



Prepared according to Commission Regulation (EU) No 453/2010.

Section 1	Identification of substance/mixture and of the company/undertaking
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1.1 Product Identifier**LUBRIZOL® 5034A**

Synonyms None.

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

Relevant identified uses (see section 7.3 for information on REACH registered uses)

Industrial gear oil additive.

1.3 Details of the supplier of the safety data sheet

The Lubrizol Corporation
29400 Lakeland Boulevard
Wickliffe, Ohio 44092
Tel: (440) 943-4200

E-mail contact EUSDS@lubrizol.com

1.4 Emergency Telephone number

FOR TRANSPORT EMERGENCY call CHEMTREC: (+1) 703-527-3887 (outside the U.S.), 1-800-424-9300 (in the U.S.)

Section 2	Hazards Identification
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2.1 Classification of the substance or mixture

(EC) No 1272/2008

Eye Irrit. 2; H319
Skin Sens. 1; H317
Aquatic Chronic 2; H411

67/548/EC or 1999/45/EC

Xi
R43
R52/53

For a full text of R- and H- phrases: See section 16

2.2 Label elements

(EC) No 1272/2008



Warning.

Causes serious eye irritation.

May cause an allergic skin reaction.

Toxic to aquatic life with long lasting effects.

Avoid breathing dust / fume / gas / mist / vapours / spray. Wear protective gloves / eye protection / face protection. Contaminated work clothing should not be allowed out of the workplace. Wash thoroughly after handling. Avoid release to the environment.

IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

IF SWALLOWED: Call a poison center or doctor if exposed or you feel unwell.

Store in a well-ventilated place. Keep cool. Store away from potential ignition sources.

All disposal practices must be in accordance with local, national and international regulations.

Supplemental label information

None.

2.3 Other hazards

None identified.

Section 3	Composition/Information on Ingredients
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3.2 Mixtures

(EC) No 1272/2008

EC No.	Registration Number	Percentage (by wt.)	Name	Classification
931-384-6	01-2119493620-38	From 20 to 29.9 percent	Reaction products of bis(2-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)	Acute Tox. 4; H302 Aquatic Chronic 2; H411 Eye Dam. 1; H318 Flam. Liq. 3; H226 Skin Sens. 1; H317
230-528-9	Not Available	From 1 to 4.9 percent	N-Cis-9-octadecenyl-1,3-propanediamine	Acute Tox. 3; H301 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 Eye Dam. 1; H318 Met. Corr. 1; H290 Skin Irrit. 2; H315
Confidentiality Pending	Not Available	From 0.5 to 1.5 percent	Methyl-1H-benzotriazole	Acute Tox. 4; H302 Eye Irrit. 2; H319
204-015-5	Not Available	From 0.1 to 0.9 percent	Oleylamine	Acute Tox. 4; H302 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 Eye Dam. 1; H318 Skin Corr. 1C; H314 Skin Sens. 1; H317

67/548/EC or 1999/45/EC

EC No.	Registration Number	Percentage (by wt.)	Name	Classification 67/548/EC
931-384-6	01-2119493620-38	From 20 to 29.9 percent	Reaction products of bis(2-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)	N Xn R22 R41 R43 R51/53
230-528-9	Not Available	From 1 to 4.9 percent	N-Cis-9-octadecenyl-1,3-propanediamine	N Xn R22 R38 R41 R50/53
Confidentiality Pending	Not Available	0.5 to 1.5 percent	Methyl-1H-benzotriazole	Xn R22 R36
204-015-5	Not Available	From 0.1 to 0.9 percent	Oleylamine	C N R34 R43 R50/53

Section 4	First Aid Measures
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4.1 Description of first aid measures**Skin**

Wash with plenty of soap and water. Remove contaminated clothing. If skin irritation occurs, get medical attention. Launder contaminated clothing before reuse.

Eyes

Rinse cautiously with water for 20 minutes or until chemical is removed. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical attention.

Inhaled

Remove exposed person to fresh air if adverse effects are observed. If breathing is labored, administer oxygen. If breathing has stopped, apply artificial respiration.

Swallowed

DO NOT INDUCE VOMITING. Get immediate medical attention. Call a poison center or doctor if exposed or you feel unwell.

