SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product Name: STARFIRE AW 32, 46, 68

1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended use: Hydraulic Oil
Recommended restrictions: Not applicable

1.3. Details of the supplier of the safety data sheet
Manufacturer: Coolants Plus, Inc.
2570 Van Hook Ave.
Hamilton, OH. 45015
Information Phone: +01 888-258-8723

1.4. Emergency telephone number
Emergency phone number: CHEMTREC: +1 (800) 424-9300
International: +01 (703) 527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Not classified under GHS

2.2. Label elements

2.3. Other hazards
Hazards not otherwise classified: Avoid prolonged or repeated skin contact with used fluid.
Unknown acute toxicity (GHS-US)

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>%</th>
<th>CAS #</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lubricating oils, petroleum, hydrotreated spent</td>
<td>30 - 60</td>
<td>64742-58-1</td>
<td>Aquatic Chronic 4; H413</td>
</tr>
</tbody>
</table>

Components not listed are not physical or health hazards as defined in 29 CFR 1910.1200 (Hazard Communication Standard).

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen.

Eyes: None expected to be needed, however, use an eye wash to remove a chemical from your eye regardless of the level of hazard.

Skin Contact: Wash with soap and water. Seek medical advice if symptoms persist.

Ingestion: Minimal risk of harm if swallowed. Do not induce vomiting. Seek medical attention immediately.
Provide medical care provider with this SDS.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: Not determined

4.3. Indication of any immediate medical attention and special treatment needed

Note to Doctor: Aspiration during swallowing or vomiting may severely damage the lungs. If evacuation of stomach contents is necessary, use method least likely to cause aspiration.
SECTION 5: Firefighting measures
5.1. Extinguishing media
Suitable and Unsuitable Extinguishing Media: Use alcohol resistant foam, carbon dioxide, or dry chemical when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the surface of the fire. Do not direct a stream of water into the hot burning liquid.

5.2. Special hazards arising from the substance or mixture
Fire and/or Explosion Hazards: Material may be ignited only if preheated to temperatures above the high flash point, for example in a fire.

5.3. Advice for firefighters
Fire Fighting Methods and Protection: Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Use methods for the surrounding fire.


SECTION 6: Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
General Measures: No adverse health affects expected from the clean up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this SDS.

6.2. Environmental precautions
Do not flush to sewer.
Avoid runoff into storm sewers and ditches that lead to waterways.
Remove from water surface by skimming or with suitable absorbents. Do not use dispersants.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Dispose of according to Federal, State, Local, or Provincial regulations. Used fluid should be disposed of at a recycling center.

6.4. Reference to other sections
Follow all protective equipment recommendations provided in Section 8.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
No special handling instructions due to toxicity.

7.2. Conditions for safe storage, including any incompatibilities
Store in a cool dry place. Isolate from incompatible materials.

Incompatible materials
See Section 10.

7.3. Specific end use(s)
Hydraulic Oil

SECTION 8: Exposure controls/personal protection
8.1. Control parameters

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Occupational Exposure Limits</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil mist, mineral</td>
<td>OSHA PEL</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>Oil mist, mineral</td>
<td>OSHA PEL</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>Oil mist, mineral</td>
<td>ACGIH TLV-TWA</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>Oil mist, mineral</td>
<td>ACGIH TLV-TWA</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>Oil mist, mineral</td>
<td>ACGIH STEL</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Oil mist, mineral</td>
<td>ACGIH STEL</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>None.</td>
<td>IDLH</td>
<td></td>
</tr>
<tr>
<td>None.</td>
<td>OSHA PEL-Skin Notation</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Engineering Measures: Use local exhaust ventilation or other engineering controls to minimize exposures and maintain
SAFETY DATA SHEET

8.2. Exposure controls

Respiratory Protection
Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.

Respirator Type(s)
None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.

Eye Protection
No special requirements under normal industrial use.

Skin Protection
Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves
Neoprene, Nitrile

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Liquid
Color Amber
Odor Mild
Odor threshold Not determined
pH Not determined
Freezing point Not determined
Boiling Point Not determined
Flash Point (°C) 207
Flash Point Method COC
Evaporation Rate Not determined
Upper Flammable/Explosive Limit, % in air = 10
Lower Flammable/Explosive Limit, % in air = 1
Flammability (solid, gas) Not applicable
Vapor pressure <0.20
Vapor Density Not determined
Relative Density 0.86
Solubility in Water Negligible; 0-1%
Octanol/Water Partition Coefficient Not determined
Autoignition Temperature Not determined
Decomposition Temperature Not determined
Viscosity(°C) 34.92

9.2. Other information

Volatiles, % by weight 0.000000

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Temperatures above the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition. Moisture (will lead to product performance degradation).

