

Red Line Engine Oil Break-In Additive

Material Safety Data Sheet
Red Line Engine Oil
Break-In Additive

1	Chemical Product and Company Identification
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*Red Line Synthetic Oil
Corporation
6100 Egret Court
Benicia, CA 94510
Tel: (707) 745-6100*

Product Trade Name Red Line Engine Oil Break-In Additive
CAS Number Not applicable for mixtures.
Synonyms None.
Generic Chemical Name Mixture.
Product Type Engine oil additive.
Preparation/Revision Date 7 May 2013
Transportation Emergency Phone No. FOR TRANSPORT EMERGENCY call: (+1) 707-400-0215

2	Hazards Identification
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Appearance Reddish colored liquid.
Odor Mild
Principal Hazards Warning.
 1 May cause skin irritation.
 1 May cause eye irritation.

See Section 11 for complete health hazard information.

3	Composition/Information on Ingredients
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Hazardous Ingredients

Comp	CAS No.	Percentage (by wt.)	Carcinogen
Zinc alkyldithiophosphate	84605-29-8	From 5 to 9.9 percent	N/E
Zinc alkyldithiophosphate	68649-42-3	From 5 to 9.9 percent	N/E

(N/E) - None established

4	First Aid Measures
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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.
Skin Wash with plenty of soap and water. Remove contaminated clothing. If skin irritation occurs, get medical attention. Launder contaminated clothing before reuse and discard leather articles saturated with the material.
Inhalation Remove exposed person to fresh air if adverse effects are observed.
Oral DO NOT INDUCE VOMITING. Get immediate medical attention.
Additional Information Note to physician: Treat symptomatically.

5	Fire Fighting Measures
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Flash Point 165 °C, 329 °F PMCC (Typical)
Extinguishing Media CO2, dry chemical, or foam. Water can be used to cool and protect exposed material.
Firefighting Procedures Recommend wearing self-contained breathing apparatus. Water may cause splattering.
Unusual Fire & Explosion Hazards Elevated temperatures can lead to the formation of irritating fumes and vapors. See section 10 for additional information.

6	Accidental Release Measures
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Spill Procedures Personal Protective Equipment must be worn, see Personal Protection Section for PPE recommendations. Take precautions to avoid release to the environment. Ventilate area if spilled in confined space or other poorly ventilated areas. Prevent entry

into sewers and waterways, dispose of in accordance with all federal, state and local environmental regulation. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material.

7	Handling and Storage
Pumping Temperature	60 °C, 140 °F
Maximum Handling Temperature	70 °C, 158 °F
Handling Procedures	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. 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.
Maximum Storage Temperature	45 °C, 113 °F
Storage Procedures	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 Loading Temperature	70 °C, 158 °F
8	Exposure Controls/Personal Protection
Exposure Limits	None established
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.
Engineering 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.
Gloves Procedures	Nitrile.
Eye Protection	Chemical goggles or faceshield.
Respiratory Protection	Use half mask respirator with an organic vapor cartridge if exposure limit is exceeded. Use NIOSH/MSHA approved respirator with a combination organic vapor and dust/mist cartridge.
Clothing Recommendation	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.
9	Physical and Chemical Properties
Flash Point	165 °C, 329 °F PMCC (Typical)
Upper Flammable Limit	Not determined.
Lower Flammable Limit	Not determined.
Autoignition Point	Not determined.
Explosion Data	Material does not have explosive properties.
Vapor Pressure	Not Determined
pH	Not determined.
Specific Gravity	0.97 (15.6 °C)
Bulk Density	8.09 Lb/gal, 0.97 Kg/L
Water Solubility	Insoluble.
Percent Solid	Not determined.
Percent Volatile	Not determined.
Volatile Organic Compound	Not determined.
Vapor Density	Not determined.
Evaporation Rate	Not determined.
Odor	Mild
Appearance	Dark colored liquid.
Viscosity	80 Centistokes (40 °C)
Odor Threshold	Not determined.
Boiling Point	Not determined.
Pour Point Temperature	-21 °C, -6 °F
Melting / Freezing Point	Not determined.
<i>The above data are typical values and do not constitute a specification. Vapor pressure data are calculated unless otherwise noted.</i>	
10	Stability and Reactivity

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Stability	Material is normally stable at room temperature and pressure. See the Handling and Storage Section for further details.
Decomposition Temperature	Not determined.
Incompatibility	Acids. Oxidizing agents. Halogens and halogenated compounds.
Polymerization	Will not occur.
Thermal Decomposition	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: calcium, sulfur, zinc.
Conditions to Avoid	High temperatures.

