



RC-HBR-A01-xx

MINERAL REFRIGERATION OIL

Properties*



Packaging

5 Gallon Pail
RC-HBR-A01-5G

Properties*

ASTM#		Typical Characteristics
D-445	Kinematic Viscosity	
	cSt @ 40°C	100
	cSt @ 100°C	8.4
D-2161	Saybolt Viscosity	
	SUS @ 100°F	928.2
	SUS @ 210°F	86.0
D-2270	Viscosity Index	93
D-4052 (Gardner Method)	Density, lb/gal, 60°F (15.5°C)	7.93
	Specific Gravity, g/cc @ 60°F (15.5°C)	0.953
D-92	Flash Point, C.O.C., °F (°C)	360 (182)
	Fire Point, C.O.C., °F (°C)	550 (287)
D-97	Pour Point °F (°C)	-31 (-24)
D-877	Dielectric Strength, (kV)	46.6

HBR-A01 is a MINERAL REFRIGERATION OIL designed for Hanbell Screw Compressors installed in air conditioning and industrial refrigeration equipment. This Naphthenic based lubricant is recommended for OEM retrofitting applications in equipment using Hanbell Rotary Screw Compressors per factory standards matched to the conditions and refrigerant specified.

Benefits

- Non hazardous (under 29 CFR1910.1200)
- High chemical stability resists reaction with all components in a properly designed refrigeration system
- High dielectric strength allows this refrigeration lubricant to be an excellent insulator between the motor windings and compressor body.
- Low wax content

Applications

Ideal for use in any system where a mineral refrigeration oil is beneficial to ensure proper lubrication of the compressor and other components found in a properly designed refrigeration system.

This lubricant is suitable for use in most medium and high temperature systems and compactible with systems using mineral oil.

Please note that each application is different and an oil cooler may be required. See your MCS representative for application.

*These values are not intended for use in preparing specifications.

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STANDARD OF GLOBALLY HARMONIZATION SYSTEM (GHS)

一、CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : HBR-A01
OTHER NAME : None
PRODUCT USE : Refrigeration Oil
COMPANY IDENTIFICATION : HANBELL PRECISE MACHINERY CO., LTD
No.5 Kongsan Road,Kuan-Yin Industrial Park.Kuan-Yin Dist.,Tao-Yuan City,Taiwan R.O.C.
TEL : +886-3-4836215
EMERGENCY TELEPHONE NUMBER : TEL : +886-3-4836215
FAX NUMBER FOR INFORMATION : FAX: +886-3-4836223

二、HAZARDS IDENTIFICATION

GHS CLASSIFICATION :

PHYSICAL HAZARDS

EXPLOSIVES	None
FLAMMABLE AEROSOLS	None
OXIDIZING GASES	None
FLAMMABLE LIQUIDS	None
WATER, EMIT FLAMMABLE GASES	None
OXIDIZING LIQUIDS	None

HEALTH AND ENVIRONMENTAL HAZARDS

ACUTE TOXICITY	Category 5
SKIN IRRITATION	Category 3
EYE IRRITATION	Category 2B
RESPIRATORY OR SKIN SENSITIZATION	None
GERM CELL MUTAGENICITY	None
CARCINOGENICITY	None
REPRODUCTIVE TOXICITY	None
HAZARDOUS TO THE AQUATIC ENVIRONMENT	
ACUTE AQUATIC TOXICITY	None
CRONIC AQUATIC TOXICITY	None

OTHER HAZARDS : None

三、COMPOSITION/INFORMATION ON INGREDIENTS

Ingred Name:MINERAL OIL,PETROLEUM DISTILLATES,HYDROTREATED HEAVY
NAPHTHENIC, CAS.# 64742-52-5
CAS:64742-52-5
RTECS #:PY8035000
ACGIH TLV:5 MG/CUM (MIST)

Ingred Name:MINERAL OIL,PETROLEUM DISTILLATES,SOLVENT-REFINED HEAVY
PARAFFINIC, CAS.#64741-88-4
CAS:64741-88-4

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RTECS #:PY8040500

ACGIH TLV:5 MG/CUM (MIST)

四、FIRST AID MEASURES

Inhalation : Remove exposed person to fresh air if adverse effects are observed.
Skin Contact : Wash with soap and water. Get medical attention if irritation develops.
Launder contaminated clothing before reuse.
Eye Contact : Flush immediately with water for at least 15 minutes. Get immediate medical attention..
Ingestion : Do not make person vomit unless directed to do so by medical personnel.
Note to physician : Treat symptomatically.

五、FIRE FIGHTING MEASURES

Extinguishing media : CO₂ , dry chemical, or foam.
Special fire fighting procedures : Recommend wearing self-contained breathing apparatus. Water may cause splattering . Material will float on water.
Unusual fire & explosion hazards : Toxic fumes, gases or vapors may evolve on burning.
Explosion data : Material does not have explosive properties.

