

# SynCold<sup>®</sup> GS Series

Refrigeration Compressor Lubricant

## Introduction

SynCold<sup>®</sup> GS series are specially selected synthetic naphthenic lubricants designed for refrigeration and air conditioning system compressors in both commercial and residential applications. SynCold<sup>®</sup> GS series boasts high chemical stability, extremely low wax content, and superior low-temperature performance, guaranteeing a long equipment lifespan. SynCold<sup>®</sup> GS refrigerant lubricants are applicable to various type of refrigeration compressors and have excellent compatibility with hydrochlorofluorocarbons (HCFCs) or chlorofluorocarbons (CFCs) refrigerants and natural refrigerants.

SynCold<sup>®</sup> GS is perfect for cost-effective environments, particularly air conditioning systems where the evaporator temperature stays above -18°C. This includes residential and commercial refrigeration, as well as industrial refrigeration and air conditioning systems.

## Applications and Compressor Types

Applicable Refrigerant:

- CFC: R11, R12, R13, R131b1, R113, R114, R500, R502, R503
- HCFC: R22, R123, R124, R401a, R402a, R402b, R403b, R406a, R408a, R409a
- Ammonia: R717
- Isobutane: R600a
- Propane: R290

Applicable Compressor:

- Reciprocating compressors
- Screw compressors
- Scroll compressors

## Features

Features	Benefits
Excellent low-temperature performance	Enables smooth compressor operation across a wide temperature range, preventing flocculent wax buildup in the system's low-temperature zones.
Good oxidation and thermal stability	Prevent heavy carbon buildup in high-temperature areas like discharge valves, ensuring longer lubricant service life.
Superior lubricity	Provides effective oil film protection, for strong lubrication and heat dissipation.
Excellent compatibility with refrigerants	Maintains high-strength oil film under high-temperature even when oil film is thinned by refrigerants, ensuring proper oil circulation throughout the refrigeration system.
Good electrical insulation	Meets the motor insulation requirements of hermetic, semi-hermetic refrigeration compressors.



## Specifications

Compliance standards: GH 1003

Meet the following standards:

- GB/T16630-2012
- (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	3GS	4GS	5GS	Test Method
ISO viscosity grade	32	56	100	GB/T 3142
Viscosity @40°C, mm <sup>2</sup> /s	31.5	56.0	100.0	GB/T 265
Color	<1.0	<1.0	<1.0	GB/T 6540
Density @20°C, kg/m <sup>3</sup>	914	915	920	SH/T 0604
Compatibility with R22 Refrigerant, °C	-10	6	15	SH/T 0699
Flash point, °C	172	180	185	GB/T 3536
Pour point, °C	-42	-36	-40	SH/T0886
Cloud point, °C	-54	-50	52	GB/T 12577
Acid value, mg KOH/g	<0.02	<0.02	<0.02	GB/T 4945
Breakdown Voltage, kV	45	50	52	GB/T 507
Chemical stability @175°C, R22, 14D	Pass	Pass	Pass	SH/T 0698
Extreme pressure (Falex) Failure load, N	2750	2820	2950	SH/T 0187

SynCold® GS 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

