SECTION 1 PRODUCT AND COMPANY INFORMATION

Product Name(s):	**AMALIE XLO ULTIMATE 100% SYNTHETIC 5W-40**
Product Code(s):	818754081
Uses:	A petroleum-based lubricant.
Company:	AOCUSA
Date Issued:	

This SDS complies with the OSHA Hazard Communication Standard 29CFR1910.1200 as revised in May 2012 (GHS). It may not meet requirements in other countries.

SECTION 2 HAZARDS IDENTIFICATION

GHS Signal Word: **DANGER**

GHS Classification:
Reproductive Toxin (Category 1)
Aquatic Acute Toxicity (Category 3)
Aquatic Chronic Toxicity (Category 3)

GHS Hazard Statements:
May damage fertility or the unborn child.
Harmful to aquatic life with long lasting effects.

GHS Precautionary Statements:

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid release to the environment.

Response:
If exposed or concerned: Get medical advice/attention.
Collect spillage.

Storage:
Store locked up.

Disposal:
Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 2 HAZARDS IDENTIFICATION

Hazards Not Otherwise Classified: None.

GHS Assessment: Approximately 10-11% of this mixture consists of ingredient(s) of unknown acute toxicity.

Approximately 10-11% of the mixture consists of ingredient(s) of unknown hazards to the aquatic environment.

SECTION 3 COMPOSITION / INGREDIENTS

Component	CAS Number	EC Number	Concentration
Petroleum distillates, hydrotreated heavy paraffinic	64742-54-7	265-157-1	15.0 - 25.0%
	Classification: Carc. 1B: H350 (*) Carc. 1B; H350: C ≥ 3.0 % DMSO Repr. 2; H361d: C ≥ 3.0 % DMSO Asp. Tox. 1; H304: Viscosity ≤ 20.5 mm2/s (40ºC)		
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	72623-87-1	276-738-4	60.0 - 80.0%
	Classification: Carc. 1B: H350 (*) Carc. 1B; H350: C ≥ 3.0 % DMSO Repr. 2; H361d: C ≥ 3.0 % DMSO Asp. Tox. 1; H304: Viscosity ≤ 20.5 mm2/s (40ºC)		
Tetrapropenylphenol	74499-35-7	616-100-8	0.1 - 1.0%
	Classification: Repr. 1B: H360; Skin Corr. 1C: H314; Eye Dam. 1: H318; Aquatic Acute 1: H400; Aquatic Chronic 1: H410		

Note (*): Components are highly refined and this hazard does not apply.
Other components are either non-hazardous or do not significantly contribute to the hazards of the product.
Trade Secret Claims: Specific chemical identity and/or exact percentage (concentration) of components has been withheld as a trade secret.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4 FIRST AID MEASURES

First Aid - Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention, if irritation develops.

First Aid - Skin: In case of contact, flush skin with plenty of soap and water while removing contaminated clothing and shoes. Get medical attention immediately if irritation develops and/or persists. Wash contaminated clothing before reuse.

First Aid - Ingestion: If swallowed and feel unwell, call a physician or poison control center. DO NOT induce vomiting unless directed to do so by a physician or poison control center. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

First Aid - Inhalation: If respiratory symptoms or other symptoms of exposure develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek immediate medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Important Symptoms / Effects – Acute and Delayed: Mild tissue inflammation, nausea.

Advice to Physician: Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

Extinguishing Media:	Treat surrounding material. Water spray, dry chemical, carbon dioxide, or foam is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.
Specific Hazards:	This product is not flammable, but will burn in a fire. This product may give rise to hazardous vapors in a fire. Vapors/fumes may be irritating, corrosive and/or toxic.
Protective equipment and procedures for fire-fighters.	Wear full protective clothing and self-contained breathing apparatus.
Additional Advice:	None.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill Procedures:	Small spills: Wipe up spills with an absorbent towel/material and transfer into suitable containers for recovery or disposal. Finally flush area with water/soap or an appropriate solvent, as this product is not appreciably soluble in water alone. Large spills: Contain spilled material if possible. Pump into suitable and properly labeled containers.
Personal Precautions:	Wear suitable protective clothing and equipment.
Environmental Precautions:	Prevent the material from entering drains or water courses. Do not discharge directly to a water source. Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

