SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

1.1. Product Identifier

Product name: LITHOL-24

Additional identification

Chemical name: Not applicable.
CAS-No: Not applicable.

1.2. Recommended use Grease
Restriction on use None identified

1.3. Details of the supplier of the safety data sheet

"Gazpromneft – lubricants", Ltd,
Bldg. 1 1B Degtyarny lane, room 22H, Smolninskoye district,
St. Petersburg, 191144, Russia
SDS.Lubricants@gazprom-neft.ru
Tel. +7 812 449-74-45 (between 9 AM and 6 PM Moscow time).

1.4. Emergency telephone number

Tel. +7 812 449-74-45 (add 18327)
(between 8 AM and 5 PM Moscow time).

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classified according to Global Harmonized System (GHS) standards.
The product is not classified as dangerous according to Global Harmonized System (GHS) standards.

2.2. Label elements Labelling according to Global Harmonized System (GHS) standards.

Not applicable
Safety data sheet available on request.

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%.
Other Hazards: No other hazards

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances Not applicable: this product is regulated as a mixture.

3.2. Mixtures

Hazardous components in accordance with GHS

Chemical Name	CAS / EC	Percent by Weight	Classification
Base oil - unspecified - lubricating oils	CAS: 74869-22-0 EC: 278-012-2	50-60	Not classified (*)
Base oil –unspecified – residual oils (petroleum), solvent-dewaxed	CAS: 64742-62-7 EC: 265-166-0	20-30	Not classified (*)

Note:

** L - The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346 "Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions — Dimethyl sulphoxide extraction refractive index method", Institute of Petroleum, London.*

4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation Remove exposed person to fresh air if adverse effects are observed

Eye contact	Flush thoroughly with water. If irritation occurs, get medical assistance. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin contact	Take off contaminated clothing and wash before re-use. Wash with soap and water. If skin irritation or rash occurs, get medical attention. Get medical attention if symptoms occur.
Ingestion	Do not induce vomiting, get medical attention showing the SDS and label hazardous. Treat symptomatically.

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

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

Seek medical attention if irritation or symptoms persist

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media	Use extinguishing media appropriate to the surrounding fire conditions (carbon dioxide (CO_2); dry chemical; foam; sand; water spray). Do not use water jet as an extinguisher, as this will spread the fire.
5.2. Special hazards arising from the substance or mixture	Burning produces irritating, toxic and obnoxious fumes. Combustion products highly dependent on combustion conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide and unidentified organic compounds will be evolved when this material undergoes combustion.
5.3. Advice for firefighters	Wear suitable respiratory equipment when necessary. Do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Move undamaged containers from immediate hazard area if it can be done safely.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures	Eliminate all sources of ignition in vicinity of spilled material. Ensure adequate ventilation of the working area. Surfaces contaminated with the product will become slippery. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. See protective measures under point 7 and 8.
6.2. Environmental precautions	Avoid release to the environment. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages. Prevent further leakage or spillage if safe to do so.
6.3. Methods and material for containment and cleaning up	Use appropriate techniques such as applying noncombustible absorbent materials or pumping. Sweep up. Transfer to suitable, labeled containers for disposal. Residual liquid can be absorbed on inert material.
6.4. Reference to other sections	See also section 8 and 13

7. HANDLING AND STORAGE

7.1. Precautions for safe handling	Avoid contact with skin and eyes, inhalation of vapors and mists. Contaminated clothing should be changed before entering eating areas. Do not eat or drink while working. See also section 8 for recommended protective equipment.
7.2. Conditions for safe storage, including any incompatibilities	Keep in a cool, dry, well-ventilated area. Keep containers tightly closed. Stored in correctly labeled containers.
7.3. Specific end use(s)	No further relevant information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Base oil –unspecified – residual oils (petroleum), solvent-dewaxed	TWA	5,4 mg/m^3	US. ACGIH Threshold Limit Values (02 2012)
Base oil - unspecified - lubricating oils	TWA	5,4 mg/m^3	US. ACGIH Threshold Limit Values (02 2012)

8.2. Exposure controls

Appropriate engineering controls: Material should be handled in enclosed vessels and equipment, in which case general (mechanical) room ventilation should be sufficient. Local exhaust ventilation or adequate ventilation should be used at points where dust, mist, vapors or gases can escape into the room air.

