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

Section 1	Identification of substance/mixture and of the company/undertaking

1.1 Product Identifier

LUBRIZOL® 8686

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)

Heavy duty diesel engine 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

2.1 Classification of the substance or mixture

(EC) No 1272/2008

Skin Irrit. 2; H315
Eye Irrit. 2; H319
Aquatic Chronic 3; H412

67/548/EC or 1999/45/EC

Xi
R36/38
R52/53

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

2.2 Label elements

(EC) No 1272/2008

Warning.

Causes skin irritation.
Causes serious eye irritation.
Harmful to aquatic life with long lasting effects.

Wear protective gloves / eye protection / face protection. Wash thoroughly after handling. Avoid release to the environment.

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation 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.

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

3.2 Mixtures

(EC) No 1272/2008

EC No.	Registration Number	Percentage (by wt.)	Name	Classification
253-249-4	01-2119488911-28	From 10 to 19.9 percent	Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	Aquatic Chronic 4; H413
283-392-8	01-2119493626-26	From 5 to 9.9 percent	Phosphorodithioic acid, mixed O,O-bis (1,3-dimethylbutyl and iso-Pr)esters, zinc salts	Aquatic Chronic 2; H411 Eye Dam. 1; H318 Skin Irrit. 2; H315
204-539-4	Not Available	From 0.1 to 0.9 percent	Diphenylamine	Acute Tox. 3; H301 Acute Tox. 3; H311 Acute Tox. 3; H331 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 STOT RE 2; H373

67/548/EC or 1999/45/EC

EC No.	Registration Number	Percentage (by wt.)	Name	Classification 67/548/EC
253-249-4	01-2119488911-28	From 10 to 19.9 percent	Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	None. R53
283-392-8	01-2119493626-26	From 5 to 9.9 percent	Phosphorodithioic acid, mixed O,O-bis (1,3-dimethylbutyl and iso-Pr)esters, zinc salts	N Xi R38 R41 R51/53
204-539-4	Not Available	From 0.1 to 0.9 percent	Diphenylamine	N T R23/24/25 R33 R50/53

Section 4 First Aid Measures

4.1 Description of first aid measures

Skin

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

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.

Inhaled

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

Swallowed

DO NOT INDUCE VOMITING. Get immediate medical attention.

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. 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

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

Elevated temperatures can lead to the formation of irritating fumes and vapors. See section 10 for additional information.

5.3 Advice for firefighters

Recommend wearing self-contained breathing apparatus. Water may cause splattering. Do not release chemically contaminated water into drains, soil or surface water.

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

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.

6.2 Environmental precautions

Take precautions to avoid release to the environment. Do not flush into surface water, sanitary sewer or ground water system. Check on local, national and international regulatory information to determine any reporting requirements for spills.

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

7.1 Precautions for safe handling

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 Avoid inhalation of dust, aerosol, mist, spray, fume, or vapor. Use with appropriate and adequate ventilation. Avoid skin contact. Wash thoroughly after handling. Launder contaminated clothing before reuse. Empty container contains product residue which may exhibit hazards of product. Dispose of packaging or containers in accordance with local, regional, national and international regulations.

Pumping Temperature

Ambient

Maximum Handling Temperature

70 °C, 158 °F

Maximum Loading Temperature

70 °C, 158 °F

7.2 Conditions for safe storage, including any incompatibilites

Take precautions to avoid release to the environment. 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

8.1 Control parameters

Country	Substance	Long Term (8 Hours T.W.A.)	Short Term (15 mins.)
Austria	Diphenylamine	0.70 ppm (s)	1.40 ppm
Czech Republic	Diphenylamine	10 mg/cu. M	20 mg/cu. M (c)
Denmark	Diphenylamine	5 mg/cu. M	N/E
Estonia	Diphenylamine	10 mg/cu. M	N/E
Finland	Diphenylamine	5 mg/cu. M	10 mg/cu. M
France	Diphenylamine	10 mg/cu. M	N/E
Greece	Diphenylamine	10 mg/cu. M	20 mg/cu. M
Ireland	Diphenylamine	10 mg/cu. M	20 mg/cu. M
Portugal	Diphenylamine	10 mg/cu. M	N/E
Slovenia	Diphenylamine	5 mg/cu. M	N/E
Spain	Diphenylamine	10 mg/cu. M	N/E
Sweden	Diphenylamine	4 mg/cu. M	12 mg/cu. M
Switzerland	Diphenylamine	10 mg/cu. M	N/E
UK	Diphenylamine	10 mg/cu. M	20 mg/cu. M

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.

Eye/face protection

Chemical goggles or faceshield.

Skin protection

Avoid skin contact. Use nitrile or neoprene gloves. Replace gloves after 8 hours.

Long sleeve shirt is recommended. Wear either a chemical protective suit or apron when potential for contact with material exists. 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 half mask respirator with an organic vapor cartridge if exposure limit is exceeded.

Hygiene Measures

Wash thoroughly after handling this product. Replace gloves after 8 hours.

Environmental exposure controls

See section 6 for details.

