SAFETY DATA SHEET
CPAR P-53

Section 1. IDENTIFICATION

1.1 Product Identifier

Product Description: CPAR P-53
(55% chlorine by weight)

Other Means of Identification: Alkanes, C14-16, Chloro; Chloro Alkanes C14-16; CPAR MCCP; P-53; Medium-Chain Chlorinated Paraffin; Chlorinated Paraffins C14-16

CAS Number: 1372804-76-6 Alkanes, C14-16, Chloro USA
85535-85-9 Alkanes, C14-17, Chloro Canada, Mexico

1.2 Relevant Identified Uses of the Substance or Mixtures and Uses Advised Against

Recommended Use: Industrial Use Only

Restrictions on Use: One or more components in this material are approved for specific commercial use(s) under a U.S. EPA TSCA Significant New Use Rule or Consent Order. Approved uses include: Flame retardant and plasticizer in polymers. Flame retardant, plasticizer and lubricant in adhesives, caulks, sealants, and coatings. Additive in lubricants including metalworking fluids. Flame retardant and plasticizer in rubber. Flame retardant and waterproofer in textiles.

Uses Advised Against: No other use is permitted but what is listed in Restrictions on Use.

1.3 Details of the Supplier of the Safety Data Sheet

Company: Qualice, LLC
PO Box 1169, 11 EV Hogan Drive
Hamlet, NC 28345-1169
Customer Service: 910-419-6589

SDS prepared by EHS Department: 910-419-6566

1.4 Emergency Telephone Number

FOR CHEMICAL EMERGENCY (Spill, Leak, Fire, Exposure, or Accident), Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)
Mexico (dial from in-country): 01-800-681-9531

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

• Aquatic Acute Category 1
• Aquatic Chronic Category 1

2.2 GHS Label Elements

Signal Word: WARNING

GHS Hazard Statements

• Very toxic to aquatic life. H400
• Very toxic to aquatic life with long lasting effects. H410
• Repeated exposure may cause skin dryness or cracking (defatting). EUH066
GHS Precautionary Statements

Prevention:
- Obtain special instructions before use.  P201
- Do not breathe dusts or mists.  P260
- Wash hands thoroughly after handling.  P264
- Do not eat, drink or smoke when using this product.  P270
- Avoid release to the environment.  P273

Response:
- IF exposed or concerned: Get medical advice/attention.  P308+P313
- Collect spillage.  P391

Storage:
- See Section 7

Disposal:
- Dispose of contents or container in accordance with local and provincial regulations.  P501

Hazards Not Otherwise Classified:  None
Physical Hazards Not Otherwise Classified:  None
Health Hazards Not Otherwise Classified:  None

Section 3.  COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Synonyms</th>
<th>CAS Number</th>
<th>% weight/weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkanes, C\textsubscript{14-16}, chloro [55% chlorine by weight]</td>
<td>Medium-Chain Chlorinated Paraffin; MCCP 55%</td>
<td>1372804-76-6 (USA) 85535-85-9 (CAN, MEX)</td>
<td>99</td>
</tr>
<tr>
<td>Epoxidized Soybean Oil*</td>
<td>ESO, Stabilizer</td>
<td>8013-07-8</td>
<td>1</td>
</tr>
</tbody>
</table>

* The stabilizer does not contribute to the hazard classification of this product.

Section 4.  FIRST AID MEASURES

4.1 Description of First Aid Measures

First Aid Procedures:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Contact</td>
<td>Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. If irritation persists, get medical attention.</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>Wash with soap and water. Get medical attention if irritation persists.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>If respiratory irritation occurs, move to fresh air. Get medical attention if irritation persists or if breathing difficulty occurs.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Rinse mouth thoroughly with water. Do not induce vomiting without medical advice. If ingestion of a large amount does occur, seek medical attention or call POISON CONTROL.</td>
</tr>
</tbody>
</table>

Notes to Physician:  Treat symptomatically.
General Advice:  If you feel unwell, seek medical advice (show the label where possible).

4.2 Most Important Symptoms and Effects, both Acute and Delayed
- Repeated exposure may cause skin dryness or cracking (defatting).
- Inhalation of vapors in high concentration may cause irritation of respiratory system.

4.3 Indication of Immediate Medical Attention or Special Treatment - None
Section 5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media
Extinguishing Media:

Suitable Extinguishing Media: Dry Chemical, Foam, Water Fog
Unsuitable Extinguishing Media: Avoid using water in a stream or in a high volume water jet as this will spread the fire.

