Two-component Room-temperature Addition-cure RTV Silicone Rubbers


Two-component room-temperature addition-cure RTV silicone rubbers cure rapidly at room temperature when the A and B components are mixed together.

1. Features
   1) Much lower power consumption and CO2 emissions associated with curing compared to heat curable addition-cure RTV silicone rubbers.
   2) Reduced heat stress on underlying materials.
   3) Can be used on plastics with low heat resistance (e.g. ABS, PET, PC).
   4) Once the A and B components are mixed together and applied, sufficient adhesiveness for temporary attachment of materials is achieved in about 2 hours.

2. Application examples
   For adhesion of electrical & electronic components, automotive parts, etc.

3. General properties

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<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>A:Pale yellow / B:Creamy white</td>
<td>A/B:Translucent</td>
<td>A/B:Grayish white</td>
<td>A/B:Grayish white</td>
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<tr>
<td><strong>Viscosity</strong>, Pa·s</td>
<td>A:138 / B:118</td>
<td>A:129 / B:111</td>
<td>A:50 / B:40</td>
<td>A:45 / B:30</td>
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<tr>
<td><strong>Mix ratio</strong></td>
<td>100:100</td>
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<tr>
<td><strong>Pot life at 23°C, min</strong></td>
<td>40</td>
<td>20</td>
<td>10</td>
<td>10</td>
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<tr>
<td><strong>Standard curing conditions</strong></td>
<td>23°C×24 h</td>
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   | **Density at 23°C, g/cm³**      | 1.06        | 1.03          | 2.76        | 3.10          |
   | **Hardness, Durometer A**       | 24          | 10            | 50          | 66            |
   | **Tensile strength, MPa**       | 3.0         | 1.9           | 0.9         | 1.1           |
   | **Elongation at break, %**      | 580         | 800           | 60          | 15            |
   | **Tensile lap-shear strength**   | 1.5 (100)   | 1.2 (100)     | 0.6 (100)** | 0.4 (100)**   |
   | **Cohesion failure rate, %**    | 0.8 (100)   | 1.1 (100)     | —           | —             |
   | **PPS**                         | 1.2 (100)   | 1.4 (100)     | —           | —             |
   | **PBT**                         | —           | —             | —           | —             |

   ✽ Thin cohesion failure

4. Instructions for use

Each product comes as separate A and B components that must be mixed together in the prescribed amounts to initiate the curing reaction. The curing reaction proceeds at room temperature, so the work should be done as quickly as possible. Be sure to use a dispenser. Before work begins, clean all containers and tools to be used so they are free of dirt, water, oil, etc.

1) Stirring before mixing
   Fillers may sink to the bottom of containers. Be sure to stir up the components thoroughly prior to use.

2) Measuring
   Measure out components A and B.

3) Mixing, stirring, degassing
   Mix components A and B together, stir well.
   ✽ Degassing
   After stirring, be sure to vacuum degas if necessary.

4) Work
   After stirring and degassing, pour into place as quickly as possible.

5) Storage
   Seal the product tightly for storage. After use, clean containers and tools used for mixing and stirring (with solvent, etc.).
5 Handling precautions

1) Store in a dry and cool place (1°C to 30°C, out of direct sunlight) with good ventilation. Keep away from heat and flame. If products are stored for too long, the product can not be used due to settling or cohesion of the filler. It is best to use up the products shortly after purchasing.

2) Please note that in some cases, the RTV silicone rubber may not cure or adhere properly if it comes in contact with flux. Thus it is recommended to clean the flux when applying the products on the location in contact with flux. Please conduct preliminary test before use, even though certain kinds of flux may not cause negative effects.

3) Addition-cure RTV silicone rubber products may not cure properly if they are contaminated by or come in contact with certain cure-inhibiting substances (e.g. sulfur, phosphorus, nitrogen compounds, water, organometallic salts).

4) Addition-cure RTV silicone rubber products should not be used in high humidity conditions, as this can result in curing problems or poor adhesion.

5) Please avoid contaminations or contact with heat, acids bases, and certain organometallic compounds to prevent polymerization, gelation and a very small quantity of hydrogen gas generation. Therefore, seal container tightly and store in a cool, dark place.

6) Be sure to clean the substrate to remove dirt, grime, moisture and oil from the surface.

7) When using products, be sure to mix, stir and deaerate thoroughly. If these steps are not done properly, it may adversely affect the properties of the rubber.

6 Safety and hygiene

1) When handling the product, be sure to wear protective glasses and protective vinyl gloves. In case of skin contact, wipe off immediately with a dry cloth and then wash thoroughly with soap and water.

2) Uncured RTV silicone rubber may irritate skin and mucous membranes. Take care to avoid eye contact or prolonged contact with the skin. In case of accidental eye contact, immediately flush with water for at least 15 minutes and then seek medical attention. Contact lens wearers must take special care when using RTV silicone rubber: if uncured RTV silicone rubber enters the eye, the contact lens may become stuck to the eye.

3) When handling the products, be sure to provide adequate ventilation.

4) Keep out of the reach of children.

5) Be sure to read the Safety Data Sheets (SDS) for these products before use. SDS are available from the Shin-Etsu Sales Department.

7 Packaging

KE-1182-A/B, X-32-3300-A/B: 1 kg (round cans), 18 kg (JP cans)
KE-1184-A/B, X-32-3292-A/B: 1 kg (round cans), 20 kg (JP cans)