



MAYFREE 133

Phosphorus Nitrogen Compound Chlorine Replacement Additive

Mayfree 133 is recommended as a replacement for chlorinated paraffin in almost every metalworking operation. **Mayfree 133** is oil soluble; however, it can also be incorporated into water dilutable formulations.

The rule of thumb to follow when trying to replace a chlorinated paraffin is to work on a one for one basis of **Mayfree 133** for % chlorine. For example, a cutting oil contains 6% of a 50% chlorinated paraffin, bringing to the formula 3% chlorine; therefore, one would substitute in the product 3% **Mayfree 133**.

Mayfree 133 does possess a high acid number, so the addition of or increase in the alkaline components, such as triethanolamine, must be made. In oil systems, **Mayfree 133** is not compatible with other chlorine replacement additives, such as overbased sulphonates.

Mayfree 133 is recommended for all metalworking applications, with the exception of very severe or stainless operations, which are normally performed with cutting oils containing in excess of 20% chlorine. **Mayfree 133** has, in the field, successfully replaced chlorine at levels up to 15% in the formulations.

TYPICAL PROPERTIES

Property	Result
Specific gravity @ 60/60°F	0.99
Density, lb/gal	8.25
Appearance	Dark Amber
Neutralization Number, meqKOH/g	155
Viscosity SUS @ 100°F	44,000
Viscosity SUS @ 210°F	750
Viscosity cSt @ 100°F	9,500
Viscosity cSt @ 210°F	162
Phosphorus Content, %	4.0
Flash Point, C.O.C, °F	460
Flash Point, C.O.C., °C	238

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