SECTION 7 HANDLING AND STORAGE

Handling:	Wear appropriate personal protection (See Section 8) when handling this material. The work area should be equipped with a safety shower and eye wash station. If exposed to the liquid, avoid contact with skin and eyes. Wash thoroughly after handling. Avoid breathing vapors, mists or sprays. Use in a well-ventilated area.
Storage:	Keep container(s) tightly closed. Use and store this material at room temperature away from sources of ignition, heat, direct sunlight and hot metal surfaces. Keep away from any incompatible materials (see Section 10).
Additional Advice:	Store in original container. Store as directed by the manufacturer.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational Exposure Standards:	Exposure limits are listed below, if they exist.
Petroleum distillates, hydrotreated heavy paraffinic:	(as petroleum distillates – naphtha) NIOSH REL: 350 mg/m3 TWA. NIOSH REL: 1800 mg/m3 STEL. OSHA PEL: 500 ppm (2000 mg/m3). (as oil mist) NIOSH REL: 5 mg/m3 TWA. NIOSH STEL: 10 mg/m3 TWA. OSHA PEL: 5 mg/m3 TWA.
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based:	(as petroleum distillates – naphtha) NIOSH REL: 350 mg/m3 TWA. NIOSH REL: 1800 mg/m3 STEL. OSHA PEL: 500 ppm (2000 mg/m3). (as oil mist) NIOSH REL: 5 mg/m3 TWA.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

	NIOSH STEL: 10 mg/m3 TWA. OSHA PEL: 5 mg/m3 TWA.
Tetrapropenylphenol:	None.
Engineering Control Measures:	Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (local exhaust), and control of process conditions.
Respiratory Protection:	A NIOSH certified self-contained breathing apparatus or air purifying respirator with an organic cartridge may be used under conditions where airborne concentrations are expected to exceed exposure limits.
Hand Protection:	The use of gloves impervious to the specific material handled is advised to prevent skin contact, possible irritation and skin damage (see glove manufacturer literature for information on permeability).
Eye Protection:	Approved eye protection (safety glasses with side-shields or goggles) to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.
Body Protection:	Impervious clothing should be worn as needed to prevent skin contact.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Amber
Odor:	Characteristic
Odor Threshold:	Not available.
pH:	Not available.
Melting Point/Range (ºC/ºF):	-39ºC / 38.2ºF (pour point)
Boiling Point/Range (ºC/ºF):	> 200ºC / 392ºF (based on constituents)
Flash Point (PMCC) (ºC/ºF):	220ºC / 428ºF
Evaporation Rate:	Not available.
Flammability / Explosivity Limits in Air (%):	Not available.
Vapor Pressure:	< 0.075 mmHg (20ºC) (based on constituents)
Vapor Density (Air = 1):	Not available.
Relative Density:	0.8602 (15ºC)
Solubility in Water:	Insoluble
Partition Coefficient:	Not available.
Autoignition Temperature (ºC/ºF):	> 250ºC / 482ºF (based on constituents)
Decomposition Temperature (ºC/ºF):	Not available.
Viscosity:	89 mm2/s (40ºC)
Explosive Properties:	None.
Oxidizing Properties:	None.
Volatile Organic Content (VOC) (g/l):	ca. 750 - 825 g/l (as defined by 40CFR51.100)

SECTION 10 STABILITY AND REACTIVITY

Reactivity:	Product will not undergo additional reaction.
Stability:	Stable under normal storage conditions.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Contact with incompatible materials, excessive heat.
Incompatibilities:	Strong oxidizing agents.
Hazardous Decomposition Products:	Oxides of carbon, oxides of phosphorus, metal oxides, aliphatic and aromatic compounds, toxic by-products.

SECTION 11 TOXICOLOGICAL INFORMATION

If available, toxicity data for the product is given; otherwise component data is listed.

Acute Toxicity:

This product is not expected to be appreciably toxic.
(Petroleum distillates, hydrotreated heavy paraffinic) Oral LD50 (rat) > 5000 mg/kg (similar oil); Dermal LD50 (rabbit) > 5000 mg/kg (similar oil); Inhalation LC50 (rat) > 5.53 mg/l (4 hr) (aerosol) (no mortality – similar oil)
(Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based) Oral LD50 (rat) > 5000 mg/kg (similar oil); Dermal LD50 (rat) > 5000 mg/kg (similar oil); Inhalation LC50 (rat) 2.18 mg/l (4 hr) (aerosol – similar oil)
(Tetrapropenylphenol) No data.

Skin Corrosion / Irritation:

The product may be slightly irritating to the skin.
(Petroleum distillates, hydrotreated heavy paraffinic) Mildly irritating to skin (rabbit – similar oil).
(Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based) Slightly irritating to skin (rabbit – similar oil).
(Tetrapropenylphenol) No data.

Serious Eye Damage / Irritation:

The product may be slightly irritating to the eyes.
(Petroleum distillates, hydrotreated heavy paraffinic) Non-irritating to eyes (rabbit – similar oil).
(Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based) Slightly irritating to eye (rabbit – similar oil).
(Tetrapropenylphenol) No data.

Respiratory or Skin Sensitization:

The product is not expected to be dermally sensitizing.
(Petroleum distillates, hydrotreated heavy paraffinic) Not dermally sensitizing (guinea pig – similar oil).
(Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based) Not dermally sensitizing (guinea pig – similar oil).
(Tetrapropenylphenol) No data.

