QUALICE LLC
QUALITY CPAR SERVICE

SAFETY DATA SHEET

CPAR W-40AO [EU Version]

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

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

1.1 Product Identifier: **CPAR W-40AO** [EU Version] Product No.: 562-EU-QLC
(43% chlorine (Cl) by weight)

Other Means of Identification: Very Long-Chain Chlorinated Olefin (vLCCO), LCCO, W-40AO, Chlorinated Alkenes

CAS Number: 63449-39-8 Paraffin waxes and Hydrocarbon waxes, chloro

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Uses: 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

Supplier:
Qualice, LLC
PO Box 1169
11 EV Hogan Drive, Hamlet, NC, 28345, USA
(910) 419-6589

1.4 Emergency Telephone No.: **(For Chemical Emergency: Spill, Leak, Fire, Exposure, or Accident)**
CHEMTREC (U.S. and Canada) 1-800-424-9300
CHEMTREC (Outside the U.S.) 1-703-527-0585

Section 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

This product does not have health, physical, or environmental hazards that meet the classification criteria under the United Nations (UN) GHS scheme or the European GHS legislation. However, it may have potential to persist in the aquatic environment, therefore the Hazard Statement and Precautionary Statements proscribed by the UN GHS for classification under Category 4 of Hazardous to the Aquatic Environment – Long-Term Hazard, are included below out of an abundance of caution.

Classification according to Regulation (EC) No 1272/2008 as amended [CLP/GHS]

Not classified

Classification according to Directive 1999/45/EC [DPD]

Not classified

2.2 Label elements according to Regulation (ED) No. 1272/2008 as amended

Signal Word	Not applicable

Hazard Statements	• H413 – May cause long lasting harmful effects to aquatic life.
Precautionary Statements	• P273 – Avoid release to the environment. • P501 – Dispose of contents/container in accordance with government regulations and in accordance with manufacturer instructions in Section 13 of this SDS.

2.3 Other hazards:

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 Substances

Components	Synonyms	CAS Number	EC Number	% by Weight
Chlorinated Alkenes 40-52% chlorine by weight	Very Long-Chain Chlorinated Olefin, vLCCO	63449-39-8	264-150-0	99.0
Epoxidized Soybean Oil (Stabilizer)*	ESO	8013-07-8	232-391-0	1.0

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

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Move to fresh air. Get medical attention, if needed.
Eye Contact	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. If irritation persists, get medical attention.
Skin Contact	Wash with soap and water. Get medical attention if irritation develops or persists.
Ingestion	Have victim rinse mouth thoroughly with water. Do not induce vomiting without medical advice. If ingestion of a large amount does occur, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Repeated or prolonged exposure may cause slight irritation of eyes and skin of susceptible persons. Inhalation of vapors in high concentration may cause irritation of the respiratory system.

4.3 Indication of any immediate medical attention or special treatment needed

Notes to Physician: Treat symptomatically.

Specific Treatments: This product does not have health hazards that require special first aid measures. If you feel unwell, seek medical advice (show the label or SDS where possible).

Section 5: FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media	Water Fog or Spray, Dry Chemical, Foam

Unsuitable Extinguishing Media	High volume water jet. If use water jet as an extinguisher, this will spread the fire.

5.2 Special hazards arising from the substance or mixture

Hazards Arising From the substance or mixture	Irritating and toxic gases or fumes may be released during a fire. Containers may explode when heated. May burn, but does not ignite readily.
Hazardous Combustion Products	Hydrogen chloride, carbon oxides Irritating and toxic gases or fumes may be released during a fire (hydrogen chloride).

5.3 Advice for firefighters

Special Fire Fighting Procedures	Use water spray to cool unopened containers. Move containers from fire area, if you can do so without risk. As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH approved or equivalent, and full protective gear. Move containers from fire area if you can do so without risk
Special Protective Equipment for Firefighters	In event of fire, wear self-contained pressure-demand breathing apparatus with full protective gear.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

For Non-Emergency Personnel and Emergency Responders	Keep unnecessary personnel away. Ensure adequate ventilation. Use personal protective equipment. Avoid touching spilled materials.