Advice for first-aid providers

When providing first aid always protect yourself against exposure to chemicals or blood born diseases by wearing gloves, masks and eye protection. If providing CPR use mouthpieces, resuscitation bags, pocket masks or other ventilation devices. After providing first aid wash your exposed skin with soap and water.

4.2 Most important symptoms and effects, both acute and delayed

See section 11.

4.3 Indication of any immediate medical attention and special treatment needed

Note to physician: Treat symptomatically.

Section 5	Fire Fighting Measures
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5.1 Extinguishing Media

CO₂, dry chemical, or foam. Water can be used to cool and protect exposed material.

5.2 Special hazards arising from substance or mixture

Vapors may be heavier than air and may travel along the ground to a distant ignition source and flash back. Container may rupture on heating. See section 10 for additional information.

5.3 Advice for firefighters

Recommend wearing self-contained breathing apparatus. Water may cause splattering.

Section 6	Accidental Release Measures
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6.1 Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Responders should review this MSDS before proceeding with cleanup. Personal protective equipment must be worn. Avoid contact with skin, eyes or clothing. Ventilate area if spilled in a confined space or other poorly ventilated area. Eliminate all ignition sources if safe to do so.

6.2 Environmental precautions

Take precautions to avoid release to the environment. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

6.3 Methods and material for containment and cleaning up

Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material.

6.4 Reference to other sections

See sections 8 and 13 for additional information.

Section 7	Handling and Storage
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7.1 Precautions for safe handling

Keep away from potential sources of ignition. Open container in a well ventilated area. Avoid breathing vapors. Keep containers closed when not in use. Do not discharge into drains or the environment, dispose to an authorized waste collection point. Use appropriate containment to avoid environmental contamination. Avoid breathing vapor. Avoid contact with eyes, skin and clothing Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Launder contaminated clothing before reuse. Empty containers retain material residue. Do not cut, weld, braze, solder, drill, grind or expose containers to heat, flame, spark or other sources of ignition. Dispose of packaging or containers in accordance with local, regional, national and international regulations.

Pumping Temperature

Ambient

Maximum Handling Temperature

60 °C, 140 °F

Maximum Loading Temperature

60 °C, 140 °F

7.2 Conditions for safe storage, including any incompatibilities

Do not store near potential sources of ignition. Take precautions to avoid release to the environment. Store in a well-ventilated place. Keep cool. Odorous and toxic fumes may form from the decomposition of this product if stored at temperatures in excess of 113 deg F (45 deg C) for extended periods of time or if heat sources in excess of 250 deg F (121 deg C) are used. See section 10 for incompatible materials.

Maximum Storage Temperature

45 °C, 113 °F

7.3 Specific end use(s)

End uses are listed in an attached exposure scenario when one is required.

Section 8	Exposure Controls/Personal Protection
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8.1 Control parameters

None known.

Other Exposure Limits

Contains mineral oil. Under conditions which may generate mists, observe the OSHA PEL of 5 mg per cubic meter, ACGIH TWA of 5 mg per cubic meter.

8.2 Exposure controls

Material should be handled in enclosed vessels and equipment, in which case general (mechanical) room ventilation should be sufficient. Local exhaust ventilation should be used at points where dust, mist, vapors or gases can escape into the room air. Additional ventilation or exhaust may be required to maintain air concentrations below recommended exposure limits.

Eye/face protection

Safety glasses. If potential for splash or mist exists, wear chemical goggles or faceshield.

Skin protection

Gloves should always be inspected before each use and discarded if they show tears, pinholes, or signs of wear.

Long sleeve shirt is recommended. Wear either a chemical protective suit or apron when potential for contact with material exists. Use chemically protective boots when necessary to avoid contaminating shoes. Do not wear rings, watches or similar apparel that could entrap the material and cause a skin reaction. Launder contaminated clothing before reuse.

Respiratory Protection

Use full face respirator with an organic vapor cartridge if the recommended exposure limit is exceeded. Use self-contained breathing apparatus for entry into

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confined space, for other poorly ventilated areas and for large spill clean-up sites.

Hygiene Measures

Wash thoroughly after handling this product.