5.2 Specific Hazards Arising from the Chemical including Hazardous Combustion Products
Flammable Properties: May burn, but does not ignite readily. Containers may explode when heated.
Hazardous Combustion Products: Irritating and toxic gases may be released during a fire (hydrogen chloride, carbon oxides).

5.3 Advice for Firefighters
Special Protective Equipment: Wear suitable protective equipment. In event of fire, wear self-contained breathing apparatus.
Precautions for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH-certified or equivalent, and full protective gear. Move containers from fire area if you can do so without risk.

Section 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures
• Keep unnecessary personnel away. Ensure adequate ventilation. Use personal protective equipment.

6.2 Environmental Precautions
• Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Do not contaminate water.

6.3 Methods and Materials for Containment and Cleaning Up
Containment:
• ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
• Stop leak if you can do so without risk.
• Dike the spilled material, where this is possible.
• This material is harmful to water and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Cleaning Up:
• Wear appropriate protective equipment and clothing during clean-up.

Small Spills:
• Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
• Do not return spills to original containers for re-use.

Large Spills:
• Stop the flow of material, if safe to do so.
• Prevent product from entering drains.
• Dike spilled material far ahead of liquid spill if possible. Cover with plastic sheet to prevent spreading.
• Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
• Following product recovery, use oil absorbent to collect any residual material.

6.4 Other Information
• Refer to personal protective measures listed in Section 8. For disposal, see Section 13.
Section 7. **HANDLING AND STORAGE**

7.1 **Precautions for Safe Handling**
- DO NOT handle, store or open near an open flame, sources of heat, or sources of ignition.
- Protect material from direct sunlight.
- Handle and open container with care to prevent spillage.
- Avoid prolonged or repeated skin contact with this material
- Wash hands after handling and before eating.
- Avoid breathing vapors or mists of this product.
- Wear personal protective equipment.
- Avoid release to the environment.

Advice on General Occupational Hygiene:
- Handle in accordance with good industrial hygiene and safety practice.

7.2 **Conditions for Safe Storage**
- Keep away from heat, sparks, and flame. Store in a cool dry place. Keep container closed when not in use.
- Keep out of the reach of children.

7.3 **Specific End Uses**
- See Section 1.2

Section 8. **EXPOSURE CONTROLS / PERSONAL PROTECTION**

8.1 **Control Parameters**

**Occupational Exposure Limits:** Exposure limits for chlorinated paraffins have not been established. Avoid repeated or prolonged exposure to vapor or mist without appropriate respiratory protection.

8.2 **Exposure Controls**

**Engineering Controls:** Under normal conditions of use, natural ventilation should effectively remove and prevent buildup of any vapor/mist/dust generated from the handling of this product.

**Personal Protective Equipment:**
- **Eye / Face Protection**
  - If splashes are likely to occur, wear safety glasses with side-shields or a face shield with safety glasses that meet the American National Standard Practice for Occupational and Educational Eye and Face Protection (ANSI Z-87.1)”. In Canada, the Canadian Standards Association (CSA) Z94.3-M1982 “Industrial Eye and Face Protectors”.
- **Skin Protection**
  - Normal work clothing (long sleeved shirts and long pants) is recommended. If splashes are likely to occur, use apron or impervious suit, such as a Tyvek® coverall. If liquid contact is likely to occur, manufacturer recommends nitrile gloves (example: N-DEX Nitrile).
- **Respiratory Protection**
  - No personal respiratory protective equipment normally required. If vapor or mist is generated (heating, spraying) and engineering controls are not sufficient, wear a NIOSH-certified organic vapor respirator with particulate filter for oil mist (R or P) in the USA. In Canada, select respirator in accordance with Canadian Standards Association (CSA) Z94.4-93, “Selection, Use and Care of Respirators”.