Individual protection measures: Wear protective clothing. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Eye/face protection: Safety glasses. If potential for splash or mist exists, wear chemical goggles or faceshield.

Skin protection - Hand protection: Use nitrile or neoprene gloves. Long sleeve shirt is recommended. Wear a chemically protective when contact with material may occur. Use neoprene or nitrile rubber boots when necessary to avoid contaminating shoes. Launder contaminated clothing before reuse.

Respiratory protection: Use in ventilated area. Use respirator with a combination organic vapor and high efficiency filter cartridge just if recommended exposure limit is exceeded. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites.

Hygienic and Technical measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Paste
Color	Light-yellow to brown
Odour	Petroleum odor
pH	Not applicable
Pour point	Not applicable
Initial boiling point and boiling range	Not determined
Flash point	>199 °C (Cleveland Open Cup, ASTMD 92)
Evaporation rate	Not applicable
Upper/lower flammability	Not applicable
Vapour density	Not applicable
Vapour pressure	Not applicable
Density	Not applicable
Solubility in water	Insoluble
Partition coefficient: n-octanol/water	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Viscosity (at 40 °C)	Not applicable
Viscosity (at 100 °C)	Not applicable
Explosive properties	Not applicable
Oxidizing properties	Not determined
Volatile Organic compounds - VOCs	Not applicable

Other information	
Miscibility	Not applicable
Conductivity	Not applicable

10. STABILITY AND REACTIVITY

10.1. Reactivity
This product has no significant hazards with respect to reactivity. Stable under normal conditions

10.2. Chemical stability
Stable under normal conditions. Will not decompose if stored and used as recommended.

10.3. Possibility of hazardous reactions
Will not occur. Stable under normal conditions.

10.4. Conditions to avoid
Elevated temperatures, sparks and open flames.

10.5. Incompatible materials
Strong oxidizing agents.

10.6. Hazardous decomposition products
Burning produces irritating, toxic and obnoxious fumes.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxicological information regarding the mixture:

Products have not been tested. Evaluation has been made through data of components.

Acute toxicity	Based on available data, the classification criteria are not met. Not classified
Skin corrosion/irritation	Based on available data, the classification criteria are not met. Not classified. Avoid direct contact. Repeated or prolonged skin contact may cause irritation. Contact with heated product may cause thermal burns. Based on data from components or similar materials.
Serious eye damage/irritation	Based on available data, the classification criteria are not met. Not classified. Vapors may cause eye damage/irritation. Evaluation is based on data from components or similar materials.
Respiratory or skin sensitization	Inhalation: Based on available data, the classification criteria are not met. Not classified If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. Based on data from components or similar materials.
Carcinogenicity	Based on available data, the classification criteria are not met. Not classified. PCA content (IP 346) < 3 %
Germ cell mutagenicity	Based on available data, the classification criteria are not met. Not classified
Reproductive toxicity	Based on available data, the classification criteria are not met. Not classified
STOT-single exposure	Based on available data, the classification criteria are not met. Not classified
STOT-repeated exposure	Based on available data, the classification criteria are not met. Not classified
Aspiration hazard	Based on available data, the classification criteria are not met. Not classified.

Toxicological information on main components of the mixture:

Base oil –unspecified – residual oils (petroleum), solvent-dewaxed CAS: 64742-62-7 EC: 265-166-0	Acute oral/rat LD_{50} > 5000 mg/kg Acute dermal/rabbit LD_{50} > 2000 mg/kg Acute inhalation/rat LC_{50} > 5000 mg/m^3
Base oil - unspecified - lubricating oils CAS: 74869-22-0, EC: 278-012-2	Acute oral/rat LD_{50} > 5000 mg/kg Acute dermal/rabbit LD_{50} >2000 mg/kg Acute inhalation/rat LC_{50} > 5000 mg/m^3

11.2. Information on other hazards

11.2.1 Endocrine disrupting properties.
No endocrine disruptor substances present in concentration >= 0.1%

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Dispose in accordance with applicable regulations, avoid release to the environment.
Eco-toxicological information: Not classified for environmental hazards.