Environmental exposure controls

See section 6 for details.

Section 9	Physical and Chemical Properties
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9.1 Information on basic physical and chemical properties

Appearance	Amber colored liquid.
Odour	Pungent
Odour Threshold	Not determined.
pH	Not determined.
Melting / Freezing Point	Not determined.
Boiling Point	Not determined.
Boiling Point Range	Not determined.
Flash Point	93 °C, 199.4 °F PMCC (Typical)
Evaporation Rate	Not determined.
Flammability (solid,gas)	Not applicable.
Lower flammability or explosive limit	Not determined.
Upper flammability or explosive limit	Not determined.
Vapour Pressure	Not determined.
Vapour Density	Not determined.
Relative density	1 (15.6 °C)
Bulk Density	8.33 Lb/gal, 1 Kg/L
Water Solubility	Insoluble.
Other solubilities	Not determined.
Partition coefficient: n-octanol/water	Not determined.
Autoignition Point	Not determined.
Decomposition Temperature	Not determined.
Viscosity	61 Centistokes (40 °C) 8.5 Centistokes (100 °C)
Explosive properties	Material does not have explosive properties.
Oxidising properties	Material is a non-oxidising substance.

9.2 Other information

Pour Point Temperature	-18 °C, -0 °F
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The above data are typical values and do not constitute a specification.

Section 10	Stability and Reactivity
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10.1 Reactivity

Carefully review all information provided in sections 10.2 - 10.6.

10.2 Chemical stability

Material is normally stable at room temperature and pressure. See the Handling and Storage Section for further details.

10.3 Possibility of hazardous reactions

Will not occur.

10.4 Conditions to avoid

Elevated temperatures.

10.5 Incompatible materials

Mineral acids. Oxidizing agents.

10.6 Hazardous decomposition products

Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion. Hydrogen sulfide and alkyl mercaptans and sulfides may also

be released. Under combustion conditions, oxides of the following elements will be formed: nitrogen, phosphorus, sulfur.

Section 11	Toxicological Information
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11.1 Information on toxicological effects**Acute toxicity****Oral**

The LD50 in rats is 2000 – 5000 mg/Kg. Based on data from components or similar materials. Swallowing material may cause irritation of the gastrointestinal lining, nausea, vomiting, diarrhea, and abdominal pain.

Dermal

The LD50 in rabbits is > 2000 mg/Kg. Based on data from components or similar materials.

Inhalation

The LC50 (4 hr.) in rats for vapors of this material is > 200 mg/l. Based on data from components or similar materials.

Skin corrosion / irritation

May cause mild skin irritation. Does not meet Canadian D2B or EU R38 criteria. Based on data from components or similar materials. Prolonged or repeated contact may cause dermatitis.

Serious eye damage / irritation

Weak to moderate eye irritant. Does not meet EU R36 criteria. Based on data from components or similar materials.

Respiratory Irritation

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.

Respiratory or skin sensitization**Skin**

May cause skin sensitization. Based on data from components or similar materials.

Respiratory

No data available to indicate product or components may be respiratory sensitizers.

Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.

Reproductive Toxicity

No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity.

STOT repeated exposure

No data available to indicate product or components present at greater than 1% are chronic health hazards.

Other information

No other health hazards known.

Section 12	Ecological Information
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12.1 Toxicity**Freshwater fish**

The acute LC50 is 10 - 100 mg/L based on actual data.

Freshwater invertebrates

The acute EC50 is 10 - 100 mg/L based on actual data. Chronic effects expected at 1 - 10 mg/L based on component data.

Algae

The acute EC50 is 100 - 1000 mg/L based on actual data.

Saltwater fish

The acute LC50 is 10 - 100 mg/L based on component data.

Saltwater invertebrates

The acute LC50 is 10 - 100 mg/L based on component data.

Bacteria

The acute EC50 is 100 - 1000 ppm based on component data.

