



SYNTHETIC REFRIGERATION LUBRICANTS

DESCRIPTION

NYCOLUBE 7000 series is composed of synthetic lubricants based on neopolyol esters.

They have been specifically designed for use in refrigeration systems working with hydrofluorocarbon (HFC) refrigerants (R134a, R404a, R407c, R410a, R507, R23...), traditional mineral oils and alkyl benzene based lubricants being not compatible with these refrigerants.

Their excellent thermal and hydrolytic stability, their miscibility at low temperature with HFC and their very good lubricity deliver excellent performance levels and energy efficiency to refrigeration systems.

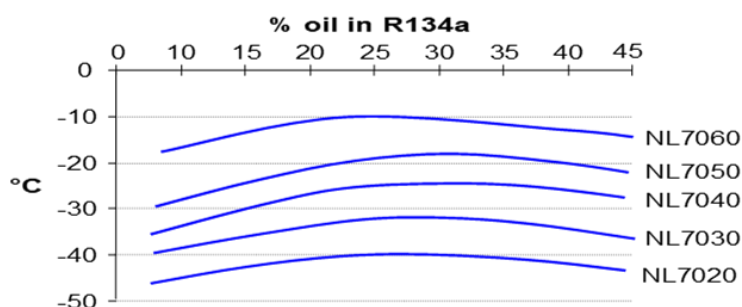
NYCOLUBE 7000 oils are available in several viscosity grades to suit a wide range of applications. Other grades can be developed to meet the requirements of specific refrigeration systems.

Summary of NYCOLUBE 7000 series

DESIGNATION	ISO VG	VISCOSITY @ 40°C mm²/s	VISCOSITY @ 100°C mm²/s	VISCOSITY INDEX	ACID NUMBER mg KOH/g	POUR POINT °C	FLASH POINT COC	WATER CONTENT ppm	MAIN APPLICATIONS
NYCOLUBE 7030	32	32	5.85	127	0.02	-57	254	< 50	Refrigeration compressors working with HFC refrigerants
NYCOLUBE 7040	46	46	7.25	119	0.02	-57	254	< 50	
NYCOLUBE 7050	68	68	9.1	109	0.02	-48	262	< 50	
NYCOLUBE 7060	100	95	11	98	0.01	-30	270	< 50	Reciprocating for the viscosity grade up to 68
NYCOLUBE 7461	100	103	11.2	94	0.05	-27	270	< 50	
NYCOLUBE 7471	150	150	16.0	112	0.05	-30	275	< 50	Screw compressor for the higher viscosities grades
NYCOLUBE 7481	220	232	23.3	124	0.06	-30	270	< 50	

Miscibility with R134a

The miscibility curves of NYCOLUBE 7020 to 7060 have been established. Lubricant and refrigerant are totally miscible above curves, and separate into 2 phases underneath the curves.



The values above are typical values. They do not constitute any contractual commitment.

Sales specifications are available on request. The present technical data sheet replaces all the previous edition.



NYCOLUBE 7040

Safety Data Sheet

There is no legal obligation to provide an SDS for this substance or mixture

Date of issue: 18/12/2012

Revision date:

Version: 2.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : NYCOLUBE 7040
Product code : NL7040-3

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Industrial use
Function or use category : Lubricant.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

NYCO
66 Avenue des Champs Elysées
75366 Paris Cedex 08 - France
T +33 (0)1 45 61 50 00
info@nyco.fr - www.nyco.fr

1.4. Emergency telephone number

Emergency number : +33 (0)1 45 42 59 59
INRS/ORFILA (France) : 33 1 45 42 59 59

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH annex II

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice (show the label where possible).
First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water. Seek medical advice (show the label where possible).
First-aid measures after eye contact : If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice (show the label where possible).
First-aid measures after ingestion : If swallowed: Rinse mouth. Do NOT induce vomiting. Seek medical advice (show the label where possible).

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4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: At high concentrations, the vapours can be irritating to the respiratory system.
Symptoms/injuries after skin contact	: Repeated exposure may cause skin dryness or cracking. irritation (itching, redness, blistering).
Symptoms/injuries after eye contact	: Eye irritation.
Symptoms/injuries after ingestion	: Possible irritation of mucous membranes and digestive tract, nausea, vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Foam. Dry powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	: Strong water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: On burning: release of harmful/irritant gases/vapours. Carbon oxides (CO, CO ₂).
Reactivity	: Stable at ambient temperature and under normal conditions of use.

