PRODUCT DATA SHEET

MACSEAL DF

DIRECT FIRE HOT APPLIED JOINT & CRACK SEALANT

PRODUCT DESCRIPTION

MACSEAL DF is a single component joint and crack sealant specifically designed for use with direct fired, single walled melters.

MACSEAL DF is manufactured using select engineered asphalt cements, polymers, selected oils and UV inhibitors.

MACSEAL DF will not flow from the joint or be picked up by vehicle tires, foot traffic, skateboards or roller blade wheels in high surface temperatures.

GENERAL PRODUCT FEATURES

• Cures to a non-tacky finish
• Can be applied over a wide range of temperatures
• Engineered for moderate to cold climates
• Its slightly stiffer nature is ideal for applications such as driveways, parking lots, bicycle trails, and areas receiving foot traffic
• Works well to fill the larger cracks and for routine maintenance of hot mix asphalt and Portland cement concrete
• Easy to apply via gravity type 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
• Can be used in either direct fire or oil jacketed kettles.
• Prevents the intrusion of water and incompressibles into the cracks of asphaltic and Portland cement concrete pavements

RECOMMENDED USE

MACSEAL DF was designed for the routine maintenance of asphalt concrete pavements on driveways, parking lots, bicycle paths and walkways using direct fire melters.

SPECIFICATIONS AND TYPICAL RESULTS

<table>
<thead>
<tr>
<th>TEST</th>
<th>TYPICAL DATA</th>
<th>SPEC RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point (COC), °C</td>
<td>275</td>
<td>...</td>
</tr>
<tr>
<td>Cone Penetration, 25°C, dmm</td>
<td>48</td>
<td>... 60</td>
</tr>
<tr>
<td>Flow, 60°C, mm</td>
<td>0</td>
<td>... 3</td>
</tr>
<tr>
<td>Resilience, 25°C, %</td>
<td>52</td>
<td>...</td>
</tr>
<tr>
<td>Asphalt Compatibility</td>
<td>Pass</td>
<td>Pass</td>
</tr>
</tbody>
</table>

TEMPERATURE VISCOSITY CHART

MACSEAL DF
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APPLICATION GUIDELINES

For detailed MACSEAL DF joint and crack preparation or specific application instructions, refer to specifying agency publications or contact manufacturer representative.

APPLICATION TEMPERATURES

- Recommended Pouring Temperature 185°C (365°F)
- Maximum Safe Heating Temperature 200°C (392°F)

MELTING EQUIPMENT

MACSEAL DF was designed to be melted in either direct fire melters equipped with either a hand operated or mechanically operated agitator, or melted in a double boiler, oil-jacketed kettle, equipped with mechanical agitator and separate temperature thermometers for both the oil bath and melting vat.

COVERAGE

MACSEAL DF weighs approximately 9.4 lb/gal (1.13 kg/L). A joint ½ X ½ (12.7 mm X 12.7 mm) requires approximately 12.2 lb per 100 lineal feet or 18.2 kg per 100 lineal meters.

PACKAGING, STORAGE AND HANDLING

MACSEAL DF is available in the following packaging:

- 2 x 25 lb. (2 x 11.33 kg) polybags in a high-strength corrugated cardboard container
- 1 X 30 lb. (13.61 kg) polybags in a high-strength corrugated cardboard container
- Boxes should be held in a dry environment

CERTIFICATION OF QUALITY

McAsphalt Industries Limited is accredited to the quality standard ISO 9001 and to the environmental standard ISO 14001.

Each lot of MACSEAL DF 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 it 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, greater environmental and health benefits, the MCA Advantage provides significant long-term cost savings, resulting in lower “total cost of ownership.”