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 material for containment and cleaning up

Methods for 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. Prevent this material from contaminating soil or from entering sewage and drainage systems that lead to waterways.
Methods for Cleaning Up Spills	Wear appropriate protective equipment and clothing during clean-up. Should not be released into the environment.
Large Spills	Stop the flow of material, if safe to do so. Dike the spilled material, if possible. Dike far ahead of liquid spill for later disposal. Cover with plastic sheet to prevent spreading. Prevent product from entering drains. 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.
Small Spills	Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Other Information	Never return spills in original containers for re-use. For waste disposal, see Section 13.

6.4 Reference to other sections

Other sections	See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

Section 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective Measures	DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. 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. Handle and open container with care.

7.2 Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks, and flame. Store in a cool dry place. Keep container closed when not in use.

7.3 Specific end uses

See Subsection 1.2

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Exposure Guidelines: Exposure Limits for this product have not been established. Avoid repeated or prolonged exposure to vapor or mist without appropriate respiratory protection.

8.2 Exposure controls

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

Personal Protective Equipment:

Eye / Face Protection	Wear safety glasses with side-shields. If splashes are likely to occur, wear a face shield with safety glasses that meet occupational standards in your country.
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 (ex: N-DEX Nitrile).
Respiratory Protection	No personal respiratory protective equipment normally required. If mist is generated (heating, spraying) and engineering controls are not sufficient, wear NIOSH-approved organic vapor respirator with (R or P) particulate filter for oil mist or respirator that meets occupational standards in your country.
Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice.

Environmental Controls: 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

Appearance:	Clear, yellow to dark yellow
Physical State:	Liquid
Odor:	Slight
Odor Threshold:	Not available
pH:	Not applicable

Melting / Freezing Point:	Does not freeze
Boiling Point:	> 400 °C
Boiling Point Range:	Not available
Flash Point:	> 450 °F (232 °C) Cleveland Open Cup
Evaporation Rate:	Not available
Flammability:	Will decompose if involved in fire conditions
Flammability limits in Air, Lower and Upper % by Volume:	Not available
Auto-Ignition Temperature:	Not available
Vapor Pressure:	Very low. Not available
Vapor Density:	Not available
Volatility (% Loss, 25 hours):	0.8 @ 100 °C estimated
Relative Density (Specific Gravity):	1.15 (25 °C / 77 °F)
Density (g/cm^3 @ 25 °C):	1.153
Bulk Density (lbs/gal):	9.6
Solubility (in water):	Very low. <0.000005 g/l @ 20 °C
Partition Coefficient: n-octanol/water:	See Section 12
Decomposition Temperature:	Not available
Viscosity, SUS @ 210 °F:	160
Stability:	0.5
Saturated Vapor Concentration:	Not available
Molecular Formula:	$C_nH_{2n+2-y}Cl_y$ n=24-28
Molecular Structure:	$CH_3(CH_2CHCl)_9CH_2$ $CH_2CH_2CH_2CH_2CH_2CH_3$ (representative)
Flash Point Class:	Class IIIB Combustible (NFPA)
Oxidizing Properties:	None

Section 10: STABILITY & REACTIVITY

10.1 Reactivity	Not reactive.
10.2 Chemical Stability	Stable at normal conditions.
10.3 Possibility of Hazardous Reactions	Will not occur.
10.4 Conditions to Avoid	High temperatures.
10.5 Incompatible Materials	Strong oxidizing agents, reducing agents.
10.6 Hazardous Decomposition Products	Thermal decomposition can lead to release of irritating gases and vapors - hydrogen chloride gas, carbon oxides.

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Likely Routes of Exposure	Skin contact, eye contact, inhalation, ingestion (skin is predominant route of exposure in workplace).
Signs and Symptoms of Exposure	Repeated or prolonged exposure may cause irritation of eyes and skin in sensitive persons. Inhalation of vapors in high concentration may cause irritation of respiratory system.