11	Toxicological Information
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– ACUTE EXPOSURE –

Eye Irritation	Weak to moderate eye irritant. Does not meet Canadian D2B or EU R36 criteria. Based on data from components or similar materials.
Skin 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.
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.
Dermal Toxicity	The LD50 in rabbits is > 2000 mg/Kg. Based on data from components or similar materials.
Inhalation Toxicity	No data available to indicate product or components may be a toxic inhalation hazard.
Oral Toxicity	The LD50 in rats is > 10,000 mg/Kg. Based on data from components or similar materials.
Dermal Sensitization	No data available to indicate product or components may be a skin sensitizer.
Inhalation Sensitization	No data available to indicate product or components may be respiratory sensitizers.

– CHRONIC EXPOSURE –

Chronic Toxicity	No data available to indicate product or components present at greater than 1% are chronic health hazards.
Carcinogenicity under	This product contains hydrocarbon 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.
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
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.
Teratogenicity	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.

– ADDITIONAL INFORMATION –

Other	No other health hazards known.
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12	Ecological Information
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– ENVIRONMENTAL TOXICITY –

Freshwater Fish Toxicity	The acute LC50 is 10 - 100 mg/L based on component data.
Freshwater Invertebrates Toxicity	Chronic effects expected at < 1 mg/L based on component data.
Algal Inhibition	Not determined.
Saltwater Fish Toxicity	Not determined.
Saltwater Invertebrates Toxicity	Not determined.
Bacteria Toxicity	The acute EC50 is 100 - 1000 ppm based on component data.
Miscellaneous Toxicity	Not determined.

– ENVIRONMENTAL FATE –

Biodegradation	At least 25% of the components in this product show moderate biodegradation based on OECD 301-type test data. At least 25% of the components in this product show moderate biodegradation based on OECD 302-type test data.
Bioaccumulation	Less than 1.0% of the components potentially bioconcentrate, based on octanol/water coefficients.
Soil Mobility	Not determined.

13	Disposal Considerations
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Waste Disposal	This material, if discarded, is not a hazardous waste under RCRA Regulation 40 CFR 261. Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.
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14	Transport Information
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ICAO/IATA I	Not regulated.
ICAO/IATA II	Not regulated.

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IMDG	Not regulated.
IMDG EMS Fire	Not applicable.
IMDG EMS Spill	Not applicable.
IMDG MFAG	Not applicable.
MARPOL Annex II	Noxious liquid, NF, (5) n.o.s. (Engine Break-In Additive Contains hydrocarbon oil), ST 2, Cat Y
USCG Compatibility	34 - Esters
U.S. DOT Bulk	Not regulated.
DOT NAERG	Not applicable.
U.S. DOT (Intermediate)	Not regulated.
U.S. DOT Intermediate NAERG	Not applicable.
U.S. DOT Non-Bulk	Not regulated.
U.S. DOT Non-Bulk NAERG	Not applicable.
Canada	Not regulated.
Mexico	Not regulated.

Review classification requirements before shipping materials at elevated temperatures.

15	Regulatory Information
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– Global Chemical Inventories –

USA	All components of this material are on the US TSCA Inventory or are exempt.
Other TSCA Reg.	None known.
EU	All components are in compliance with the EC Seventh amendment Directive 92 /32/EEC
Canada	All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.

– Other U.S. Federal Regulations –

SARA Ext. Haz. Subst.	This product does not contain greater than 1.0% of any chemical substance on the SARA Extremely Hazardous Substances list.								
SARA Section 313	From 10 to 19.9 percent zinc compounds; contains 2% as Zn.								
SARA 311 Classifications	<table border="1" style="width: 100%;"> <tr> <td>Acute Hazard</td> <td>Yes</td> </tr> <tr> <td>Chronic Hazard</td> <td>No</td> </tr> <tr> <td>Fire Hazard</td> <td>No</td> </tr> <tr> <td>Reactivity Hazard</td> <td>No</td> </tr> </table>	Acute Hazard	Yes	Chronic Hazard	No	Fire Hazard	No	Reactivity Hazard	No
Acute Hazard	Yes								
Chronic Hazard	No								
Fire Hazard	No								
Reactivity Hazard	No								
CERCLA Hazardous Substances	None known.								
Miscellaneous Regulatory Information	Not determined.								

16	Other Information
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US NFPA Codes	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="width: 25%;">Health</th> <th style="width: 25%;">Fire</th> <th style="width: 25%;">Reactivity</th> <th style="width: 25%;">Special</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1</td> <td>0</td> <td>N/E</td> </tr> </tbody> </table> <p>(N/E) - None established</p>	Health	Fire	Reactivity	Special	1	1	0	N/E
Health	Fire	Reactivity	Special						
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HMIS Codes	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="width: 33%;">Health</th> <th style="width: 33%;">Fire</th> <th style="width: 33%;">Reactivity</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1</td> <td>0</td> </tr> </tbody> </table>	Health	Fire	Reactivity	1	1	0		
Health	Fire	Reactivity							
1	1	0							
Precautionary Labels	<p>Warning.</p> <ul style="list-style-type: none"> 1 May cause skin irritation. 1 May cause eye irritation. 								

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