Two-Part Polyurethane Potting Sealant
SP2204

Product Description

SP2204 is two-component no solvent RTV/Heating curing resin elastomer compound. Used for two component sealing, filling, and other fields. Raw materials are free of heavy metal, green and environmental protection, wide technology operability. Finished products are with high physical properties, good adhesion to the substrate. It can cure deeply, after mixing, the two component sealant is with good liquidity, after curing, the colloid does not cause dimensional changes.

Key Features

1. Low viscosity, easy to operation
2. Excellent performance on low-temperature and weatherability
3. Excellent electrical insulativity and stability
4. Good waterproof, moisture resistance, very low water absorption
5. Good adhesion to most metals and plastics

Typical Applications

For casting and potting of water permeable components, communications equipment, transformers, electronic instruments panel components, electronic ignition controllers, electronic sensors, connectors etc.

Technical Data Table

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>STANDARD/UNITS</th>
<th>VALUE of SP2204</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PART A</td>
<td>PART B</td>
</tr>
<tr>
<td>Appearance</td>
<td>Visual inspection</td>
<td>Light yellow or Black fluid</td>
</tr>
<tr>
<td>Viscosity</td>
<td>25°C, cps</td>
<td>1,300 ± 500</td>
</tr>
<tr>
<td>Density</td>
<td>25°C, g/cm³</td>
<td>0.98 ± 0.3</td>
</tr>
<tr>
<td>Mixture ratio</td>
<td>Mass ratio</td>
<td>A:B=100: 46~60</td>
</tr>
<tr>
<td>Operation time</td>
<td>25°C, min</td>
<td>20~25</td>
</tr>
<tr>
<td>Water absorption</td>
<td>25°C, 15 days, %</td>
<td>&lt; 0.15</td>
</tr>
<tr>
<td>Dielectric strength</td>
<td>kV/mm, 25°C</td>
<td>≥ 20</td>
</tr>
<tr>
<td>Flame resistance</td>
<td>UL 94</td>
<td>V-0</td>
</tr>
<tr>
<td>Volume resistance</td>
<td>DC500V, ohm-cm</td>
<td>1.0×10¹⁵</td>
</tr>
</tbody>
</table>
### SP2204 Technical Data Sheet

<table>
<thead>
<tr>
<th>Lose factor</th>
<th>50HZ</th>
<th>0.02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working temperature</td>
<td>°C</td>
<td>-60~125</td>
</tr>
<tr>
<td>Temperature resistance</td>
<td>up to 1 hour short term, °C</td>
<td>150</td>
</tr>
</tbody>
</table>

Note: Above data was tested under certain conditions, just for reference.

### Directions for Use

#### Equipment encapsulating process

- **Preparations before use**
  - **Material preparation**: Suggest that the combine materials poured into the dispenser and then stirring. Also can stirring in the original drum, then pouring into dispenser.
  - **Defoaming treatment**: To avoid bubbles inside of finished products, need to do defoaming treatment before production: usually do evacuation with 6 minutes under the pressure of 0-2mmHg.
  - **Mixing ratio deviation**: Mixing proportion of deviation will affect the products’ mold release time and mechanical properties, the deviation should be less than 0.5%.
  - **Note**: During the operation process, should always maintain the tank airtight. For compressed gas, which must be dry, otherwise B material will become sticky, and affect the mechanical properties of the finished product.

- **Recommended molding conditions**
  - Equipment: Low pressure casting machine
  - Mold temperature: 50~60 °C
  - Material temperature: 25~30 °C (part A and part B)
  - Mold release time: 10~60min ,depending on the requirements of different intensity of demoulding, if mixing by manual stirring, defoaming treatment is required, the actual cure time is related to the environmental temperature etc.

#### Manual encapsulating process

- **Temperature**: Before using, keep the material under 25 ± 2°C to ensure that its reactivity and viscosity is suitable for processing.
- **Mixing**: weight and mix the material according to above suggested ratio.
- **Preparation**: Dry all the potting electronic devices, containers and mold in 70-80 °C oven for 1-2 hours to remove moisture.
- **Potting Process**: put A and B into a container according the ratio. Stirring 1~2 minutes. Defoaming under 0.1 Mp negative pressure to avoid the bubble. then potting to electronic devices smoothly. Should avoid the excessive speed to involving into air bubbles. If no vacuum defoaming apparatus can stand for a moment after the sealant mixing, after bubbles release automatically, then start pouring and casting.
- **Cleaning**: clean used appliances, containers by organic solvents, such as acetone and chloroform etc.

#### Typical hardness and ratio for reference

- **Part A: B**
  - 100:60   60 Shore A
  - 100:55   55 Shore A
  - 100:46   80 Shore A
Packing and Storage

Part A—200 KG/Metal bucket, Part B—200 KG/Metal bucket.

When stored at between 10~30°C in the original unopened containers, part A has a usable life of 12 months, and 6 months for part B from the date of production. The opened bucket should be used out as soon as possible and be sealed tightly from moisture.
It’s non-dangerous goods, can be transported and stored as normal chemicals.

Safety Operation Data

MSDS isn't included here. Please read TDS, MSDS and label carefully before operation. You can get MSDS from SEPNA or other distributors, or mail to service center sepna@sepna.cc, or call +86-400-882-1323.

Warranty and Liability

All product properties and application details based on information believe to be reliable and accurate. But you still need to test its property and safety before application. The advices we supply don't apply in any circumstances. SEPNA don't make assurance of any other applications outside the specification until SEPNA supply a special written guarantee. SEPNA is only responsible to replace or refund if this product is defective within the warranty period stated above. SEPNA makes it clear that will not be liable of any accidents.