNOR #4 cup: 14 to 31 seconds

Note: Viscosities quoted are the typical ranges obtained when using specified mix ratio.

Pot Life:
3 hours @ 21 - 25°C (70 - 77°F)

Application Guidelines

Recommended Application conditions:

<table>
<thead>
<tr>
<th>Temperature</th>
<th>15 - 30°C (59 - 86°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative Humidity</td>
<td>20 - 90%</td>
</tr>
</tbody>
</table>
DeSoto® HS 535K020 Fluid Resistant Primer

Application:

Ground the aircraft and the application equipment before priming. Stir the primer slowly during the application. The suggested film thickness is 15 to 23 microns (0.6 to 0.9 mils). This can be accomplished by one coat with a 50% overlap.

*These application guidelines represent PPG’s best advice in standard conditions. Some parameters will be influenced by environmental conditions, equipment settings, and other variables.*

Theoretical Coverage:

23 square meters/liter at 25 microns dry film (953 square feet/gallon at 1 mil dry film)

Recommended dry film thickness; 15 to 23 microns (0.6 to 0.9 mils)

Dry Film Density:

1.76 grams/cubic centimeter (14.66 pounds/gallon)

Dry Film Weight:

44 grams/square meter at 25 microns dry film (0.00911 pounds/square feet at 1 mil dry film)

Equipment:

535K020 primer is compatible with all current forms of spray equipment.

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Tip Size</th>
<th>Pot Pressure</th>
<th>Atomization Pressure at the Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrostatic Air Spray Gun</td>
<td>1.2 mm or 1.5 mm</td>
<td>10 to 20 psi</td>
<td>45 to 60 psi (0.69 to 1.4 bar)</td>
</tr>
<tr>
<td>Electrostatic Air Assisted Airless Spray Gun</td>
<td>#611 or #613 (Graco Nomenclature)</td>
<td>700 to 1200 psi (48 to 82 bar)</td>
<td>40 to 60 psi (2.8 to 4.1 bar)</td>
</tr>
<tr>
<td>High Volume Low Pressure Spray Gun (HVLP)</td>
<td>1.0 mm to 1.4 mm</td>
<td>10 to 20 psi (0.69 to 1.4 bar)</td>
<td>10 psi maximum (0.69 bar)</td>
</tr>
<tr>
<td>Conventional Air Spray Gun</td>
<td>1.2 mm to 1.8 mm</td>
<td>10 to 20 psi</td>
<td>45 to 60 psi (3.1 to 4.1 bar)</td>
</tr>
</tbody>
</table>

Equipment Cleaning:

Clean spray equipment as soon as possible after use. Flush spray equipment with DeSoto® CN20, DeSoto® CN44, or Desoclean™ 45 high performance solvent cleaner.

535K020
DeSoto® HS 535K020 Fluid Resistant Primer

Physical Properties (product)

- **Color:** Semi-Gloss version of FED STD 595C #34151 Green
- **Gloss:** Not Applicable

<table>
<thead>
<tr>
<th>Dry Times</th>
<th>13 - 21°C (55 - 70°F)</th>
<th>22 - 28°C (71 - 84°F)</th>
<th>&gt;29°C (&gt;85°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust Free</td>
<td>45 minutes</td>
<td>30 minutes</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Tack Free</td>
<td>3 hours</td>
<td>2 hours</td>
<td>1 1/2 hours</td>
</tr>
<tr>
<td>Dry Through</td>
<td>7 hours</td>
<td>6 hours</td>
<td>5 hours</td>
</tr>
<tr>
<td>Full Cure</td>
<td>7 days</td>
<td>7 days</td>
<td>7 days</td>
</tr>
</tbody>
</table>

Accelerated cure for dry through:
- Allow 60 minutes flash off at 24°C ± 3°C (75°F ± 10°F)
- followed by 30 minutes at 65.5°C (150°F)

**VOC (EPA method 24):**

- Mixed, ready for use VOC: 350 grams/liter
- Base Component: 288 grams/liter
- Activator Component: 441 grams/liter

**Flash point:**

- Base Component: 39°C (102°F)
- Activator Component: 6°C (42°F)

**Shelf Life:**

12 months from date of manufacture to most OEM material specifications. Consult the specification to verify shelf life requirements.

24 months from date of manufacture for PRC-DeSoto Standard.

*Note: Shelf life is provided for original, unopened containers.*
DeSoto® HS 535K020 Fluid Resistant Primer

Note: The application and performance property values above are typical for the material, but not intended for use in specifications or for acceptance inspection criteria because of variations in testing methods, conditions and configurations.

Storage Recommendations

Inspect the condition of the container to ensure compliance. The material should be stored at temperatures between 5°C to 35°C (41°F to 95°F) to ensure shelf life.

Note: When procuring to a qualified material specification, follow those storage instructions.
DeSoto® HS 535K020 Fluid Resistant Primer

Health Precautions

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Safety Data Sheet (SDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An SDS is available on request. Avoid overexposure. Obtain medical care in case of extreme overexposure.

For industrial use only. Keep away from children.

Additional information can be found at: www.ppgaerospace.com

For sales and ordering information call the local PPG office at the numbers listed below:

**Asia Pacific**

ASC – Australia
Tel 61 (3) 9335 1557
Fax 61 (3) 9335 3490

ASC – Japan
Tel 81 561 35 5200
Fax 81 561 35 5201

ASC – South East Asia
Tel 65 6861 1119
Fax 65 6861 6162

ASC – Suzhou
Tel (86-512) 6661 5858
Fax (86-512) 6661 6868

ASC – Tianjin
Tel (86-022) 2482 8625
Fax (86-022) 2482 8600

**Europe and Middle East**

ASC – Central Europe
Tel 49 (40) 742 193 10
Fax 49 (40) 742 139 69

ASC – Middle East & India
Tel (971) 4 883 9666
Fax (971) 4 883 9665

ASC – North Europe
Tel 44 (0) 1388 770222
Fax 44 (0) 1388 770288

ASC – South Europe
Tel 33 (0) 235 53 43 71
Fax 33 (0) 235 53 54 44

**Americas**

1 (818) 362-6711 or 1-800-AEROMIX

Desoclean, Desothane, DeSoto, and Koropon are trademarks of PRC-DeSoto International, Inc.

All recommendations, statements, and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use and assumes all risks and liability resulting from his use of the product. Seller’s and manufacturer’s sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss, or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.