Section 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Amber liquid.
Odour	Mild
Odour Threshold	Not determined.
pH	Not determined.
Melting / Freezing Point	Not determined.
Boiling Point	Not determined.
Boiling Point Range	Not determined.
Flash Point	132 °C, 269.6 °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	0.99 (15.6 °C)
Bulk Density	Not determined.
Water Solubility	Insoluble.
Other solubilities	Not determined.
Partition coefficient: n-octanol/water	Not determined.
Autoignition Point	Not determined.
Decomposition Temperature	Not determined.
Viscosity	85 Centistokes (40 °C) 7 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	-24 °C, -11 °F

The above data are typical values and do not constitute a specification.

Section 10 Stability and Reactivity

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

High temperatures.

10.5 Incompatible materials

Acids. Strong bases. Strong 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: phosphorus, sulfur, zinc.

Section 11	Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Oral

The LD50 in rats is > 10,000 mg/Kg. Based on data from components or similar materials.

Dermal

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

Inhalation

No data available to indicate product or components may be a toxic inhalation hazard.

Skin corrosion / irritation

Skin irritant. Based on data from components or similar materials. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.

Serious eye damage / irritation

Moderate to strong eye irritant. 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

No data available to indicate product or components may be a skin sensitizer.

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.

There are conflicting reports in the literature concerning the teratogenicity of diphenylamine. However, because the predominant route of exposure was oral (via gavage or diet) and relatively high dose levels were administered in the studies where positive effects were observed, it would not seem to present a workplace hazard.

STOT repeated exposure

Repeated-dose oral toxicity studies in rats using a component contained in this product revealed internal organ effects (i.e., liver and thyroid enlargement). These effects were considered adaptive and were reversible upon cessation of treatment.

Other information

No other health hazards known.

Section 12	Ecological Information

12.1 Toxicity

Freshwater fish

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

Freshwater invertebrates

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

Algae

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

Saltwater fish

Not determined.

Saltwater invertebrates

Not determined.

Bacteria

Not determined.

12.2 Persistence and degradability

Substance	Pct. (weight)	Test type	Duration (days)	Pct. degradation
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	From 10 to 19.9 percent	Sturm	28	0
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr)esters, zinc salts	From 5 to 9.9 percent	Sturm	28	1.5

Diphenylamine	From 0.1 to 0.9 percent	Closed Bottle	28	26

12.3 Bioaccumulative potential

Substance	Pct. (weight)	Test type	Duration (days)	Log Kow or BCF
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	From 10 to 19.9 percent	Bioconcentration Factor	42	3.2
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	From 10 to 19.9 percent	Octanol-Water Coefficient	0.1	3.6
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts	From 5 to 9.9 percent	Octanol-Water Coefficient	0.1	0.6
Diphenylamine	From 0.1 to 0.9 percent	Octanol-Water Coefficient	0.1	3.4

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

13.1 Waste treatment methods

All disposal practices must be in accordance with local, regional, national and international regulations. Do not dump into any sweers, on the ground, or into any body of water. Recycle as much af the recoverable product as possible. Do not dispose in landfill.

Dispose of packaging or containers in accordance with local, regional, national and international regulations.

Section 14 Transport Information

14.1 UN number

ADR/RID Not regulated
ICAO Not regulated
IMDG Not regulated

14.2 UN proper shipping name

ADR/RID Not regulated
ICAO Not regulated
IMDG Not regulated

14.3 Transport hazard class(es)

ADR/RID Not regulated
ICAO Not regulated
IMDG Not regulated

14.4 Packing group

ADR/RID Not regulated
ICAO Not regulated
IMDG Not regulated

14.5 Environmental hazards

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

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

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

Global Chemical Inventories

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 comply with the EU 7th Amendment and are approved for EU sales. Lubrizol must maintain records of all imports of this product into the EU. Third party importers are asked to report every import to The Lubrizol PSCD Manager (Europe), Hazelwood,Derby DE56 1QN, UK.
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 Substance Ordinance in Switzerland. Lubrizol must maintain records of all imports of this product into Switzerland. Third party importers are asked to report every import to The Lubrizol PSCD Manager (Europe), Hazelwood, Derby DE56 1QN, UK.
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**

Created by

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

Created Date

08 May 2002

Revision date

12 January 2012

SDS No.

11372809-1111061-2026231-102103

HMIS Codes

Health	Fire	Reactivity
2*	1	0

Relevant R Phrases

R23/24/25 -- Toxic by inhalation, in contact with skin and if swallowed.
R33 -- Danger of cumulative effects.
R36/38 -- Irritating to eyes and skin.
R38 -- Irritating to skin.
R41 -- Risk of serious damage to eye.
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.
R53 -- May cause long-term adverse effects in aquatic environment.

Relevant hazard phrases

H301 - Toxic if swallowed.
H311 - Toxic in contact with skin.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H319 - Causes serious eye irritation.
H331 - Toxic if inhaled.
H373 - May cause damage to organs through prolonged or repeated exposure.
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.
H412 - Harmful to aquatic life with long lasting effects.
H413 - May cause long lasting harmful effects to aquatic life.

Revision Indicators

Section: 2 Storage procedures.	Changed: 7 July 2011
Section: 3 CLP Hazardous Ingredients	Changed: 12 January 2012
Section: 3 EU hazardous ingredients.	Changed: 12 January 2012