PRODUCT DESCRIPTION

MACSEAL 6690-4 MOD is a high-performance, hot-applied, single-component, extra-low modulus joint and crack sealant.

MACSEAL 6690-4 MOD is a very soft sealant that offers excellent low temperature bonding properties while still maintaining a high degree of resiliency against incompressibles.

MACSEAL 6690-4 MOD permits high elongation at cold temperatures with low stress development. It will not flow from the joint or be picked up by vehicle tires at 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
- Superior field performance when used in “blow and go” or “clean and fill” operations relative to traditional “harder type” sealants due to its very flexible nature and extra low modulus properties
- Extra-low modulus characteristics allow for a decrease in stress build up and enhanced field performance.
- 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 double boiler/oil jacketed 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 MOD 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), ºC</td>
<td>245</td>
<td>-</td>
</tr>
<tr>
<td>Cone Penetration, 25ºC, dmm</td>
<td>135</td>
<td>90 150</td>
</tr>
<tr>
<td>Flow, 60ºC, mm</td>
<td>1</td>
<td>- 5</td>
</tr>
<tr>
<td>Softening Point R&amp;B, ºC</td>
<td>82</td>
<td>80 -</td>
</tr>
<tr>
<td>Bond, 200%, -29ºC, 3 cycles</td>
<td>Pass</td>
<td>3 -</td>
</tr>
<tr>
<td>Resilience, 25ºC, %</td>
<td>56</td>
<td>30 60</td>
</tr>
<tr>
<td>Asphalt Compatibility</td>
<td>Pass</td>
<td>Pass -</td>
</tr>
</tbody>
</table>

TEMPERATURE VISCOSITY CHART

![Temperature Viscosity Chart](chart.png)
MACSEAL 6690-4 MOD
HOT-APPLIED JOINT & CRACK SEALANT ASTM 6690 TYPE IV MODIFIED OR EQUIVALENT

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

APPLICABLE SPECIFICATIONS
MACSEAL 6690-4 MOD meets or exceeds: ASTM D-6690 Type IV (Modified) formerly D-3405 Modified Extra Low Modulus and 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 MOD 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 MOD weighs approximately 1.18 kg/L (9.8 lb/gal). A joint 12.7 mm x 12.7 mm (½ x ½”) requires approximately 19 kg/100 linear meters (12.8 lb/100 linear feet).

PACKAGING, STORAGE AND HANDLING
MACSEAL 6690-4 MOD is available in the following packaging:
* 2 x 11 kg (25 lb) polybags in a high-strength, corrugated cardboard container. MACSEAL 6690-4 MOD 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 MOD 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.