PRODUCT DESCRIPTION

**MACSEAL 6690-4** is a premium-quality, high-performance, hot-applied, single-component joint and crack sealant.

**MACSEAL 6690-4** is a formulated blend of engineered asphalts, virgin polymers, synthetic rubbers, reinforcing fillers, anti-oxidants, and UV inhibitors.

**MACSEAL 6690-4** offers advanced low-temperature bonding properties, prolonged resistance to degradation from weather, and a positive seal during the expansion and contraction of the joint or crack. It remains ductile and highly resilient at low and high service temperatures.

GENERAL PRODUCT FEATURES

- Cures to a non-tacky finish
- Can be applied over a wide range of temperatures
- Engineered for moderate to cold in-service climate temperatures
- Low modulus characteristics allow for a decrease in stress build up and enhanced field performance.
- Superior field performance when used in “blow and go” or “clean and fill” operations relative to traditional harder sealants due to its very flexible nature and low modulus properties
- Easy to apply via gravity-fed mechanism (e.g. pour pot, walk behind units, etc.) as well as via pump and hose/wand method
- Adheres very well to both hot mix asphalt and Portland cement concrete
- Engineered specifically for oil jacketed double boiler kettles. Not recommended for direct fire melters.
- Prevents the intrusion of water and incompressibles into the cracks of asphaltic and Portland cement concrete pavements

RECOMMENDED USE

**MACSEAL 6690-4** is recommended for the large-scale sealing of joints and random cracks in Portland cement concrete and asphalt pavements. It will provide good protection against repeated freeze-thaw cycles.

SPECIFICATIONS AND TYPICAL RESULTS

<table>
<thead>
<tr>
<th>TEST</th>
<th>TYPICAL DATA</th>
<th>SPEC.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point (COC), °C</td>
<td>245</td>
<td></td>
</tr>
<tr>
<td>Cone Penetration, 25°C, dmm</td>
<td>115</td>
<td>90 150</td>
</tr>
<tr>
<td>Flow, 60°C, mm</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Softening Point R&amp;B, °C</td>
<td>84</td>
<td>80 -</td>
</tr>
<tr>
<td>Bond, 200%, -29°C, 3 cycles</td>
<td>Pass</td>
<td>3</td>
</tr>
<tr>
<td>Resilience, 25°C, %</td>
<td>69</td>
<td>60 -</td>
</tr>
<tr>
<td>Asphalt Compatibility</td>
<td>Pass</td>
<td>Pass</td>
</tr>
</tbody>
</table>

TEMPERATURE VISCOSITY CHART

![Rotational Viscosity Chart](chart.png)
APPLICATION GUIDELINES

For detailed MACSEAL 6690-4 joint and crack preparation or specific application instructions, refer to specifying agency publications or contact an MCA representative.

APPLICABLE SPECIFICATIONS

MACSEAL 6690-4 meets or exceeds: ASTM D-6690 Type IV (Formerly D-3405 Modified-Low Modulus, AASHTO M 324-04, various state and provincial D.O.T. specifications.

APPLICATION TEMPERATURES

Recommended pouring temperature: 170°C (340°F)
Maximum safe heating temperature: 200°C (392°F)

MELTING EQUIPMENT

MACSEAL 6690-4 must be melted in an oil jacketed double boiler kettle equipped with a mechanical agitator and separate temperature thermometers for both the oil bath and melting vat.

COVERAGE

MACSEAL 6690-4 weighs approximately 9.5 lb/gal (1.14 kg/L). A joint ½ x ½ " (12.7 mm x 12.7 mm) requires approximately 18.4 kg/100 linear meters (12.4 lb/100 linear feet).

PACKAGING, STORAGE AND HANDLING

MACSEAL 6690-4 is available in the following packaging:

- 2 x 11 kg (25 lb) polybags in a high-strength, corrugated cardboard container. MACSEAL 6690-4 in boxes should kept in a dry environment.

CERTIFICATION OF QUALITY

McAsphalt Industries Limited is accredited to the quality management standard ISO 9001, the environmental management standard ISO 14001, and the occupational health and safety standard ISO 45001.

Each lot of MACSEAL 6690-4 is produced using the strictest quality, safety, and environmental guidelines. Each production lot is tested to ensure it meets or exceeds all performance requirements and is delivered with a Certificate of Analysis.

PRODUCT SUPPORT

With the MCA Advantage, you get a partner and advisor who will consult with you about designs, specifications, technical services, processes, and material selection. By developing innovative, custom-designed products that offer additional benefits such as peak performance in unique conditions, improved field performance, and greater environmental and health benefits, the MCA Advantage provides significant long-term cost savings, resulting in lower total cost of ownership.