This material is to be used for research purposes only under the supervision of a technically qualified individual. The toxicological properties may have not been completely characterized. To determine your responsibilities under the EC Seventh amendment Directive 92 /32/EEC, please see the Regulatory Information Section. If this material has been supplied to you under the terms of a secrecy or non-analysis agreement, the information included in this MSDS is hereby identified as "Confidential Information."

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

ENEOS Premium Hyper R1 5W30

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)

Experimental.

1.3 Details of the supplier of the safety data sheet

JX Nippon Oil & Energy Europe Limited 4 Moorgate, 4th Floor London EC2R 6DA Tel: +44 20 7186 0400 Email: info@eneos.eu

1.4 Emergency Telephone number

+44 20 7186 0400

Section 2

2.1 Classification of the substance or mixture

(EC) No 1272/2008

This product does not meet the classification requirements of the current European legislation.

67/548/EC or 1999/45/EC

This product does not meet the classification requirements of the current European legislation.

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

2.2 Label elements

(EC) No 1272/2008

Not applicable.

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

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EC No.	Registration Number	Percentage (by wt.)	Name	Classification
253-249-4	01-2119488911-28	From 0 to 10.0 percent	Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	Aquatic Chronic 4; H413
272-028-3	Not Available	From 0 to 10.0 percent	Zinc, bis[O,O-bis(1,3-dimethylbutyl) phosphorodithioato-S,S']-, (T-4)-	Aquatic Chronic 2; H411 Eye Irrit. 2; H319 Skin Irrit. 2; H315
283-392-8	01-2119493626-26	From 0 to 10.0 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
310-154-3	01-2119513207-49	From 0 to 10.0 percent	Dodecylphenol, mixed isomers (branched)	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 Eve Irrit. 2: H319

Repr. 2; H361 Skin Irrit. 2; H315

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 0 to 10.0 percent	Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	None. R53
272-028-3	Not Available	From 0 to 10.0 percent	Zinc, bis[O,O-bis(1,3-dimethylbutyl) phosphorodithioato-S,S']-, (T-4)-	N Xi R38 R51/53
283-392-8	01-2119493626-26	From 0 to 10.0 percent	Phosphorodithioic acid, mixed O,O-bis (1,3-dimethylbutyl and iso-Pr)esters, zinc salts	N Xi R38 R41 R51/53
310-154-3	01-2119513207-49	From 0 to 10.0 percent	Dodecylphenol, mixed isomers (branched)	N Xn R36/38 R50/53 R62

600, 700 and 900 ECHA List Numbers do not have any legal significance; rather they are purely technical identifiers and are displayed for informational purposes only.

Section 4	First Aid Measures
Section 4	1 ii st / iii wicasures

4.1 Description of first aid measures

Skin

Wash with soap and water. Get medical attention if irritation develops. Launder contaminated clothing before reuse.

Eyes

Flush with water at least 30 minutes. Get medical attention if eye irritation develops or persists.

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

If exposed or concerned: Get medical attention.

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

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

6.1 Personal precautions, protective equipment and emergency procedures

Personal protective equipment must be worn. Ventilate area if spilled in a confined space or other poorly ventilated area.

6.2 Environmental precautions

Prevent entry into sewers and waterways.

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 containers closed when not in use. 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

Not determined.

Maximum Handling Temperature

Not determined.

Maximum Loading Temperature

Not determined

7.2 Conditions for safe storage, including any incompatibilities

See section 10 for incompatible materials.

Maximum Storage Temperature

Not determined.

7.3 Specific end use(s)

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

ection 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

Use with adequate ventilation.

Eye/face protection

Safety Glasses.

Skin protection

Nitrile.

Gloves, coveralls, apron, boots as necessary to minimize contact When working with heated material, wear heat protective clothing. Launder contaminated clothing before reuse.

Respiratory Protection

Use respirator with a combination organic vapor and high efficiency filter cartridge 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.

Hygiene Measures

Wash thoroughly after handling this product.

Environmental exposure controls

See section 6 for details.

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

Water white liquid. **Appearance**

Odour Mild

Odour Threshold Not determined. Not determined. Melting / Freezing Not determined. **Point Boiling Point** Not determined. **Boiling Point Range** Not determined.

Flash Point > 101 °C, 213.8 °F PMCC (Minimum)

Evaporation Rate Not determined. Flammability Not applicable. (solid,gas)

Lower flammability or Not determined.

explosive limit

Upper flammability or Not determined. explosive limit Vapour Pressure Not determined. Vapour Density Not determined. Relative density 0.88 (15.6 °C)

Bulk Density Not determined. Water Solubility Insoluble. Other solubilities Not determined. Partition coefficient: Not determined. n-octanol/water **Autoignition Point** Not determined. Decomposition Not determined. Temperature Viscosity Not determined.

Explosive properties Material does not have explosive properties. **Oxidising properties** Material is a non-oxidising substance.

9.2 Other information

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

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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 moderately elevated temperatures and pressures.

10.3 Possibility of hazardous reactions

Will not occur.

10.4 Conditions to avoid

Not determined.

10.5 Incompatible materials

Strong acids. Oxidizing agents.