10.5. Incompatible materials
Strong oxidizing agents

10.6. Hazardous decomposition products
Carbon monoxide, Hydrogen sulfide, Nitrogen containing gases

SECTION 11: Toxicological information

11.1. Information on toxicological effects
## SAFETY DATA SHEET

### SECTION 11: Toxicological information

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingestion Toxicity</td>
<td>No hazard in normal industrial use. Estimated to be &gt; 5.0 g/kg.</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>Estimated to be non-irritating to skin (Primary Irritation Index is &lt;0.5 [rabbits]). No hazard in normal industrial use.</td>
</tr>
<tr>
<td>Absorption</td>
<td>Likely to be practically non-toxic based on animal data.</td>
</tr>
<tr>
<td>Inhalation Toxicity</td>
<td>No hazard in normal industrial use. Likely to be practically non-toxic based on animal data.</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>This material is estimated to be non-irritating eyes (Draize score &lt;15 [rabbits]). No hazard in normal industrial use.</td>
</tr>
<tr>
<td>Sensitization</td>
<td>Non-hazardous under Respiratory Sensitization category. No data available to indicate product or components may be a skin sensitizer.</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>No data available to indicate product or any components present at greater than 0.1% is mutagenic or genotoxic.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not expected to cause cancer. This product meets the IP-346 criteria of &lt;3% PAH's and is not considered a carcinogen by the International Agency for Research on Cancer.</td>
</tr>
<tr>
<td>Reproductive and Developmental Toxicity</td>
<td>No data available to indicate product or any components present at greater than 0.1% may cause birth defects.</td>
</tr>
<tr>
<td>Specific target organ</td>
<td>Non-hazardous under Specific Target Organ Systemic Toxicity Single Exposure category.</td>
</tr>
<tr>
<td>toxicity-Single exposure</td>
<td></td>
</tr>
<tr>
<td>Specific target organ</td>
<td>Non-hazardous under Specific Target Organ Systemic Toxicity Repeated Exposure category.</td>
</tr>
<tr>
<td>toxicity-Repeated exposure</td>
<td></td>
</tr>
<tr>
<td>Aspiration toxicity</td>
<td>Non-hazardous under Aspiration category.</td>
</tr>
<tr>
<td>Other information</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

### Agents Classified by IARC Monographs

<table>
<thead>
<tr>
<th>Group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC Group 1</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IARC Group 2A</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IARC Group 2B</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### National Toxicity Program (NTP) Status

<table>
<thead>
<tr>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Known Human Carcinogen</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Reasonably Anticipated To Be A Human Carcinogen</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological information

12.1 Toxicity

- **Acute Aquatic ecotoxicity:** Non-hazardous under Aquatic Acute Environment category.
- **Chronic Aquatic ecotoxicity:** Non-hazardous under Aquatic Chronic Environment category.

12.2 Persistence and degradability

Biodegrades at a moderate rate.

12.3 Bioaccumulative potential

Bioconcentration may occur.

12.4 Mobility in soil

This material is expected to have essentially no mobility in soil. It absorbs strongly to most soil types.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

Not determined

### SECTION 13: Disposal considerations

13.1 Waste treatment methods

**Disposal Methods**

Dispose of according to Federal, State, Local, or Provincial regulations. Recycle used oil.

**Waste Disposal Code(s)**

- **Waste Description for Spent Product**

Spent or discarded material is non-hazardous according to environmental regulations.

**Contaminated packaging:**
SAFETY DATA SHEET

SECTION 13: Disposal considerations
Recycle containers whenever possible.

SECTION 14: Transport information
DOT Basic Description
Not classified as hazardous for transport (DOT, TDG, IMO/IMDG, IATA/ICAO).

SECTION 15: Regulatory information

Chemical Inventories
U.S. State Restrictions: Not applicable
WHMIS: Uncontrolled product according to WHMIS classification criteria.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Regulation</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>None.</td>
<td>CERCLA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None.</td>
<td>SARA 313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None.</td>
<td>SARA EHS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None.</td>
<td>TSCA 12b</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U.S. State Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Regulation</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>None.</td>
<td>California Prop 65- Cancer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None.</td>
<td>California Prop 65- Dev. Toxicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None.</td>
<td>California Prop 65- Reprod -fem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None.</td>
<td>California Prop 65- Reprod-male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None.</td>
<td>Massachusetts RTK List</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None.</td>
<td>New Jersey RTK List</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None.</td>
<td>Pennsylvania RTK List</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None.</td>
<td>Rhode Island RTK List</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None.</td>
<td>Minnesota Hazardous Substance List</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HMIS Ratings:
Health: 0
Fire: 1
Reactivity: 0
PPE: B

KEY:
0 - Least
1 - Slight
2 - Moderate
3 - High
4 – Extreme

SECTION 16: Other information

Revision Date 12/16/2015 10:17:20 AM
Supersedes: 10/1/2015 8:50:22 AM
References
ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
CFR: Code of Federal Regulations
DOT: United States Department of Transportation
GHS: Globally Harmonized System of Classification and Labeling of Chemicals
HMIS: Hazardous Materials Identification System
### SAFETY DATA SHEET

#### SECTION 16: Other information

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transportation Association</td>
</tr>
<tr>
<td>IDLH</td>
<td>Immediately Dangerous to Life or Health</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Association</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety and Health</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>RTK</td>
<td>Right-to-Know</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold limit value</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substances Control Act</td>
</tr>
<tr>
<td>TWA</td>
<td>Time weighted average</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
</tr>
</tbody>
</table>

#### Disclaimer

This safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in the data sheet which we have received from outside sources and we believe the information to be correct, but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product in a safe manner and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either expressed or implied.