SECTION 1: Identification

Product Identifier
- Red Line® SI-1 Complete Fuel System Cleaner
- Code: 830019
- Issue date: 23-Jan-2020
- Relevant identified uses: Fuel additive
- Uses advised against: All others

24 Hour Emergency Phone Number
- CHEMTREC: 1-800-424-9300
- CHEMTREC Global: +1 703 527 3887
- CHEMTREC Mexico: 01-800-681-9531

Manufacturer/Supplier
- RED LINE SYNTHETIC OIL
- 6100 Egret Court
- Benicia, CA  94510

SDS Information
- URL:  www.phillips66.com/SDS
- Phone:  800-762-0942
- Email:  SDS@P66.com

Technical Information
- 1-707-745-6100

SECTION 2: Hazard identification

Classified Hazards
- H315 -- Skin corrosion/irritation -- Category 2
- H317 -- Skin sensitization -- Category - 1
- H319 -- Eye damage/irritation -- Category 2
- H372 -- Specific target organ toxicity (repeated exposure) -- Category 1
- H412 -- Hazardous to the aquatic environment, chronic toxicity -- Category 3

Hazard Not Otherwise Classified (HNOC)
- PHNOC:  None known
- HHNOC:  None known

Label elements

DANGER

- H315 - Causes skin irritation
- H317 - May cause an allergic skin reaction
- H319 - Causes serious eye irritation
- H372 - Causes damage to organs through prolonged or repeated exposure
- H412 - Harmful to aquatic life with long lasting effects

- P260 - Do not breathe dust/fume/gas/mist/vapors/spray; P264 - Wash skin thoroughly after handling; P270 - Do not eat, drink or smoke when using this product; P272 - Contaminated work clothing must not be allowed out of the workplace; P273 - Avoid release to the environment; P280 - Wear protective gloves/protective clothing and eye/face protection; P302 + P352 - IF ON SKIN: Wash with plenty of soap and water; P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention; P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing; P337 + P313 - If eye irritation persists: Get medical advice/attention; P314 - Get medical advice/attention if you feel unwell; P362 - Take off contaminated clothing and wash before reuse; P501 - Dispose of contents/ container to an approved waste disposal plant
SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CASRN</th>
<th>Concentration¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates, petroleum, hydrotreated light naphthenic</td>
<td>64742-53-6</td>
<td>&lt;45</td>
</tr>
<tr>
<td>Polyetheramine</td>
<td>224622-34-8</td>
<td>&lt;30</td>
</tr>
<tr>
<td>Distillates, petroleum, hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Naphtha, petroleum, hydrodesulfurized heavy</td>
<td>64742-82-1</td>
<td>2.5 - 4.99</td>
</tr>
<tr>
<td>Fatty acids, reaction products with alkanolamine and alkylxide</td>
<td>Proprietary</td>
<td>1 - 2.49</td>
</tr>
</tbody>
</table>

¹ All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4: First aid measures

Eye Contact: For direct contact, remove contact lenses if present and easy to do. Immediately hold eyelids apart and flush the affected eye(s) with clean water for at least 20 minutes. Seek immediate medical attention.

Skin Contact: Remove contaminated shoes and clothing, and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops, seek medical attention. Wash contaminated clothing before reuse.

Inhalation: First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

Ingestion: First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

Most important symptoms and effects, both acute and delayed: While significant vapor concentrations are not likely, high concentrations can cause minor respiratory irritation, headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Ingestion can cause irritation of the digestive tract, nausea, diarrhea, and vomiting. Prolonged or repeated contact may dry skin and cause irritation.

Notes to Physician: Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

SECTION 5: Firefighting measures

NFPA 704: National Fire Protection Association

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

0 = minimal hazard
1 = slight hazard
2 = moderate hazard
3 = severe hazard
4 = extreme hazard

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Specific hazards arising from the chemical

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.
**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen, or phosphorus may also be formed.

**Special protective actions for fire-fighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

**SECTION 6: Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard.

**Methods and material for containment and cleaning up:** Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

**SECTION 7: Handling and storage**

**Precautions for safe handling:** Keep away from flames and hot surfaces. Wash thoroughly after handling. Do not breathe vapor or mist. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing must not be allowed out of the workplace. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Do not eat, drink or smoke when using this product. Spills will produce very slippery surfaces. Do not wear contaminated clothing or shoes. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146.