8.3 **Protective Measures**

There are no additional protective measures during repair and maintenance of contaminated equipment.
### Section 9.  PHYSICAL & CHEMICAL PROPERTIES

#### 9.1 Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear, pale yellow, oil-like</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting / Freezing Point</td>
<td>Does not freeze</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt; 200 °C (≈392 °F) @ 1031 hPa (773 mmHg)</td>
</tr>
<tr>
<td>Boiling Range</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 232 °C (450 °F) Cleveland Open Cup</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Flammability limits in Air, Lower % by Volume</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability Limits in Air, Upper % by Volume</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>0.00027 Pa @ 20 °C (very low)</td>
</tr>
<tr>
<td>Vapor Density (air = 1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Density (Specific Gravity)</td>
<td>1.30 @ 25 °C (77 °F)</td>
</tr>
<tr>
<td>Density (g/cm³ @ 25 °C)</td>
<td>1.304</td>
</tr>
<tr>
<td>Bulk Density (kg/m³)</td>
<td>1.304 [10.9 lbs/gallon]  (water = 8.32 lbs/gal @ 25 °C)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: MCCPs are practically insoluble. For MCCP with 51% chlorine content, the value is 0.005-0.027 mg/l @ 20 °C MCCPs are practically insoluble in lower alcohols, glycerol and glycols. Soluble in chlorinated solvents, aromatic hydrocarbons, ketones, esters, ethers, mineral oil, and some cutting oils.</td>
</tr>
<tr>
<td>Partition Coefficient n-octanol/water</td>
<td>See Section 12.</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>95 SUS @ 99 °C (210 °F)</td>
</tr>
<tr>
<td>Explosive</td>
<td>Will not explode</td>
</tr>
<tr>
<td>Sensitivity to Mechanical Impact</td>
<td>Not sensitive</td>
</tr>
<tr>
<td>Sensitivity to Static Discharge</td>
<td>Not sensitive</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>None</td>
</tr>
</tbody>
</table>

#### 9.2 Other Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point Classification (NFPA)</td>
<td>Combustible IIIB</td>
</tr>
<tr>
<td>Volatility</td>
<td>Not available</td>
</tr>
<tr>
<td>Saturated Vapor Concentration</td>
<td>0.0027 ppm  @ 20°C and 760 mmHg</td>
</tr>
<tr>
<td>Emulsifiable in water</td>
<td>No</td>
</tr>
<tr>
<td>Color Gardner</td>
<td>1</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>CₓH₂ₓ₊₂₋₂ᵧClᵧ  where x = 14-16 and y = 1-16</td>
</tr>
<tr>
<td>Structural Formula</td>
<td>CH₃(CH₂)ₓ-Cly-CH₃ where x=number of carbon atoms and y=number of chlorine atoms</td>
</tr>
</tbody>
</table>
Section 10. STABILITY & REACTIVITY

10.1 Reactivity

- Hazardous polymerization is not known to occur.

10.2 Chemical Stability

- Product is stable under normal conditions.

10.3 Possibility of Hazardous Reactions

- Will not occur.

10.4 Conditions to Avoid

- Heat, flames and sparks. Avoid temperatures exceeding the flash point.

10.5 Incompatible Materials

- Strong oxidizing agents, reducing agents. Strong amines.

10.6 Hazardous Decomposition Products

- Thermal decomposition (heating higher than 200 °C (392 °F) can lead to release of irritating gases and vapors - carbon oxides, hydrogen chloride, phosgene, chlorine.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Signs & Symptoms of Exposure:

| Routes of Exposure | Skin contact, eye contact, inhalation (skin is predominant route of exposure in workplace). |

Delayed and Immediate Effects:

| Skin | May cause slight skin irritation. |
| Eyes | Contact with eyes may cause slight, transient irritation. |
| Ingestion | Swallowing a large amount may cause gastric irritation, incontinence, injury to kidneys (necrosis) based on animal studies. |
| Inhalation | Inhalation of vapors or mists in high concentration may cause slight irritation of respiratory system. |

| Acute Toxicity, Oral | MCCP 52% | ESO | LD₅₀ = >5000 mg/kg, rat | Product does not meet classification criteria based on available data. |
| Acute Toxicity, Dermal | No data available. | | Product is not classifiable. Acute dermal toxicity is low due to MCCPs poorly absorbed via the dermal route. |
| Acute Toxicity, Inhalation | No data available. | | Product is not classifiable. Acute inhalation toxicity is low for a single exposure. |

| Skin Corrosion / Irritation | MCCP 52%: 4 hr, rabbit, slightly irritating Human patch test, no irritation | Product does not meet classification criteria based on available data. |
| Serious Eye Damage / Irritation | MCCP 52%: No irritation, rabbit ESO: No irritation, rabbit | Product does not meet classification criteria based on available data. |
| Irritation to Respiratory Tract | No data available. | | Product is not classifiable. |
| Respiratory or Skin Sensitization | MCCP: Human patch test, no allergic response ESO: Negative result, guinea pig | Product is not classifiable. Not a contact sensitizer when human or guinea pig tested for dermal sensitization. |
Chronic Effects
Repeated exposure may cause skin dryness or cracking (defatting).