六、ACCIDENTAL RELEASE MEASURES

Person-related precautionary measures : Stop the source of the leak or releases, clean up releases as soon as possible.
Environmental-protection measures : Prevent further contamination of soil, surface water or ground.
Procedures for cleaning : Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.

七、HANDLING AND STORAGE

Handling :

1. Do not weld heat or drill container. Replace cap or bung. Emptied container still contains hazardous material which may ignite with explosive violence if heats sufficiently.
2. Minimum feasible handling temperatures should be maintained.
3. Water contamination should be avoided.

CAUTION : Do not use pressure to empty drum or drum may rupture with explosive force.
Storage : Periods of exposure to high temperatures should be minimized.

八、EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS : No special ventilation is usually necessary. However, if operating conditions create high air borne concentrations of this material, special ventilation may be needed.

EXPOSURE LIMIT :

TWA mist	STEL mist	CEILING	BEIs
5mg/m ³	10mg/m ³	None	None

PERSONAL PROTECTIVE EQUIPMENT :

RESPIRATORY PROTECTION :

Wear a breathing mask.

HAND PROTECTION :

Avoid prolonged or frequently repeated skin contact by wearing impervious protective gloves.

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EYE PROTECTION : Chemical type goggles or face shield optional.
SKIN PROTECTION : Avoid prolonged or frequently repeated skin contact by wearing impervious protective clothing including gloves.
OTHER CLOTHING AND EQUIPMENT : No special clothing or equipment is usually necessary.

九、PHYSICAL AND CHEMICAL PROPERTIES

COLOR&APPEARANCE :	Clear	ODOR :	Slight petroleum odor.
Sense of smell threshold value :	None.	MELTING POINT :	None
PH value :	None	BOILING POINT :	None
INFLAMMABLE(SOLID、GAS) :	None.	FLASH POINT :	208 °C
DECOMPOSITION TEMPERATURE :	None.	TEST METHOD :	Open Cup
AUTO IGNITION TEMPERATURE :	None.	EXPLOSION LIMITS :	None
DENSITY :	0.92 @15°C , g/cm ³	SOLUBILITY :	Insoluble in water

十、STABILITY AND REACTIVITY

STABILITY : Stable
CONDITIONS TO AVOID : See the Handling and storage section for further details.
INCOMPATIBILITY(MATERIALS TO AVOID) : Acids, oxidizing agents. Halogens and halogenated compounds.
HAZARDOUS POLYMERIZATION : Will not occur.

十一、TOXICOLOGICAL INFORMATION

Acute Oral :	No Data Available :	Believed to be greater than 5g/kg (rat)
Dermal :	No Data Available :	Practically non-toxic Believed to be greater than 3 g/kg (rabbit)
Carcinogen :	OSHA :	Practically non-toxic This material is listed as Group 3 by IARC
	EU :	The classification as a carcinogen need not apply.

十二、ECOLOGICAL INFORMATION

ECOTOXICITY : Chronic Toxicity to Fish, NOEC>5000mg/L (7 day)-IUCLID Dataset.
Chronic Toxicity to Aquatic Invertebrates, NOEC=552mg/L (7 day)-IUCLID Dataset

十三、DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD : Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.
ENVIRONMENTAL FATE : This material is not expected to present any environmental problems other than those associated with oil spills.

十四、TRANSPORT INFORMATION

The description shown may not apply to all shipping situations.

DOT	Proper Shipping Name :	Not applicable.
IMDG	Proper Shipping Name :	Not applicable.

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ICAO Proper Shipping Name : Not applicable.
TDG Proper Shipping Name : Not applicable.
NFPA Proper name : Class 1.
UN Number : Not applicable.

十五、REGULATION INFORMATION

The U.S.TSCA inventory : No
The SARA 311/312 Reportable Hazard Categories : No
The OSHA (29 CFR 1910.1200) : No
The EC EINECS inventory : No

十六、OTHER INFORMATION

References :

1. Handbook of Toxic and Hazardous Chemicals and Carcinogens (2nd Ed.)
2. Registry of Toxic Effects of Chemical Substances (NIOSH, 1983)
3. Globally Harmonization System (Council of Labor Affairs, Executive Yuan, Taiwan)

Made by	HANBELL PRECISE MACHINERY CO., LTD
	No.5 Kongsan Road,Kuan-Yin Industrial Park.Kuan-Yin Dist.,Tao-Yuan City,Taiwan R.O.C.
Made by	Title : PURCHASER
Creation Date	2021-11-30

Material safety data sheets are provided as reference information on the safe handling of hazardous or harmful Materials to companies using such materials. When referring to this data sheet, companies should remember that They must take responsibility for implementing the proper measures for their own particular situations. This data sheet is not a guarantee of safety.