5.3. Advice for firefighters

Precautionary measures fire	: Protective equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
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6.1.1. For non-emergency personnel

Protective equipment	: See Headings 7 and 8.
Emergency procedures	: For a large spillage, contain the spillage by bunding.

6.1.2. For emergency responders

Protective equipment	: See Headings 7 and 8.
Emergency procedures	: For a large spillage, contain the spillage by bunding.

6.2. Environmental precautions

Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel).
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6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Stable at ambient temperature and under normal conditions of use.
Precautions for safe handling	: Wear suitable protective clothing. Personal protective equipment. When using do not eat, drink or smoke. Always wash your hands immediately after handling this product, and once again before leaving the workplace. Avoid spilling the product, as this might cause falls.
Hygiene measures	: When using do not eat or drink. Always wash your hands immediately after handling this product, and once again before leaving the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in dry, cool, well-ventilated area.
Special rules on packaging	: Store in original container. Keep container closed when not in use.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

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8.2. Exposure controls

Personal protective equipment : Gloves. Safety glasses. Protective clothing.



Hand protection : Chemical resistant gloves (according to European standard NF EN 374 or equivalent).

Eye protection : Safety glasses with side shields.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : No personal breathing protective equipment is normally required.

Environmental exposure controls : Do not flush into surface water or sewer system.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : No data available

Odour : No data available

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : No data available

Melting point : -57 °C

Freezing point : No data available

Boiling point : No data available

Flash point : 254 °C

Self ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapour pressure : < 110 kPa (1,1 bar)

Relative vapour density at 20 °C : No data available

Relative density : No data available

Density : 0,978 kg/l @20°C

Solubility : Insoluble in water.

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : 46 mm²/s @40°C

Viscosity, dynamic : No data available

Explosive properties : No data available

Oxidising properties : No data available

Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable at ambient temperature and under normal conditions of use.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Elevated temperature.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Collect all waste in suitable and labelled containers and dispose according to local legislation.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

No dangerous good in sense of transport regulations.

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Contains no REACH candidate substance

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



НусоLube 7040

Синтетический смазочный материал для холодильных компрессоров

НикоЛюб 7040 - это специальное ISO VG 46 вязкости масло хладоустановок, состоящее из сложных синтетических полиолэфиров и уникальной системы присадок для достижения исключительных способности к смазыванию, к защите от износа, химической, термической и гидролитической стабильности. Разработанное специально для использования совместно с R 134a и другими HFC экологически безопасными хладагентами в промышленных хладоустановках.

Свойства

НикоЛюб 7040 представляет собой синтетическое холодильное масло на основе сложных синтетических полиолэфиров (ПОЭ), совместимое с экологически безопасными HFC хладонами, такими как R 134a, R 404A, R 407A, R 410A, R507, R 23 и др..

НикоЛюб 7030 имеет:

- отличную химическую и термическую стабильность;
- очень хорошую взаиморастворимость с R 134a;
- очень хорошую взаиморастворимость с R 23;
- достаточную текучесть при низких температурах;
- хорошие противоизносные свойства;
- длительный срок службы;
- совместимость с эластомерными материалами, обычно используемыми в холодильных системах

Применение

НикоЛюб 7040 рекомендуется к применению в открытых, полужакрытых и герметично закрытых компрессорах, использующих такие хладагенты как R 134a, R 23, R 404A, R 407, R 507 и другие смеси хлорфтор-углеводородов. Подходит для любого промышленного холодильного оборудования, бытовых холодильников, передвижных и стационарных установок кондиционирования воздуха.

При переходе к использованию других хладагентов и холодильных масел необходимо учитывать соответствующие требования производителей оборудования.

Они успешно применяются на объектах ОАО Газпром более чем в половине парка запорной арматуры около 30 лет Техжидкости типа ПМС (кроме контрафактных) и НикоЛюб 4020 всесторонне испытаны и выдержали проверку, в т. ч. длительным использованием, имеют все необходимые разрешения и сертификаты, другими словами – полностью отвечают требованиям промышленной безопасности и основных потребителей (в первую очередь – газовой и нефтяной отраслей).

Рекомендации

Рекомендации по применению смазочных материалов в областях, не указанных в данном информационном листке, могут быть получены у представителя компании Нико С.А. фирмы Механика УАБ.

Взаимозаменяемость и подтверждения

НикоЛюб 7040 заменяет : НикоЛюб 4020

Оберегайте окружающую среду

Не сливайте отработанное масло в дренажные трубы, почву или воду.

