

### FUNCTIONAL CI-446EP

#### Corrosion Inhibitor – Extreme Pressure Additive Incidental Food Contact

##### APPLICATION:

**FUNCTIONAL CI-446EP** is an oil-soluble extreme pressure/anti-wear additive and corrosion inhibitor for use in lubricants and hydraulic fluids with incidental food contact. The product contains a food contact approved white oil as the carrier fluid but is soluble in vegetable oils, and polyalphaolefins.

##### COMPOSITION:

**FUNCTIONAL CI-446EP** is composed of an amine phosphate and other phosphate compounds in a food contact approved white oil as the base fluid.

| Typical Properties             |  |
|--------------------------------|--|
| Appearance                     | Colorless clear liquid                   |
| Odor                           | Mild amine                               |
| Specific Gravity               | 0.90                                     |
| Lbs per Gallon                 | 7.5                                      |
| Flash Point                    | 105°C (220°F)                            |
| Kinematic Viscosity            | 20 cSt at 40°C                           |
| pH                             | 7.0 – 8.0 (in 99% isopropanol, 1% water) |
| Phosphorus                     | 3.75 %                                   |
| D4782 4-ball wear, 20kg, mm    | 0.38 (2% treat in White Oil) ISO 32      |
| D2783 4-ball EP, weld load, kg | 126 (2% treat in White Oil) ISO 32       |

##### TREATMENT LEVEL:

**FUNCTIONAL CI-446EP** is typically used at levels up to 2.0% for corrosion inhibition and antiwear and to meet NSF's maximum treat level requirements. If only rust protection is required a starting level of 0.1% -0.2% is recommended for normal protection (ASTM D665A) and 0.2% -0.5% for corrosion prevention under saline conditions (ASTM D665B). For non-incident food contact applications, higher levels of CI-446EP can be used. It is up to the user to define the appropriate treat level.

##### HANDLING:

In its concentrated form, **FUNCTIONAL CI-446EP** may cause skin and eye irritation and should be handled with suitable personal protection such as gloves and eye protection. Fumes resulting from heating of the concentrated form may be an inhalation irritant. See the Safety Data Sheet.



Nonfood Compounds  
Program Listed  
Category Codes: HX-1 and HX-2  
Registration No. 158355

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.

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