12.2 Persistence and degradability

Substance	Pct. (weight)	Test type	Duration (days)	Pct. degradation
Reaction products of bis(2-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)	From 20 to 29.9 percent	Inherent/Sludge	28	3.6
Reaction products of bis(2-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)	From 20 to 29.9 percent	Sturm	28	-10
Reaction products of bis(2-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)	From 20 to 29.9 percent	Sturm	28	7.4

Oleylamine	From 0.1 to 0.9 percent	Closed Bottle	28	42
Oleylamine	From 0.1 to 0.9 percent	Closed Bottle	28	60
Oleylamine	From 0.1 to 0.9 percent	Closed Bottle	42	72
Oleylamine	From 0.1 to 0.9 percent	Sturm	28	61

12.3 Bioaccumulative potential

Substance	Pct. (weight)	Test type	Duration (days)	Log Kow or BCF
Oleylamine	From 0.1 to 0.9 percent	Octanol-Water Coefficient	0.1	7.5

12.4 Mobility in soil

Not applicable.

12.5 Results of PBT and vPvB assessment

Not Available

12.6 Other adverse effects

None known.

Section 13	Disposal Considerations
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13.1 Waste treatment methods

All disposal practices must be in accordance with local, regional, national and international regulations. Do not dispose in landfill.

Empty container retains product residue and can be hazardous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat, flame, sparks, static electricity, or other sources of ignition. Dispose of packaging or containers in accordance with local, regional, national and international regulations.

Section 14	Transport Information
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14.1 UN number

ADR/RID	UN3082
ICAO	UN3082
IMDG	UN3082

14.2 UN proper shipping name

ADR/RID	Environmentally hazardous substance, liquid, n.o.s.(Phosphoric acid esters/amine salt, Alkenyl amine)
ICAO	Environmentally hazardous substance, liquid, n.o.s.(Phosphoric acid esters/amine salt, Alkenyl amine)
IMDG	Environmentally hazardous substance, liquid, n.o.s.(Phosphoric acid esters/amine salt, Alkenyl amine)

14.3 Transport hazard class(es)

ADR/RID	9
ICAO	9
IMDG	9

14.4 Packing group

ADR/RID	III
ICAO	III
IMDG	III

14.5 Environmental hazards

ADR/RID	Not applicable.
ICAO	Marine Pollutant
IMDG	Marine Pollutant

14.6 Special precautions for users

Review classification requirements before shipping materials at elevated temperatures.

14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC code

Not determined.

Section 15	Regulatory Information
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15.1 Safety, health and environment regulations / legislation specific for the substance or mixture

Global Chemical Inventories

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Australia	All components are in compliance with chemical notification requirements in Australia.
Canada	All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.
China	All components of this product are listed on the Inventory of Existing Chemical Substances in China.
EU	All components are in compliance with the EC Seventh amendment Directive 92/32/EEC.
Japan	All components are in compliance with the Chemical Substances Control Law of Japan.
Korea	All components are in compliance in Korea.
New Zealand	All components are in compliance with chemical notification requirements in New Zealand.
Philippines	All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).
Switzerland	All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.
Taiwan	All components of this product are listed on the Taiwan inventory.
USA	All components of this material are on the US TSCA Inventory or are exempt.

German water hazard classes

WGK = 2 according to the Water Hazardous Directive, VwVwS, dated May 17, 1999.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out.

Section 16	Other Information
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Created by

Product Safety and Compliance Department (440-943-1200)

Created Date

04 October 2011

Revision date

05 March 2012

SDS No.

21456864-2103423-5012221-102103

HMIS Codes

Health	Fire	Reactivity
2	2	0

Relevant R Phrases

- R22 -- Harmful if swallowed.
- R34 -- Causes burns.
- R36 -- Irritating to eyes.
- R38 -- Irritating to skin.
- R41 -- Risk of serious damage to eye.
- R43 -- May cause sensitisation by skin contact.
- R50/53 -- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R51/53 -- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R52/53 -- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Relevant hazard phrases

- H226 - Flammable liquid and vapor.
- H290 - May be corrosive to metals.
- H301 - Toxic if swallowed.
- H302 - Harmful if swallowed.
- H314 - Causes severe skin burns and eye damage.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H318 - Causes serious eye damage.
- H319 - Causes serious eye irritation.
- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.
- H411 - Toxic to aquatic life with long lasting effects.

Revision Indicators

This MSDS has no revisions since 5 March 2012

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