Типичные физико-химические характеристики

Показатель	ЕДИНИЦЫ	РЕЗУЛЬТАТ	МЕТОД
- Внешний вид	-	Светлое, прозрачное, без примеси.	Визуальный анализ
- Цвет Gardner	-	<1	ISO 4630
- Плотность при 20°C	kg/dm ³	0,978	ISO 12185
- Температура вспышки, COC	°C	254	ISO 2592
- Температура застывания	°C	< -57	ISO 3016
- Кинематическая вязкость при 100°C	mm ² /s	7,25	ISO 3104
40°C		46,0	
- Индекс вязкости	-	119	ISO 2909
- Кислотное число (pH=11)	mg KOH/g	0.02	ISO 6618
- Коррозия меди	-	1a	ASTM D 130
- Влажность	mg/kg	<50	MO-10-001/A

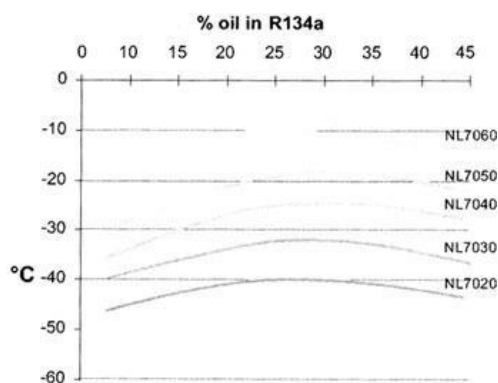
TNL7030-3E1a

August 2002 - E1

НикоЛюб 7040 отвечает требованиям стандарта **DIN 51503 KD**.

Значения приведенных физико-химических показателей являются типичными для выпускаемой в настоящее время продукции. В дальнейшем они могут изменяться в соответствии с требованиями спецификаций Нико.

Взаиморастворимость масла НикоЛюб и хладагона R-134a :



Охрана здоровья и окружающей среды

При соблюдении правил личной и производственной гигиены, а также при надлежащем использовании в рекомендуемых областях применения **НикоЛюб 7040** не представляет угрозы для здоровья и опасности для окружающей среды.

Избегайте попадания масел на кожу. При замене масла пользуйтесь защитными перчатками. При попадании продукта на кожу сразу же смойте его водой с мылом.

Более полная информация по данному вопросу содержится в паспорте безопасности Нико.

LLC «JV YUKOIL»

48A Ivana Pulyuya str., Bila Tserkva, Kyiv region, Ukraine, 09100

Hot-line: +38 (0) 800 60 5555

Tel: +38 (061) 222 80 25 (laboratory)

State register No. 31852954



Testing laboratory of JV "YUKOIL" LLC is certified for carrying out tests of quality parameters of petroleum products, technical fluids and lubricants. Certificate of technical competence recognition № AB 83-21 dated 16.11.2021 is issued by the State-owned enterprise "ZAPORIZHYASTANDARTMETROLOGIA", valid till 16.11.2024

Quality Certificate No 43030.01.01.1

Grease YUKO Graphite

Manufacturer JV YUKOIL LLC

Packed by JV YUKOIL LLC

Viscosity grade:

Quality Index: **OGF2G-20, ISO-L-XBAEA2**

Production date: October 2023

Package: can 1L tin

Batch No:43030.24.10.23.01.



Test	Norm	Result	Test method
Appearance	homogeneous grease from dark brown to black	homogeneous black ointment	GOST 1033 p. 4.2
Dropping point, °C, not low than	77	97,0	ASTM D2265
Worked penetration at 25°C, 0.1 mm	250	270	GOST 5346
Corrosion on plates of the steel	pass	pass	GOST 9.080
Water content	3	0,1	ASTM D95
Shear strength at 50°C, Pa, not less than	100	350	GOST 7143
Oil separation, %, not more than	5	3,8	GOST 7142
Effective viscosity at 0°C and with average gradient of the strain rate 10 s ⁻¹ , Pa·s, not more than	100	100	ASTM D1092

Result: the product quality meets the standard of GOST 3333-80

seal

Head of Quality Assurance Department

WEB: www.yuko.eu**Hot-line:** +38 (0) 800 60 5555**E-mail:** support@yukoil.com**Tel.:** +38 (061) 222 80 32

Member of:



Паспорт якості

№40 від 27.04.2023р.

