

FUNCTIONAL V-4010

Grease Polymer Pellet for Improved Water Washout

Application:

FUNCTIONAL V-4010 is a pellet copolymer specifically designed for use in greases. **FUNCTIONAL V-4010** interacts with the grease soap matrix and greatly boosts the water resistance of grease. Unlike pre-dissolved polymers, the absence of oil improves economics, handling, and does not alter the base oil composition in a grease.

FUNCTIONAL V-4010's lower molecular weight and improved hydrophobicity reliably improve water washout (ASTM D1264) performance. In contrast, polymers with higher molecular weight and more cohesion like **FUNCTIONAL V-4020** can easily reduce water spray-off (ASTM D4049) but water washout can remain high in many greases.

Composition:

FUNCTIONAL V-4010 is a styrene copolymer in pellet form.

Typical Properties	
Appearance	Off-white to Yellow Pellet
Specific Gravity	1.1 – 1.2

Treatment Level:

Typical treatment level of 0.25 - 0.5wt% is sufficient for excellent water resistance with <10% ASTM D1264 water washout in soap-based greases including lithium complex and aluminum complex.

Handling:

FUNCTIONAL V-4010 has a high melting point and must be mixed at a temperature of 150-160°C / 302-320°F for 1 hour to incorporate into grease. Add **FUNCTIONAL V-4010** immediately after the soapmaking reaction; or with cooling oil for the recommended temperature and time.

FUNCTIONAL V-4010 may be unsuitable for greases with low production temperatures. Verify **FUNCTIONAL V-4010** compatibility in all new grease formulations in small scale before using in production.

FUNCTIONAL V-4010 may be prone to dust formation. Use with proper ventilation. When used in greases, **FUNCTIONAL V-4010** is a non-hazardous material; see the current Safety Data Sheet.

This Technical Data Sheet and the Safety Data Sheet contain information believed to be accurate and reliable. No warranty is made, however, to information beyond the control of FUNCTIONAL PRODUCTS INC. The engineering and management personnel of the user are responsible for determining the suitability of this or any product for any specific application, and this information is offered to them for that purpose.

Issued: 2020.02.17