**Conditions for safe storage:** Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

**SECTION 8: Exposure controls/personal protection**

**Occupational exposure limits**
State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

### Biological occupational exposure limits

None.

### Engineering controls:

If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

### Eye/Face Protection:

The use of eye protection (such as splash goggles) that meets or exceeds ANSI Z87.1 is recommended when there is potential liquid contact to the eye. Depending on conditions of use, a face shield may be necessary.

### Skin/Hand Protection:

Depending on exposure and use conditions, additional protection may be necessary to prevent skin contact including use of items such as chemical resistant boots, aprons, arm covers, hoods, coveralls, or encapsulated suits.

Suggested protective materials: Nitrile rubber

### Respiratory Protection:

Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

### Other Protective Equipment:

Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse.

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

### SECTION 9: Physical and chemical properties

**Note:** Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
<th>Phillips 66</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates, petroleum, hydrotreated light naphthenic</td>
<td>TWA-8hr: 5 mg/m³ STEL: 10 mg/m³ as Oil Mist, if Generated</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Distillates, petroleum, hydrotreated heavy naphthenic</td>
<td>TWA-8hr: 5 mg/m³ STEL: 10 mg/m³ as Oil Mist, if Generated</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Naphtha, petroleum, hydrodesulfurized heavy</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>TWA-8hr: 0.5 ppm (as benzene) STEL: 2.5 ppm (as benzene) Skin</td>
</tr>
</tbody>
</table>

| Appearance: | Amber Transparent |
| Physical Form: | Liquid |
| Odor: | Mild Slight hydrocarbon |
| Odor Threshold: | No data |
| pH: | N/A |
| Vapor Density (air1): | >1 |
| Upper Explosive Limits (vol % in air): | No data |
| Lower Explosive Limits (vol % in air): | No data |
| Evaporation Rate (nBuAc=1): | No data |
| Particle Size: | Not applicable |
| Percent Volatile: | No data |
| Flammability (solid, gas): | Not applicable |
| Solubility in Water: | Negligible |

| Flash Point: | 248 °F / 120 °C (ASTM D93) |
| Test Method: | Pensky-Martens Closed Cup (PMCC), ASTM D93, EPA 1010 |
| Initial Boiling Point/Range: | No data |
| Vapor Pressure: | No data |
| Partition Coefficient (n-octanol/water) (Kow): | No data |
| Melting/Freezing Point: | No data |
| Auto-ignition Temperature: | No data |
| Decomposition Temperature: | No data |
| Specific Gravity (water=1): | No data |
| Bulk Density: | 7.56 lbs/gal |
| Viscosity: | 4.5 cSt @ 100°C; 22.5 cSt @ 40°C |
| Pour Point: | No data |
SECTION 10: Stability and reactivity

Reactivity: Not chemically reactive.

Chemical stability: Stable under normal ambient and anticipated conditions of use.

Possibility of hazardous reactions: Hazardous reactions not anticipated.

Conditions to avoid: Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

Incompatible materials: Avoid contact with strong oxidizing agents and strong reducing agents.

Hazardous decomposition products: Not anticipated under normal conditions of use.

SECTION 11: Toxicological information

Information on Toxicological Effects

<table>
<thead>
<tr>
<th>Substance / Mixture</th>
<th>Acute Toxicity</th>
<th>Hazard</th>
<th>Additional Information</th>
<th>LC50/LD50 Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Unlikely to be harmful</td>
<td></td>
<td></td>
<td>&gt;5 mg/L (mist, estimated)</td>
</tr>
<tr>
<td>Dermal</td>
<td>Unlikely to be harmful</td>
<td></td>
<td></td>
<td>&gt; 2 g/kg (estimated)</td>
</tr>
<tr>
<td>Oral</td>
<td>Unlikely to be harmful</td>
<td></td>
<td></td>
<td>&gt; 5 g/kg (estimated)</td>
</tr>
</tbody>
</table>

Likely Routes of Exposure: Inhalation, eye contact, skin contact

Aspiration Hazard: Not expected to be an aspiration hazard

Skin Corrosion/Irritation: Causes skin irritation. Repeated exposure may cause skin dryness or cracking.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Skin Sensitization: May cause an allergic skin reaction. Based on component information

Respiratory Sensitization: No information available.

