



TECHNICAL DATA

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450 PURE SYNTHETIC SMOKELESS FOOD GRADE H1 CHAIN LUBE ISO 15, 150, and 220

Pure Synthetic Smokeless Food Grade H1 Chain Lube is a food grade, anti-wear, synthetic, smokeless, odorless high temperature chain lubricant that is specially formulated for use as a lubricant on all types of high temperature oven chains exposed to temperatures up to 450°F.

These high temperature chain applications can be found in the following food processing industries:

Meat and Poultry Processing Plants	Paper and Paperboard Manufacturers
Fish and Seafood Processing Plants	Candy Manufacturers
Ethnic Food Manufacturers	Vegetable and Fruit Processors
Cheese and Cheese Product Producers	Bakeries
Snack Food Manufacturers	Pasta Manufacturers
Pet Food and Animal Feed Producers	Oil Mills and Seed Cake Processors
Food and Beverage Container Manufacturers	

Pure Synthetic Smokeless Food Grade H1 Chain Lube meets the requirements for a USDA H1 quality lubricant and the requirements of the United States Code of Federal Regulations 21CFR 178.3570, 178.3620(b), and 573.680 of the United States Food and Drug Administration's Regulations.

Pure Synthetic Smokeless Food Grade H1 Chain Lube is blended from the highest quality combination of naturally derived food grade polyol esters and other food grade synthetic base oils that provide the following benefits:

- **LOW VOLATILITY AND HIGH SMOKE POINT** to eliminate the formation of dense, obnoxious fumes and odors, and provide lower makeup requirements from evaporation
- **HIGH VISCOSITY INDEX** provides a minimum change in viscosity with temperature to give the proper chain lubrication regardless of temperature
- **EXCELLENT LUBRICITY** for outstanding load carrying capabilities, film strength and anti-wear properties which extends chain life
- **HIGH DEGREE OF SOLVENCY** will clean-up, breakdown and dissolve prior carbon, varnish and gum build-up. Also provides anti-sticking and release properties so the processed food product does not stick to the chain.
- **VERY LOW ODOR AND CLEAN TASTE** because the polyol ester base oil is refined to remove any volatile odor and flavor component as well as residual fatty acids.
- **UNIFORM AND COMPLETE COVERAGE** because the lube spreads easily and completely over the chain surfaces to penetrate and coat all of the moving parts. Also provides trouble-free operation and reduced frictional drag.

HIGH TEMPERATURE OXIDATION AND THERMAL STABILITY:

Many food grade chain lubricants have a tendency to oxidize into sludge, carbonaceous deposits and residues at elevated temperatures. These residues can block clearances, jam chain rollers and allow rapid wear to occur. Pure Synthetic Smokeless Food Grade H1 Chain Lube's fully saturated molecular structure greatly reduces the potential of oxidation. This results in the elimination of any carbon, varnish and sludge deposits being formed due to high temperature operation.

ENERGY EFFICIENCY:

Pure Synthetic Smokeless Food Grade H1 Chain Lube's low volatility characteristics, excellent oxidative and thermal stability, excellent lubricity and uniform and complete coverage properties result in a reduction of drag and friction on the chain mechanisms. This results in a significant reduction in starting loads and peak power demand, thus providing a realistic power cost savings.

Combined with the naturally derived food grade polyol esters and other food grade synthetic base fluids is a highly specialized high temperature additive package that provides the Pure Synthetic Smokeless Food Grade H1 Chain Lube with the following special advantages:

- Exceptional anti-wear and extreme pressure properties for reduced chain drag.
- Exceptional rust and corrosion protection
- Rapid penetration of the Pure Synthetic Smokeless Food Grade H1 Chain Lube into the chain rollers, pins and sprockets.

TYPICAL PROPERTIES

ISO Grade	15	150	220
Specific Gravity @ 60°F/15°C	0.95	0.932	0.920
Viscosity cSt @ 40°C (ASTM D445)	13.5 – 15.50	138 – 165	198-242
Viscosity cSt @ 100°C (ASTM D445)	3.5 – 4.0	19.3 – 22.0	25.0-30.0
Viscosity Index (ASTM D2270)	218	159	166
Flash Point °F/°C (ASTM D92)	464°/240°	466°/241°	482°/250°
Pour Point °F/°C		-13°/-25°	-13°/-25°
Four Ball Wear Test (ASTM D4172)			
Scar Diameter, mm	0.3	0.3	0.3
% Evaporation @ 6 hours (ASTM D972)			
@450°F/232°C	<3%	<3%	<3%
500°F/260°C	<4%	<4%	<4%
Active Oxidation Method			
Hours to oxidation at 100°C	+500 hours	+1000 hours	+1000 hours