

### FUNCTIONAL CA-441 COUPLING AGENT (FOOD - GRADE)

#### APPLICATION:

White mineral oil, widely used in food-grade lubricants, is generally a poor solvent for polar lubricant additives, such as antioxidants and anti-wear additives. **FUNCTIONAL CA-441** is an additive that is used to increase the polarity of the food-grade lubricant to enable advantageous use of these other additives. It can also be used to impart rubber-swelling properties to food-grade lubricants, to minimize seal shrinkage and leakage.

#### COMPOSITION:

The active ingredient in **FUNCTIONAL CA-441** is a mixture of esters. These and the food-grade diluent oil have both been certified by their manufacturers to be suitable for use as lubricant components where incidental contact of the lubricant with food could occur, as described in 21 CFR 178.3570. **FUNCTIONAL CA-441** has been registered with the USDA and may be cited as a component when you submit your lubricant composition to USDA.

Typical Properties	
Appearance	clear colorless liquid
Odor	mild or none
Specific Gravity	0.92
Lbs per Gallon	7.7
Flash Point	135 °C (275 °F)
Kinematic Viscosity	12 cSt at 40 °C

#### TREATMENT LEVEL:

The typical treatment level for paraffinic white oils is two parts **FUNCTIONAL CA-441** for each part of polar additive to be dissolved. Rubber swell is imparted at levels over about 5%. USDA requires that all additives be used at the minimum level that achieves the desired effect.

#### HANDLING:

**FUNCTIONAL CA-441** is an easily handled liquid and any convenient technique may be used for blending. Safe handling precautions are the same as those to be taken with the base oil; see the current Material Safety Data Sheet.



Nonfood Compounds  
Program Listed  
Category Codes: HX-1 and HX-2  
Registration No. 120908

This Technical Data Sheet and the Material 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.

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# FUNCTIONAL PRODUCTS INC.

**A Solution Company**

## Technical Data Sheet

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8282 Bavaria Road, Macedonia, Ohio 44056

Phone: (330) 963-3060

Fax: (330) 963-3322

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