

# SynCold<sup>®</sup> SH Series

Refrigeration Compressor Lubricant

## Introduction

SynCold<sup>®</sup> SH series lubricants are semi-synthetic polyalphaolefin (PAO) refrigeration compressor oil specially developed for commercial and industrial refrigeration and air conditioning compressors. Compared with naphthenic lubricants, SynCold<sup>®</sup> SH series lubricants have lower volatility, which can significantly reduce the frequency of daily maintenance and lubricant consumption. They are particularly suitable for use in evaporation temperatures above -45°C and ammonia refrigeration systems.

SynCold<sup>®</sup> SH has a low pour point, high viscosity index, and good viscosity-temperature performance, resulting in excellent low-temperature fluidity. It meets and exceeds the requirements of DIN 51503-1 (KAA class: refrigeration oil that do not mix with ammonia (NH<sub>3</sub>)). The test results for the ammonia resistance of refrigeration lubricants show that SynCold<sup>®</sup> SH has good stability when used with R717 refrigerant (DIN51538). SynCold<sup>®</sup> SH series lubricants have no adverse effects on metals, rubber, and other materials.

## Applications and Compressor Types

- R717 (ammonia), hydrocarbon refrigerants (e.g., R290), R744 (CO<sub>2</sub>)
- Reciprocating and Screw-type compressors

## Features

Features	Benefits
Meets extreme chemical & thermal stability requirements of R717 (NH <sub>3</sub> )	Extends system life
Meets the high stability requirements of R744 (CO <sub>2</sub> )	Suitable for high-temperature nitrogen and carbon dioxide cascade heat pump systems
Anti-corrosion	Improves system reliability and reduces downtime
Excellent bearing lubrication	Longer compressor life
Superior low-temperature fluidity	Optimized system oil return performance
Excellent lubricity	Exceptional high-temperature stability with minimal evaporation
Food Safety Grade	NSF (H2) certified



## Specifications

Compliance standards: Q/GH 1004

Meet the following standards:

- (DIN) DIN51503-1, German Society of Standardization
- (JISC) JIS K2211, Japanese Industrial Standards Survey (JISC)
- BS 2626, The British Standards Institute (BS)

## Properties

Product Name	SH46	SH68	Test Method
ISO viscosity grade	46	68	GB/T 3142
Viscosity @40° C, mm <sup>2</sup> /s	45.2	68.2	GB/T 265
Color	<0.5	<0.5	GB/T 6540
Density @20° C, kg/m <sup>3</sup>	872	875	SH/T 0604
Viscosity Index	103	100	GB/T 1995
Flash point, ° C	216	225	GB/T 3536
Pour point, ° C	-52	-45	SH/T0886
Acid value, mg KOH/g	<0.02	<0.02	GB/T 4945
Extreme pressure (Falex) Failure load, N	2850	3020	SH/T 0187

SynCold® SH Series is available in various viscosities to meet user specific needs. Additional information is available upon request.

## Health and Safety

Refer to the Material Safety Data Sheet (MSDS) on the official website for health and safety information.

## Package size

200L drums, 20L pails, 10L pails, 4L containers, 1L bottles



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