10.6 Hazardous decomposition products

Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion.

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

Not expected to be a primary 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

Not expected to cause eye irritation. Based on data from components or similar materials. Vapors formed from heating may cause eye irritation.

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

This product contains para-dodecylphenol. Rats given high, repeated daily doses of para-dodecylphenol by oral intubation experienced adverse reproductive effects. The relevance of these effects to humans is uncertain.

This product contains para-dodecylphenol. Pregnant rats given high, repeated daily doses of para-dodecylphenol by oral intubation gave birth to pups with cleft palate and skeletal malformations. The relevance of these effects to humans is uncertain.

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.

G	10
Section	

Ecological Information

12.1 Toxicity

Freshwater fish

Not determined.

Freshwater invertebrates

Chronic effects expected at 1 - 10 mg/L based on component data.

Algae

Not determined.

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 0 to 10.0 percent	Sturm	28	0
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts	From 0 to 10.0 percent	Sturm	28	1.5
Dodecylphenol, mixed isomers (branched)	From 0 to 10.0 percent	Miscellaneous- Degradation	56	10
Dodecylphenol, mixed isomers (branched)	From 0 to 10.0 percent	Sturm	28	25

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 0 to 10.0 percent	Bioconcentration Factor	42	3.2
Reaction products of Benzeneamine, N-phenyl- with nonene (branched)	From 0 to 10.0 percent	Octanol-Water Coefficient	0.1	3.6
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts	From 0 to 10.0 percent	Octanol-Water Coefficient	0.1	0.6
Dodecylphenol, mixed isomers (branched)	From 0 to 10.0 percent	Bioconcentration Factor	27	2.9
Dodecylphenol, mixed isomers (branched)	From 0 to 10.0 percent	Octanol-Water Coefficient	0.1	7.1

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
Section 13	Disposal Constuct ations

13.1 Waste treatment methods

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

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

Section 14	Transport Information	Transport Information	
444 1791			
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
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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 To obtain information on the REACH compliance status of this product, please visit Lubrizol.com/REACH, or e-mail us at

 $REACH_MSDS_INQUIRIES@Lubrizol.com$

Japan All components are in compliance with the Chemical Substances Control Law of Japan.

Korea All components are in compliance in Korea.

New Zealand May require notification before sale under New Zealand regulations.

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 May require notification before sale in Taiwan.

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	
Section 10 State Information	

Created by

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

Created Date

13 October 2008

Revision date

27 September 2011

SDS No.

21149728-2722169-009121-102103

HMIS Codes

Health	Fire	Reactivity
0	1	0

Relevant R Phrases

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.

R53 -- May cause long-term adverse effects in aquatic environment.

R62 -- Possible risk of impaired fertility.

Relevant hazard phrases

H315 - Causes skin irritation.

H318 - Causes serious eye damage.

H319 - Causes serious eye irritation.

H361 - Suspected of damaging fertility or the unborn child.

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.

H413 - May cause long lasting harmful effects to aquatic life.

Revision Indicators

Section: 1 Registration Number	Changed: 10 August 2011
Section: 1 CAS Number.	Changed: 10 August 2011
Section: 1 Substance Name	Changed: 10 August 2011
Section: 1 Synonyms	Changed: 10 August 2011
Section: 2 CLP Hazard Class	Changed: 10 August 2011
Section: 2 Disposal	Changed: 10 August 2011
Section: 2 Label Eye first aid	Changed: 10 August 2011
Section: 2 Extinguishing media.	Changed: 10 August 2011
Section: 2 Oral first aid.	Changed: 10 August 2011
Section: 2 Skin first aid.	Changed: 10 August 2011
Section: 2 Storage procedures.	Changed: 10 August 2011
Section: 3 CLP Hazardous Ingredients	Changed: 27 September 2011
Section: 3 Registration Number	Changed: 10 August 2011
Section: 3 EU hazardous ingredients.	Changed: 27 September 2011
Section: 4 Important effects, symptons	Changed: 10 August 2011
Section: 5 Unusual fire& explosion hazards.	Changed: 10 August 2011
Section: 6 Reference to other sections	Changed: 10 August 2011
Section: 7 Handling procedures.	Changed: 10 August 2011
Section: 7 Storage procedures.	Changed: 10 August 2011
Section: 8 Environmental exposure controls	Changed: 10 August 2011
Section: 9 Average particle size	Changed: 10 August 2011
Section: 9 Flammability Gas or solid	Changed: 10 August 2011
Section: 9 Oxidising properties	Changed: 10 August 2011
Section: 10 CLP Reactivity	Changed: 10 August 2011
Section: 12 PBT and vPvB assessment	Changed: 10 August 2011
Section: 12 Freshwater invertebrate toxicity.	Changed: 10 August 2011
Section: 13 Contaminated Containers/Packaging	Changed: 10 August 2011
Section: 14 Special precautions for user	Changed: 10 August 2011
Section: 15 Authorisations	Changed: 10 August 2011
Section: 15 Chemical safety assessment	Changed: 10 August 2011
Section: 15 Taiwan	Changed: 10 August 2011
Section: 16 Relevant hazard phrases	Changed: 27 September 2011

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