



SAFETY DATA SHEET

SDS: 1604

**1604 DUOLEC® VARI-PURPOSE GEAR
LUBRICANT**

Issuing Date 04-24-2012

Revision Date 05-03-2017

Revision Number 6.1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product Identifier****Product Name** 1604 DUOLEC® VARI-PURPOSE GEAR LUBRICANT**Other means of identification****Synonyms** No information available**Recommended use of the chemical and restrictions on use****Identified uses** Lubricant**Uses advised against** Consumer use**Details of the supplier of the safety data sheet****Manufacturer**Lubrication Engineers Inc.
1919 E. Tulsa
Wichita, KS 67216
USA
800-537-7683**Emergency Telephone Number**CHEMTREC: 1-800-424-9300 (NORTH AMERICA)
+1-703-527-3887 (INTERNATIONAL)

SDS: 1604

1604 DUOLEC® VARI-PURPOSE GEAR LUBRICANT

Issuing Date 04-24-2012

Revision Date 05-03-2017

Revision Number 6.1

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label Elements

Emergency Overview

Signal Word

None

Hazard Statements

None

The product contains no substances which at their given concentration, are considered to be hazardous to health

appearance purple

Physical state liquid

Odor Hydrocarbon-like

Precautionary Statements - Prevention

None.

Response

None.

Eyes

None.

Skin

None.

Inhalation

None.

Ingestion

None.

Fire

None.

Spill

None.

Storage

None.

Disposal

None.

Hazards not otherwise classified (HNOC)

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Amines, C12-14-alkyl, reaction products	91745-46-9	1 - 5

SDS: 1604

1604 DUOLEC® VARI-PURPOSE GEAR LUBRICANT

Issuing Date 04-24-2012

Revision Date 05-03-2017

Revision Number 6.1

The producer of "1604" declares that it contains less than 3% DMSO extractable material by IP-346

4. FIRST AID MEASURES

First Aid Measures

General Advice	If symptoms develop move victim to fresh air. Show this safety data sheet to the doctor in attendance. Do not breathe dust/fume/gas/mist/vapors/spray.
Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.
Skin Contact	Consult a physician if necessary. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
Inhalation	Move to fresh air. Consult a physician. If not breathing, give artificial respiration.
Ingestion	May cause adverse kidney effects. Drink plenty of water. Do NOT induce vomiting.
Protection of First-aiders	Use personal protective equipment.

Most important symptoms and effects, both acute and delayed

Symptoms None known.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point	210 °C / 410 °F
Suitable Extinguishing Media	Water spray, Carbon dioxide (CO2), Foam, Dry chemical
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter and spread fire.
Specific Hazards Arising from the Chemical	Thermal decomposition can lead to release of irritating gases and vapors.
Explosion Data	
Sensitivity to Mechanical Impact	Not impact sensitive.
Sensitivity to Static Discharge	May be ignited by friction, heat, sparks or flames.
Protective Equipment and Precautions for Firefighters	Wear self-contained breathing apparatus and protective suit.

NFPA Health hazard 1 Flammability 1 Stability 1

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment.

SDS: 1604

1604 DUOLEC® VARI-PURPOSE GEAR LUBRICANT

Issuing Date 04-24-2012

Revision Date 05-03-2017

Revision Number 6.1

Environmental Precautions

Environmental Precautions

Prevent entry into waterways, sewers, basements or confined areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for Containment

Prevent further leakage or spillage if safe to do so. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

Methods for Cleaning up

Use personal protective equipment. Dam up. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Prevent vapor buildup by providing adequate ventilation during and after use. Do not eat, drink or smoke when using this product. .

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep in a bunded area.

Incompatible products.