Specific Target Organ Toxicity (Single Exposure): No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

Specific Target Organ Toxicity (Repeated Exposure): Causes damage to organs through prolonged or repeated exposure. Based on component information.

Carcinogenicity: No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

Germ Cell Mutagenicity: No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

Reproductive Toxicity: No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

Information on Toxicological Effects of Components

Lubricant Base Oil (Petroleum)

Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.
Naphtha, petroleum, hydrodesulfurized heavy

Carcinogenicity: Two year inhalation studies of vaporized unleaded gasoline produced an increased incidence of kidney tumors in male rats and liver tumors in female mice. Repeated skin application of various petroleum naphthas in mice for two years resulted in an increased incidence of skin tumors but only in the presence of severe skin irritation. Follow-up mechanistic studies suggest that the occurrence of these tumors may be the consequence of promotional processes and not relevant to human risk assessment. Epidemiology data collected from a study of more than 18,000 petroleum marketing and distribution workers showed no increased risk of leukemia, multiple myeloma, or kidney cancer from gasoline exposure. Unleaded gasoline has been identified as a possible carcinogen by the International Agency for Research on Cancer.

Reproductive Toxicity: No evidence of developmental toxicity was found in pregnant laboratory animals (rats and mice) exposed to high vapor concentrations of unleaded gasoline and petroleum naphthas via inhalation. A two-generation reproductive toxicity study of vapor recovery gasoline did not adversely affect reproductive function or offspring survival and development.

Target Organ(s): Two year inhalation studies of wholly vaporized unleaded gasoline, and 90 days studies of various petroleum naphthas, did not produce significant target organ toxicity in laboratory animals. Nephropathy in male rats, characterized by the accumulation of alpha-2-u-globulin in epithelial cells of the proximal tubules was observed, however follow-up studies suggest that these changes are unique to the male rat.

SECTION 12: Ecological information

GHS Classification:
H412 -- Hazardous to the aquatic environment, chronic toxicity -- Category 3
Harmful to aquatic life with long lasting effects.

Toxicity: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Persistence and Degradability: The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.

Bioaccumulative Potential: Log Kow values measured for the hydrocarbon components of this material are greater than 5.3, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

Mobility in Soil: Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of the hydrocarbon constituents in soil and sediment.

Other adverse effects: None anticipated.

SECTION 13: Disposal considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations. This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the SDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste. This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle used oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

SECTION 14: Transport information

UN Number: Not regulated
UN proper shipping name: None
Transport hazard class(es): None
Packing Group: None
Environmental Hazard(s): This product does not meet the DOT/UN/IMDG/IMO criteria of a marine pollutant
Special precautions for user: If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

Product Name: None

SECTION 15: Regulatory information

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds)
This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

CERCLA/SARA - Section 311/312 (Title III Hazard Categories)
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CERCLA/SARA - Section 313 and 40 CFR 372
This material does not contain any chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

EPA (CERCLA) Reportable Quantity (in pounds)
This material does not contain any chemicals with CERCLA Reportable Quantities.

California Proposition 65

WARNING. This product can expose you to chemicals including Naphthalene (CASRN 91-20-3) which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

International Inventories
All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.
All components are either on the DSL, or are exempt from DSL listing requirements.

SECTION 16: Other information

<table>
<thead>
<tr>
<th>Issue date</th>
<th>Previous Issue Date</th>
<th>SDS Number</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>23-Jan-2020</td>
<td>30-Jan-2018</td>
<td>830019</td>
<td>FINAL</td>
</tr>
</tbody>
</table>

Revised Sections or Basis for Revision:
Identified Hazards (Section 2); Precautionary Statement(s) (Section 2); Composition (Section 3); Handling and Storage information (Section 7); Physical Properties (Section 9)

Mexican NOM-018-STPS-2015:
The information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

Precautionary Statements:
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P264 - Wash skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P272 - Contaminated work clothing must not be allowed out of the workplace
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention
P314 - Get medical advice/attention if you feel unwell
P362 - Take off contaminated clothing and wash before reuse
P501 - Dispose of contents/container to an approved waste disposal plant

Guide to Abbreviations:
Disclaimer of Expressed and implied Warranties:
The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.