Масило
«RIMOL Кранол»

ТУ У 19.2-38320673-012:2018

Партія №1

Маса нетто: 1,360тн

Дата виготовлення: квітень 2023 року

Фізико-хімічні показники

Найменування показника	Норма згідно з НД на продукцію	Фактично	НД на метод випробувань
1. Зовнішній вигляд та колір	Однорідна мазь від світло-жовтого до коричневого кольору	Відповідає	ГСТУ 38.001
2. Пенетрація за температури 25°C без перемішування, 10-1мм	В межах 35-70	62	ГОСТ 5346 метод В
3. Температура крапання, °C	Не нижче 60	68	ГОСТ 6793
4. Колоїдна стабільність, % виділеної оливи	Не більше 2	1,4	ГОСТ 7142
5. Масова частка механічних домішок нерозчинних в HCl, %	Не більше 0,05	0,03	ГОСТ 6479
6. Масова частка води, %	Не більше 3,5	2,1	ГОСТ 2477
7. Випарність за температури 100°C впродовж 1 год, %	Не більше 4,0	2,5	ГОСТ 9566
8. Стійкість до окиснення, мг КОН на 1г мастила	Не більше 0,3	0,17	ГОСТ 5734
9. Корозійна дія на метали, пластина зі сталі	Витримує	Витримує	ГОСТ 9.080
10. Захисні властивості	Витримує	Витримує	ГОСТ 9.054

Виробник: ТОВ «НВП РІМОЛ».

Висновок: зразок мастила «RIMOL Кранол» за визначеними показниками відповідає вимогам
ТУ У 19.2-38320673-012:2018 «Мастила «RIMOL».

Гарантійний термін зберігання 5 років від дня виготовлення.

Начальник ВТК



В.П. ХМІЛЕВСЬКИЙ



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State register No. 31852954



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Quality Certificate No 18124.01.01.1

Grease YUKO CIATIM-221

Manufacturer: JV YUKOIL LLC

Packed by: JV YUKOIL LLC

Viscosity grade: **NLGI 1/2**

Production date: May 2024

Package: can 1L tin

Batch No: 18124.02.05.24.01.



Test	Norm	Result	Test method
Appearance	smooth homogeneous ointment from light yellow to light brown colour	smooth homogeneous light brown ointment	visual
Effective viscosity at 50°C and with average gradient of the strain rate 10 s ⁻¹	800	800	ASTM D1092
Shear strength at 50°C, Pa	120	408	GOST 7143
Dropping point, °C, not low than	200	220	ASTM D2265
Penetration at 25°C	280-360	310	GOST 5346
Corrosive effect on metals	pass	pass	GOST 9.080
Oil separation, %, not more than	7	6,0	GOST 7142
Mass part of free alkali calculated to NaOH, %, not more than	0,08	0,08	GOST 6707
Water content, %, not more than	absence	absence	ASTM D95
Mass fraction of mechanical impurities	absence	absence	GOST 6479 p.4.7
Evaporation at 150°C (1h), %	2,0	0,5	GOST 9566

Result: the product quality meets the standard of

seal

Head of Quality Assurance Department

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Quality Certificate No 04021.01.01.1
 Grease YUKO Solidol

Manufacturer: JV YUKOIL LLC
 Packed by: JV YUKOIL LLC
 Viscosity grade: **NLGI 2/3**
 Production date: January 2024
 Package: pail 20L tin
 Batch No: 04021.22.01.24.01.



Test	Norm	Result	Test method
Appearance	homogeneous grease from light yellow to dark brown	homogeneous brown grease	GOST 1033 p. 4.2
Dropping point, °C, not low than	78	98,0	ASTM D2265
Effective viscosity at 0°C and with average gradient of the strain rate 10 s ⁻¹ , Pa·s, not more than	250	108	ASTM D1092
Worked penetration at 25°C, 0.1 mm	230-290	245	GOST 5346
Shear strength at 50°C, Pa, not less than	196	340	GOST 7143
Mass part of free alkali calculated to NaOH, %, not more than	0,2	0,062	GOST 6707
Mass fraction of organic acid admixture	absence	absence	GOST 6707 free acids
Mass fraction of mechanical impurities, %, not more than	absence	absence	GOST 6479 or ASTM D128
Water content, %, not more than	2,5	0,1	ASTM D95
Mass fraction of the calcium soaps, %, not less than	11,0	11,0	GOST 5211

Result: the product quality meets the standard of GOST 1033-79

seal

Head of Quality Assurance Department