List of components with eco-toxicological properties

Quantity	Component	Ecotox Infos
50-60%	Base oil - unspecified - lubricating oils CAS: 74869-22-0 EC: 278-012-2	EL_{50} Aquatic acute toxicity Daphnia magna > 10000 мг/л 48ч NOELR Aquatic acute toxicity Algae > 100 mg/L 72h LL_{50} Aquatic acute toxicity Fish > 100 mg/L 96h NOELR Aquatic chronic toxicity Daphnia magna = 10mg/L 21 days NOELR Aquatic chronic toxicity Fish = 10 mg/L
20-30%	Base oil –unspecified – residual oils (petroleum), solvent-dewaxed CAS: 64742-62-7 EC: 265-166-0	EL_{50} Aquatic acute toxicity Daphnia magna > 10000 mg/L 48h NOELR Aquatic acute toxicity Algae > 100 mg/L 72h LL_{50} Aquatic acute toxicity Fish > 100 mg/L 96h NOELR Aquatic chronic toxicity Daphnia magna = 10mg/L 21 days NOELR Aquatic chronic toxicity Fish = 10 mg/L

12.2. Persistence and degradability

Component	Result	Duration	Method	Conclusion
Base oil –unspecified – residual oils (petroleum), solvent-dewaxed	31 %	28 d	-	Non-readily biodegradable
Base oil - unspecified - lubricating oils	31 %	28 d	-	Non-readily biodegradable

Note: Based on data from similar materials.

12.3. Bio accumulative potential — No additional information available.

12.4. Mobility in soil — Product floats on water (insoluble) and can entrape small organisms. The product could easily disperse in soil. Products have not been tested. Evaluation has been made through data of components.

12.5. Results of PBT and vPvB assessment — No PBT, vPvB substances present in concentration >= 0.1%.

12.6. Endocrine disrupting properties — No endocrine disruptor substances present in concentration >= 0.1%

12.7. Other adverse effects — No components with environmental hazard properties.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Disposal methods — Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.
Dispose of packaging or containers in accordance with local, regional, national and international regulations. Empty container contains product residue, which may exhibit hazards of product.

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

	ADR/RID	IMDG	IATA
UN number	Not applicable	Not applicable	Not applicable
UN proper shipping name	Not applicable	Not applicable	Not applicable
Transport hazard class(es)	Not applicable	Not applicable	Not applicable
Packing group	Not applicable	Not applicable	Not applicable
Environmental hazards	No	No	No

Other information:
IMDG: Not applicable.

Special precautions for user:
Not applicable.

Transport in bulk according to Annex II of Marpol and the IBC Code:
Not applicable.

15. REGULATORY INFORMATION

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

All components comply with the following chemical inventory requirements:

Canada (DSL). All components of this product are listed on the Domestic Substances List.
China (IECSC). All components of this product are listed on the Inventory of Existing Chemical Substances in China.
New Zealand (NZIoC). All components of this product are listed on NZIoC. Do not have an individual approval but may be used under an appropriate group standard.
Taiwan (TCSI). All components of this product are listed on the Taiwan Chemical Substance Inventory.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

16. OTHER INFORMATION

Hazard class and category	**Description**
-	-
Text of Hazard statements in Section	-

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
BCF: Biological Concentration Factor
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CMR: Carcinogenic, Mutagenic and Reprotoxic
CSA: Chemical Safety Assessment
DMEL: Derived Minimal Effect Level
DMSO: Dimethyl sulfoxide.
DNEL: Derived No Effect Level.
EC_{50}: Half Maximal Effective Concentration
EINECS (EC): European Inventory of Existing Commercial Chemical Substances.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IATA: International Air Transport Association.
IC_{50}: half maximal inhibitory concentration
IMDG: International Maritime Code for Dangerous Goods.

LC_{50}: Lethal concentration, for 50 percent of test population.
LD_{50}: Lethal dose, for 50 percent of test population.
N.A.: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic
PMT: Persistent, Mobile, Toxic)
PNEC: Predicted No Effect Concentration.
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STOT: Specific Target Organ Toxicity.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
vPvM: Very Persistent, Very Mobile

Further information

The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.

Paragraphs modified from the previous revision:

1. Identification of the substance or mixture and of the supplier
15. Regulatory information
16. Other information

Revision

1