Acute or Delayed Effects:

Eyes	Contact with eyes may cause slight irritation.
Skin	Prolonged and/or repeated skin contact may result in mild irritation or redness.
Inhalation	May cause slight irritation of respiratory tract. Avoid breathing vapors or mists of this product.
Ingestion	Small amounts (a tablespoonful) swallowed during normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.
Specific Target Organ Toxicity – Single Exposure	No data available for single exposure.

Chronic Effects from Short and Long Term Exposure:

Specific Target Organ Toxicity - Repeated	• No data available for repeated skin exposure. • Liver (enlargement) is predominant target in animal studies. • Kidney nephritis is also identified as possible target
Respiratory or Skin Sensitization	• Available data is inconclusive.
Aspiration Hazard	• No data available.
Carcinogenicity	• The components in this products are not listed by or considered to be a carcinogen by IARC, NTP, OSHA, or ACGIH. • An increased incidence of malignant lymphoma in male mice was reported at the highest dose tested (5,000 mg/kg/day) for C_{23} avg, 43% Cl
Mutagenicity (germ cell)	• No data available for this product, but it is predicted that vLCCOs are not mutagenic.
Reproductive Effects	• No effects on fertility is expected. • Slight increase in implantation loss at 5,000 mg/kg/day, rabbit for C22–26, 43% Cl
Endocrine Disruption	• No data available.

Toxicology Studies:

Acute Toxicity	Low acute toxicity has been observed for inhalation or dermal routes. Oral studies on representative products are listed below:
LOAEL, Rat, oral, 90 day	100 mg/kg/day, for repeated dose toxicity (liver) for LCCP, 43% Cl
NOAEL, Rat, oral, 14 day	3,000 mg/kg/day, for repeated dose toxicity (liver)
NOAEL, Mouse, oral, 2 year	5,000 mg/kg/day

Section 12: ECOLOGICAL INFORMATION

There is no specific ecological information for these vLCCO products. Information provided below is representative of the carbon chain range and percent of chlorination in the product.

12.1 Ecotoxicity

Ecologically significant impacts may have potential to occur if released to water and sediment. Although there is no established acute aquatic toxicity for this product, they may cause long lasting harmful effects to aquatic life due to studies that they do not readily biodegrade and may therefore persist in the environment.

Aquatic Toxicity	• C22-26, 42% wt. Cl, 96h LC50 >5,000 mg/l, Bleak fish species, No effects seen at solubility. • C18-26, 49% wt. Cl, 91-day LC0 >3,400 mg/kg, Bleak, No effects seen at solubility. • C>20, 48–54% wt. C,l 96h LC50 >300 mg/l, Bluegill Sunfish, No effects seen at solubility. • C20-30, 42% wt. Cl, 96h LC50 >770 mg/l Rainbow Trout, No effects seen at solubility. • C>20, 43% wt. Cl, No adverse effects seen over 48 hours, daphnia magna (does not meet Marine toxicity criteria)
Terrestrial Toxicity	No data available.

12.2 Persistence and Degradability Environmental Fate	• Unlikely to be readily or inherently biodegradable. Assumed to be potentially persistent, as a result. • No data available on degradation in soil or fate in atmosphere. • Atmospheric half-life is estimated 20 to 25 hours
12.3 Bioaccumulative Potential	Not considered to be bioaccumulative.
Partition Coefficient (n-octanol/water)	Log K_{ow} = 10.3 is representative value Koc = 2.77×10^{8} l/kg is representative value
BCF	BCF for LCCPs is considered to be <2,000 l/kg. Thus it is extrapolated that vLCCOs are unlikely to meet the bioaccumulative criteria as well.
12.4 Mobility in Soil	No data available.
12.5 Results of PBT and vPvB Assessment	No data available.
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 Methods:	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste. It is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets criteria for hazardous waste. Dispose in accordance with all applicable regulations.
Waste from Residues and Unused Products:	Dispose of in accordance with 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 or returned to the manufacturer.

Section 14: TRANSPORT INFORMATION

DOT (United States):	Not regulated as hazardous material.
TDG (Canada):	Not regulated as dangerous goods.
IMDG (Water):	Not regulated as dangerous goods.
IATA (Air):	Not regulated as dangerous goods.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

None known.