Strong oxidizing agents. Strong acids. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Mineral Oil 8042-47-5	TWA: 5 mg/m ³	TWA: 5 mg/m ³ (vacated) TWA: 5 mg/m ³	IDLH: 2500 mg/m ³ TWA: 5 mg/m ³ STEL: 10 mg/m ³
White Mineral Oil 8042-47-5	TWA: 5 mg/m ³	TWA: 5 mg/m ³ (vacated) TWA: 5 mg/m ³	IDLH: 2500 mg/m ³ TWA: 5 mg/m ³ STEL: 10 mg/m ³

Appropriate engineering controls

Engineering Measures

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Tightly fitting safety goggles.

Skin and Body Protection

Long sleeved clothing. Protective gloves.

Respiratory Protection

No protective equipment is needed under normal use conditions. If exposure limits are

SDS: 1604

1604 DUOLEC® VARI-PURPOSE GEAR LUBRICANT

Issuing Date 04-24-2012

Revision Date 05-03-2017

Revision Number 6.1

exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures

When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid
appearance	purple
Odor	Hydrocarbon-like
Odor threshold	No information available

PropertyProperty

pH	6 - 8
Melting point/freezing point	No data available
Boiling Point/Range	no data available
Flash Point	210 °C / 410 °F
Vapor pressure	No data available
Vapor Density	< 1 (Air = 1)
Specific Gravity	0.887
Water solubility	negligible
Partition Coefficient: n-octanol/water	no data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity, kinematic	156 cSt @ 40°C

10. STABILITY AND REACTIVITY

reactivity No information available

Chemical stability Stable under recommended storage conditions.

Possibility of Hazardous Reactions None under normal processing.

Conditions to Avoid Heat, flames and sparks. Contact with other chemicals

Incompatible Materials Strong oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke)

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information
Inhalation	May cause irritation of respiratory tract.
Eye Contact	Contact with eyes may cause irritation.
Skin Contact	May cause irritation.

SDS: 1604

1604 DUOLEC® VARI-PURPOSE GEAR LUBRICANT

Issuing Date 04-24-2012

Revision Date 05-03-2017

Revision Number 6.1

Ingestion

There is no data available for this product.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Amines, C12-14-alkyl, reaction products 91745-46-9	> 10000 mg/kg (Rat)	-	-

Information on toxicological effects**Symptoms**

No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

The producer of "1604" declares that it contains less than 3% DMSO extractable material by IP-346

Sensitization

No information available.

Mutagenic Effects

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

Target Organ Effects

Respiratory system, Eyes, Skin.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 83514 mg/kg
ATEmix (dermal) 282721 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to daphnia and other aquatic invertebrates
Amines, C12-14-alkyl, reaction products 91745-46-9	-	LC50 16 - 26 mg/L Pimephales promelas 96 h	-	LC50 < 1 mg/L 96 h

Persistence and Degradability

No information available.

Bioaccumulation

.

Mobility

The product is insoluble and floats on water.

Chemical Name	Log Pow
Mineral Oil 8042-47-5	>6
White Mineral Oil	>6

SDS: 1604

1604 DUOLEC® VARI-PURPOSE GEAR LUBRICANT

Issuing Date 04-24-2012

Revision Date 05-03-2017

Revision Number 6.1

8042-47-5	
Naphtha (petroleum), heavy aromatic 64742-94-5	2.9 - 6.1

Other Adverse Effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods Should not be released into the environment. Dispose of in accordance with local regulations.

Contaminated Packaging Do not re-use empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDL	Not determined
NDSL	Not determined
EINECS	Not determined
ELINCS	Not determined
ENCS	Not determined
IECSC	Not determined
KECL	Not determined
PICCS	Not determined
AICS	Not determined

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SDS: 1604

1604 DUOLEC® VARI-PURPOSE GEAR LUBRICANT

Issuing Date 04-24-2012

Revision Date 05-03-2017

Revision Number 6.1

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material does not contain any components with a CERCLA RQ.

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

16. OTHER INFORMATION

Issuing Date 04-24-2012
Revision Date 05-03-2017
Reason for revision Update to Format.

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

SDS is available at www.LElubricants.com

End of Safety Data Sheet