Specific Target Organ Toxicity – single exposure
No data available.

Specific Target Organ Toxicity – repeated exposure
Product does not meet classification criteria based on available data.
MCCP 52%: 175 mg/kg bw NOAEL, rat oral, 14 day
ESO: 1400 mg/kg bw NOAEL, rat oral

Germ Cell Mutagenicity
MCCP 52% and ESO:
Did not show mutagenic or chromosomal aberration effects in animal experiments.

Carcinogenicity
The components in this product are not listed by or considered to be a carcinogen by: IARC, NTP, US OSHA, or ACGIH.

Reproductive Toxicity
MCCP 52%:
400 mg/kg/day diet produced internal hemorrhaging in rat pups, NOAEL: 8 mg/kg/bw/day
Teratogenicity or Developmental Toxicity - Negative results in animal studies.
ESO:
 Reproductive toxicity: 1000 mg/kg bw NOAEL, rat gavage
 Teratogenicity 1000 mg/kg bw NOAEL, rat gavage

Aspiration Hazard
Product is not an aspiration hazard.

Interactive Effects
Data not available for product or components.

Neurotoxicity
Data not available for product or components.

Endocrine Disrupting Potential
Data not available for product or components.

11.2 Other Information - None

Section 12. ECOLOGICAL INFORMATION (Based on MCCP C14-17)

12.1 Toxicity
Ecotoxicity: Product is very toxic to aquatic life with long lasting effects.
Environmental Effects: Most ecologically significant impacts have potential to occur if released to water and sediment. Bioaccumulation potential in aquatic organisms.
Aquatic Acute Toxicity: Alkanes, C14-17, chloro: EC50 daphnia magna, 0.0059 mg/l, 48-hr
Aquatic Chronic Toxicity: Alkanes, C14-17, chloro: NOEC daphnia magna, 0.010 mg/l, 21 day

12.2 Persistence and Degradability
- Product is not expected to be readily biodegradable. MCCP - Not readily biodegradable. ESO is biodegradable (aerobic).
- MCCP - Atmospheric half-life (photo-degradation) is estimated to be 0.85 to 1.1 days.

12.3 Bioaccumulative Potential
Bioaccumulation: Does not break down naturally and has potential to bioaccumulate in aquatic organisms.
BCF: 1,087 l/kg has been estimated for fish.

12.4 Mobility in Soil
- Not expected. For MCCPs, a KOC (soil organic carbon - water partition coefficient) of 588844 l/kg has been estimated. These high KOC values indicate that MCCP are expected to be relatively immobile in soil and would not be expected to leach from soil into groundwater.
- Log Kow 4.9 to 12 (range for MCCPs)
- Log Pow 5.47 to 8.01 calculated (MCCP 52%)

12.5 Results of PBT and vPvB Assessment
European Assessment is ongoing, not completed.
12.6 Other Adverse Effects

Ozone Depletion Potential: Not determined
Endocrine Disrupting Potential: Not determined
Global Warming Potential: No

Section 13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Waste Codes: Waste codes should be assigned by the user based on the application for which the product was used.
Disposal Instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies.
Waste from Residues and Unused Products: Dispose of in accordance with provincial and local regulations.
Contaminated Packaging: Do not re-use empty containers for other substances. Empty containers should be taken to an approved waste handling site for recycling or disposal.

13.2 Additional Information

None

Section 14. TRANSPORT INFORMATION

US DOT Not regulated as hazardous material.

IMDG (Water)

14.1 UN Number UN3082
14.2 Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
14.3 Hazard Class 9
14.4 Packing Group III
14.5 Marine Pollutant Yes

Per IMDG Section 2.9.3.3: This substance is classified as a Marine Pollutant. It satisfies criteria for Acute 1: EC50 crustacea, < 1 mg/l, 48-hr. See EC50 data in Section 12.

14.6 Special Precautions None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

Additional Information:
Packaging Exceptions 155
ERG 171
Labels Required 9 and
Environmentally Hazardous Substance (EHS - Marine Pollutant)

IATA (Air)

Basic Shipping Requirements:
UN Number UN3082
Proper Shipping Name Environmentally hazardous substances, liquid, n.o.s.
Hazard Class 9
Packing Group III
Labels Required 9, EHS

Additional Information:
Packaging Instruction 914
Section 15. REGULATORY INFORMATION

15.1 Regulatory Information

US FEDERAL REGULATIONS:

OSHA: This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

CERCLA Reportable Quantity: Not listed.