Section 15: REGULATORY INFORMATION

15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture:

EU Regulations

Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer:

None present or none present in regulated quantities.

Regulation (EC) No. 850/2004 on persistent organic pollutants:

None present or none present in regulated quantities.

Regulation (EC) No. 689/2008 Import and export of dangerous chemicals:

None present or none present in regulated quantities.

Regulation (EC) No. 1907/2006, REACH Article 59(1). Candidate List:

None present or none present in regulated quantities.

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended:

None present or none present in regulated quantities.

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.:

None present or none present in regulated quantities.

Directive 96/82/EC (Seveso III): on the control of major accident hazards involving dangerous substances:

None present or none present in regulated quantities.

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants:

None present or none present in regulated quantities.

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

None present or none present in regulated quantities.

INVENTORY STATUS FOR Paraffin waxes and Hydrocarbon waxes, chloro (CAS No. 63449-39-8)
Soybean Oil, Epoxidized (CAS No. 8013-07-8)

Country	Inventory name		On inventory (yes/no)*
Australia	AICS	Australian Inventory of Chemical Substances (CAS No. 85535-86-0 for Alkanes, C18-28, chloro-)	Yes
Canada	DSL	Domestic Substances List	Yes
Canada**	DSL	Domestic Substances List (CAS No. 85535-86-0 for Alkanes, C18-28, chloro-)	Yes
Canada	NDSL	Non-Domestic Substances List	No
China	IECSC	Inventory of Existing Chemical Substances in China	Yes
Europe	EINECS	European Inventory of Existing Commercial Chemical Substances (CAS No. 85535-86-0 for Alkanes, C18-28, chloro) (EC Number 232-391-0)	Yes
Europe	ELINCS	European List of Notified Chemical Substances	No
Japan	ENCS	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	ECL	Existing Chemicals List	Yes
Mexico	INSQ	National Inventory of Chemical Substances	Yes
New Zealand	NZIoC	New Zealand Inventory	Yes
Philippines	PICCS	Philippine Inventory of Chemicals and Chemical Substances	Yes
Taiwan	NECI	National Existing Chemical Inventory (CAS No. 85535-86-0 for Alkanes, C18-28, chloro)	Yes
United States & Puerto Rico**	TSCA	Toxic Substances Control Act Inventory (USA uses different CAS no.) CAS No. 1402738-52-6 for Alkanes, C24-28, chloro	Yes

* "Yes" indicates that all components of this product comply with the inventory requirements of the governing country(s).
** (Please note additional CAS no. for USA and Canada for the very long chain chlorinated olefins)

15.2 Chemical Safety Assessment:

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

Section 16: OTHER INFORMATION

16.1 Indication of changes

Version 2 Date: April 10, 2019

Revision History: 04-13-18: Initial Version

04-10-19: Section 5: Modified Suitable Extinguishing Media

16.2 Abbreviations and acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CHEMTREC	Chemical Transportation Emergency Center
DOT	United States Department of Transportation
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
IMDG	International Maritime Dangerous Goods
K_{oc}	The value of Koc indicates where a chemical is likely to end up - surface water or ground water. For example, a chemical with large Koc values tend to adsorb onto soil and has potential for contaminating surface water.
LC_{50}	Lethal Concentration - median dose at which 50% of test animals die from inhalation
LOAEL	Lowest Observed Adverse Effect Level
Log K_{ow}	Octanol-Water Partition Coefficient. The higher the number, the more bioavailable (prefers partitioning into soil organic matter rather than water).

NFPA	National Fire Protection Association
NOAEL	No Observed Adverse Effect Level
NTP	Normal Temperature and Pressure: 760 mmHg and 20ºC or 1 atm and 68º F
NTP	National Toxicology Program
SDS	Safety Data Sheet (formerly known as MSDS – Material Safety Data Sheet)
TDG	Transport of Dangerous Goods (Canada)
vLCCO	Very Long-Chain Chlorinated Olefin
vLCCP	Very Long-Chain Chlorinated Paraffin

16.7 Further information:

Technical contact for SDS: 011-910-419-6566 (EHS and Regulatory Compliance)

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.