



SAFETY DATA SHEET SYN 1601

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name SYN 1601

Product number L0301-039, L0301-040, L0301-040B, L0301-098LT, L0301-101, L0301-106, L0301-130, L0301-131, L0301-165, L0301-166, L0301-203, L0301-231, L0301-401, L0301-412, L0301-425, L0301-460, L0301-512, L0301-612, L0301-625, L0301-660, L0301-811, L0301-824, L0301-856

Recommended use of the chemical and restrictions on use

Application Lubricating grease.

Uses advised against No specific uses advised against are identified.

Details of the supplier of the safety data sheet

Manufacturer Lubriplate Lubricants Co.
Corporate Headquarters
129 Lockwood Street
Newark, NJ 07105

Midwest Office & Plant
1500 Oakdale Ave.
Toledo, OH 43605
419-691-2491
419-693-3806

Emergency telephone number

Emergency telephone Chem-Tel: 1-800-255-3924 (US & Canada only)
01-813-248-0585 (Outside US & Canada)

2. Hazard(s) identification

Classification of the substance or mixture

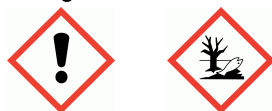
Physical hazards Not Classified

Health hazards Skin Sens. 1 - H317

Environmental hazards Aquatic Acute 2 - H401 Aquatic Chronic 2 - H411

Label elements

Pictogram



Signal word Warning

SYN 1601

Hazard statements	H317 May cause an allergic skin reaction. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	P261 Avoid breathing dust. P272 Contaminated work clothing must not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P302+P352 If on skin: Wash with plenty of water. P321 Specific treatment (see medical advice on this label). P333+P313 If skin irritation or rash occurs: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P391 Collect spillage. P501 Dispose of contents/ container in accordance with national regulations.
Contains	Zinc bis(dibutyldithiocarbamate)

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients**Mixtures**

zinc oxide CAS number: 1314-13-2 M factor (Acute) = 1 M factor (Chronic) = 1	5-10%
Classification Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	
Zinc bis(dibutyldithiocarbamate) CAS number: 136-23-2 M factor (Acute) = 1 M factor (Chronic) = 10	<1%
Classification Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Skin Sens. 1 - H317 STOT SE 3 - H335 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	
Distillates (petroleum), hydrotreated heavy naphthenic CAS number: 64742-52-5	<1%
Classification Not Classified	

SYN 1601

Amine neutralized dinonylnaphthalene sulfonic acid	<1%
CAS number: —	
Classification Flam. Liq. 4 - H227 Skin Irrit. 2 - H315 Eye Irrit. 2A - H319	

The full text for all hazard statements is displayed in Section 16.

4. First-aid measures

Description of first aid measures

General information	If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Get medical attention if symptoms are severe or persist.
Ingestion	Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel.
Skin Contact	Rinse with water.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	No specific symptoms known.
Ingestion	No specific symptoms known.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	No specific symptoms known. May be slightly irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
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5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards	None known.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

SYN 1601

Advice for firefighters

Protective actions during firefighting

Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

SYN 1601

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material.

Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. For waste disposal, see Section 13.

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Avoid discharge to the aquatic environment.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

Storage class Miscellaneous hazardous material storage.

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

Long-term exposure limit (8-hour TWA): ACGIH 5 mg/m³ inhalable fraction

zinc oxide

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ fume

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust

Long-term exposure limit (8-hour TWA): ACGIH 2 mg/m³ respirable fraction

Short-term exposure limit (15-minute): ACGIH 10 mg/m³ respirable fraction

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ respirable fraction

Distillates (petroleum), hydrotreated heavy naphthenic

SYN 1601

Mineral oil, excluding metal working fluids (pure, highly and severely refined)

ACGIH

OSHA = Occupational Safety and Health Administration.

ACGIH = American Conference of Governmental Industrial Hygienists.

zinc oxide (CAS: 1314-13-2)

Immediate danger to life and health 500 mg/m³

Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

Hand protection

No specific hand protection recommended. Avoid contact with skin.

Other skin and body protection

Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures

Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

Respiratory protection

Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Grease.
Color	Off-white.
Odor	Mineral oil
Odor threshold	Not available.
pH	Not available.
Melting point	Pour Point: -45.6 to -42.8°C/-50 to -45°F
Initial boiling point and range	>288°C/>550.4°F
Flash point	260 to 262°C/500 to 503.6°F Cleveland open cup.
Evaporation rate	< 0.01 (butyl acetate = 1)

SYN 1601

Evaporation factor	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 0.9 % Upper flammable/explosive limit: 7 %
Vapor pressure	<0.0013 kPa @ 20°C
Vapor density	< 1
Relative density	0.96
Bulk density	Not available.
Solubility(ies)	Insoluble in water.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	218 to 446 cSt @ 40°C/104°F 26 to 45 cSt @ 100°C/212°F
Explosive properties	Not considered to be explosive.
Oxidizing properties	Does not meet the criteria for classification as oxidizing.

10. Stability and reactivity

Reactivity	See the other subsections of this section for further details.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known.
Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀)	Based on available data the classification criteria are not met.
ATE oral (mg/kg)	16,666.67

Acute toxicity - dermal

Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.
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Acute toxicity - inhalation

Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
ATE inhalation (vapours mg/l)	366.67

SYN 1601**Skin corrosion/irritation**

Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitization

Respiratory sensitization Based on available data the classification criteria are not met.

Skin sensitization

Skin sensitization May cause sensitization or allergic reactions in sensitive individuals.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicity None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Not relevant. Solid.

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation No specific symptoms known.

Ingestion No specific symptoms known.