SARA 302: Not listed.

Hazardous Substance: No

Superfund Amendments and Reauthorization Act of 1986 (SARA): Hazard categories: None that meet OSHA.

SARA 313 (TRI reporting): Not regulated.

STATE REGULATIONS:

California This product does not contain a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

Maine MCCPs are listed as a chemical of concern to children.

INVENTORY STATUS FOR PRODUCT INGREDIENTS:

<table>
<thead>
<tr>
<th>Country</th>
<th>Inventory Name</th>
<th>Substance Name</th>
<th>CAS Number</th>
<th>On Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>Toxic Substances Control Act (TSCA) Inventory 8(b)</td>
<td>Alkanes, C14-16, chloro</td>
<td>1372804-76-6</td>
<td>Yes</td>
</tr>
<tr>
<td>United States</td>
<td>Toxic Substances Control Act (TSCA) Inventory 8(b)</td>
<td>Soybean oil, epoxidized</td>
<td>8013-07-8</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Alkanes, C14-17, chloro</td>
<td>85535-85-9</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Soybean oil, epoxidized</td>
<td>8013-07-8</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>National Inventory of Chemical Substances (INSQ)</td>
<td>Alkanes, C14-17, chloro</td>
<td>85535-85-9</td>
<td>Yes</td>
</tr>
<tr>
<td>Mexico</td>
<td>National Inventory of Chemical Substances (INSQ)</td>
<td>Epoxidized Soybean Oil</td>
<td>8013-07-8</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* “Yes” indicates that all components of this product comply with the inventory requirements of the governing country(ies).

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance by the supplier.

Section 16. OTHER INFORMATION

NFPA Rating:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>1</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
</tr>
</tbody>
</table>
Abbreviations and Acronyms:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>BCF</td>
<td>Bioconcentration Factor</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability, Act (USA)</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations (USA)</td>
</tr>
<tr>
<td>CHEMTREC</td>
<td>Chemical Transportation Emergency Center</td>
</tr>
<tr>
<td>DOT</td>
<td>Department of Transportation (USA)</td>
</tr>
<tr>
<td>EC$_{50}$</td>
<td>Half Maximal Effective Concentration - concentration of a material in water, a single dose which is expected to cause a biological effect on 50% of a group of test species.</td>
</tr>
<tr>
<td>EPCRA</td>
<td>Emergency Planning and Community Right-to-Know Act</td>
</tr>
<tr>
<td>ESO</td>
<td>Epoxidized Soybean Oil</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
<tr>
<td>LD$_{50}$</td>
<td>Lethal Dose - median dose at which 50% test animals die from oral or dermal exposure</td>
</tr>
<tr>
<td>MCCP(s)</td>
<td>Medium Chain Chlorinated Paraffin(s)</td>
</tr>
<tr>
<td>MCCP 52%</td>
<td>Medium Chain Chlorinated Paraffin (Alkanes, C$_{14-16}$, chloro with 52% chlorine)</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</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 (USA)</td>
</tr>
<tr>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Health and Safety Administration (USA)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative, Toxic</td>
</tr>
<tr>
<td>ppm</td>
<td>part per million</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal Protective Equipment</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act (USA)</td>
</tr>
<tr>
<td>TRI</td>
<td>Toxics Release Inventory (US EPA)</td>
</tr>
<tr>
<td>vPvB</td>
<td>Very Persistent and Very Bioaccumulative</td>
</tr>
</tbody>
</table>

Key Literature References and Sources of Data:

- Toxnet – Toxicology Data Network, United States National Library of Medicine
- The International Uniform Chemical Information Database (IUCLID) – Organization for Economic Cooperation and Development (OECD)
- ECHA Database (European Chemicals Agency)

Disclaimer:
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release. The information in the sheet was written based on the best knowledge and experience currently available.

Version 2 Date: August 17, 2017

Revision History:

- 06-06-17: Original GHS Version
- 08-17-17: Added CAS number
- Section 1: Updated classification, hazard and precautionary statements
- Section 15: Revised SARA information and updated inventory status

910-419-6566 Contact the EHS Regulatory Compliance Manager for additional information on the substance for hazard evaluation and any appropriate emergency procedures.