Skin Contact Prolonged contact may cause dryness of the skin.

Eye contact No specific symptoms known.

Route of exposure Ingestion Inhalation Skin and/or eye contact

Target Organs No specific target organs known.

Toxicological information on ingredients.**Zinc bis(dibutyldithiocarbamate)****Acute toxicity - oral**

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

SYN 1601

Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	
Animal data	Irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye irritation.
<u>Respiratory sensitization</u>	
Respiratory sensitization	Based on available data the classification criteria are not met.
<u>Skin sensitization</u>	
Skin sensitization	May cause skin sensitization or allergic reactions in sensitive individuals.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	STOT SE 3 - H335 May cause respiratory irritation.
Target organs	Respiratory system, lungs
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant. Solid.
<u>General information</u>	
General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing.
Ingestion	May cause sensitization or allergic reactions in sensitive individuals. May cause irritation.
Skin Contact	May cause skin sensitization or allergic reactions in sensitive individuals. Redness. Irritating to skin.
Eye contact	Irritating to eyes.
Route of exposure	Ingestion Inhalation Skin and/or eye contact

SYN 1601

Target Organs Respiratory system, lungs

Medical considerations Skin disorders and allergies.

Amine neutralized dinonylnaphthalene sulfonic acid

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Irritating.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitization

Respiratory sensitization Based on available data the classification criteria are not met.

Skin sensitization

Skin sensitization Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicity None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation No specific symptoms known.

SYN 1601

Ingestion	May cause irritation.
Skin Contact	Redness. Irritating to skin.
Eye contact	Irritating to eyes.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	No specific target organs known.

12. Ecological information

Toxicity Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.

Ecological information on ingredients.**zinc oxide**

Toxicity Aquatic Acute 1 - H400 Very toxic to aquatic life. Aquatic Chronic 1 - H410 Very toxic to aquatic life with long lasting effects.

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Chronic aquatic toxicity

M factor (Chronic) 1

Zinc bis(dibutylidithiocarbamate)

Toxicity Aquatic Acute 1 - H400 Very toxic to aquatic life. Aquatic Chronic 1 - H410 Very toxic to aquatic life with long lasting effects.

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Chronic aquatic toxicity

NOEC 0.001 < NOEC ≤ 0.01

Degradability Non-rapidly degradable

M factor (Chronic) 10

Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Ecological information on ingredients.**zinc oxide**

Persistence and degradability The degradability of the product is not known.

Zinc bis(dibutylidithiocarbamate)

Persistence and degradability The degradability of the product is not known.

SYN 1601**Bioaccumulative potential****Bio-Accumulative Potential** No data available on bioaccumulation.**Partition coefficient** Not available.**Ecological information on ingredients.****zinc oxide****Bio-Accumulative Potential** No data available on bioaccumulation.**Zinc bis(dibutyldithiocarbamate)****Bio-Accumulative Potential** No data available on bioaccumulation.**Mobility in soil****Mobility** No data available.**Ecological information on ingredients.****zinc oxide****Mobility** No data available.**Zinc bis(dibutyldithiocarbamate)****Mobility** No data available.**Other adverse effects****Other adverse effects** None known.**Ecological information on ingredients.****zinc oxide****Other adverse effects** None known.**Zinc bis(dibutyldithiocarbamate)****Other adverse effects** None known.**13. Disposal considerations****Waste treatment methods**

General information The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Do not empty into drains.**14. Transport information****General** For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.**UN Number**

SYN 1601

UN No. (TDG) 3077

UN No. (IMDG) 3077

UN No. (ICAO) 3077

UN proper shipping name**Proper shipping name (TDG)** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.**Proper shipping name (IMDG)** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.**Proper shipping name (ICAO)** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.**Transport hazard class(es)**

TDG class 9

TDG label(s) 9

IMDG Class 9

ICAO class/division 9

Transport labels**Packing group**

TDG Packing Group III

IMDG packing group III

ICAO packing group III

Environmental hazards**Environmentally Hazardous Substance****Special precautions for user**

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS F-A, S-F

15. Regulatory information**US Federal Regulations****SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed or exempt.

SYN 1601

SARA 313 Emission Reporting

The following ingredients are listed or exempt:

zinc oxide

1.0 %

Antimony tris[O,O-dipropyl] tris(dithiophosphate)

1.0 %

Zinc bis(dibutylidithiocarbamate)

1.0 %

Dec-1-ene, homopolymer, hydrogenated.dec-1-ene, oligomers, hydrogenated

1.0 %

CAA Accidental Release Prevention

None of the ingredients are listed or exempt.

FDA - Essential Chemical

None of the ingredients are listed or exempt.

FDA - Precursor Chemical

None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories

None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals

None of the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-I)

The following ingredients are listed or exempt:

zinc oxide

California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances

The following ingredients are listed or exempt:

zinc oxide

Massachusetts "Right To Know" List

The following ingredients are listed or exempt:

zinc oxide

Distillates (petroleum), hydrotreated light paraffinic

Rhode Island "Right To Know" List

The following ingredients are listed or exempt:

zinc oxide

Minnesota "Right To Know" List

The following ingredients are listed or exempt:

zinc oxide

SYN 1601**New Jersey "Right To Know" List**

The following ingredients are listed or exempt:

zinc oxide

Pennsylvania "Right To Know" List

The following ingredients are listed or exempt:

zinc oxide

Inventories**US - TSCA**

All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

16. Other information

Classification abbreviations and acronyms Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Training advice Only trained personnel should use this material.

Revision date 8/8/2018

SDS No. 5033

Hazard statements in full H227 Combustible liquid.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H401 Toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

End of SDS

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 process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.