Mutagenicity:

This product is not expected to be mutagenic.
(Petroleum distillates, hydrotreated heavy paraffinic) Not mutagenic (in vitro mammalian chromosome aberration test and micronucleus assay - similar oil).
(Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based) Not mutagenic (Ames test, in vitro mammalian chromosome aberration test, mammalian cell gene mutation assay and micronucleus assay – similar oils).
(Tetrapropenylphenol) No data.

Carcinogenicity:

This product is not expected to be carcinogenic.
(Petroleum distillates, hydrotreated heavy paraffinic) Carcinogenic potential is reduced for highly refined distillates. Tumors have developed in animal studies, but were dependent on the concentration of impurities. Not classified as to carcinogenicity to humans (IARC – Petroleum solvents).
(Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based) In a 78

SECTION 11 TOXICOLOGICAL INFORMATION

week study in mice by dermal application (0.25 ml dose rate applied once or twice a week), it was shown that there was no carcinogenic potential in sufficiently refined oil. Not classified as to carcinogenicity to humans (IARC – Petroleum solvents).
(Tetrapropenylphenol) No data.

Reproductive / Developmental Toxicity:	This product may be reproductively harmful. (Petroleum distillates, hydrotreated heavy paraffinic) Reproductive performance and offspring development were not adversely affected in mice or rats (1000 mg/kg – similar oil). (Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based) In dermally-exposed rats at up to 1000 mg/kg/day during gestation, the developmental NOAEL was determined to be 125 mg/kg/day based on decreased fetal body weights and skeletal anomalies at the highest dose (similar oil). (Tetrapropenylphenol) In a 2-generation study in orally-dosed rats, there was clear evidence of adverse effects on sexual function and fertility (NOAEL was 15 mg/kg).
Chronic/Subchronic Toxicity: Specific Target Organ/Systemic Toxicity – Single Exposure:	(Petroleum distillates, hydrotreated heavy paraffinic) No data. (Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based) No data. (Tetrapropenylphenol) No data.
Chronic/Subchronic Toxicity: Specific Target Organ/Systemic Toxicity – Repeated Exposure:	(Petroleum distillates, hydrotreated heavy paraffinic) In a 13-week oral study in rats at up to 500 mg/kg/day, the LOAEL was 125 mg/kg/day based on organ weight changes, reddening/discoloration of organs and atrophy in male sex organs (similar oil). (Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based) In a 13-week oral study in rats at up to 500 mg/kg/day, the LOAEL was 125 mg/kg/day based on organ weight changes, reddening/discoloration of organs and atrophy in male sex organs (similar oil). (Tetrapropenylphenol) No data.
Aspiration Hazard:	This product does not pose an appreciable aspiration hazard.
Additional Information:	None.

SECTION 12 ECOLOGICAL INFORMATION

If available, ecological data for the product is given; otherwise component data is listed.

Acute Ecotoxicity:	This may be harmful to aquatic species. (Petroleum distillates, hydrotreated heavy paraffinic) LL50 (Fathead minnow) > 100 mg/l/96 hr (similar oil); EL50 (Daphnia magna) > 10000 mg/l/48 hr (similar oil); NOEL (algae) > 100 mg/l/72 hr (similar oil). (Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based) LL50 (fathead minnow) > 100 mg/l/96 hr; EL50 (Daphnia magna) > 10000 mg/l/48 hr; NOEL (algae) ≥ 100 mg/l/72 hr. (Tetrapropenylphenol) No data.
Mobility:	(Petroleum distillates, hydrotreated heavy paraffinic) Not expected to be mobile in soil. (Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based) Not expected to be mobile in soil. (Tetrapropenylphenol) No data.
Persistence/Degradability:	(Petroleum distillates, hydrotreated heavy paraffinic) Not inherently biodegradable (2-4% in 28 days – similar oil). (Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based) Not readily biodegradable (2-4% in 28 days). (Tetrapropenylphenol) No data.

SECTION 12 ECOLOGICAL INFORMATION

Bioaccumulation: (Petroleum distillates, hydrotreated heavy paraffinic) May contain constituents with the potential to bioaccumulate.
(Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based) No data.
(Tetrapropenylphenol) No data.

Other adverse effects: None.

SECTION 13 DISPOSAL CONSIDERATION

Environmental precautions: Prevent the material from entering drains or water courses. Do not discharge directly to a water source. Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

Product Disposal: Dispose in accordance with all local, state (provincial), and federal regulations. Under RCRA, it is the responsibility of the product's user to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because the product uses, transformations, mixtures, processes, etc. may render the resulting materials hazardous.

Container Disposal: Do not remove label until container is thoroughly cleaned. Empty containers may contain hazardous residues. This material and its container must be disposed of in a safe way.

SECTION 14 TRANSPORT INFORMATION

DOT (US):

Proper Shipping Name:	Not regulated
UN Number:	None.
Class:	None.
Packaging Group:	None.
Reportable Quantity:	None.
Marine Pollutant:	None.

IATA:

Proper Shipping Name:	Not regulated
UN Number:	None.
Class:	None.
Packing Group:	None.

IMDG:

Proper Shipping Name:	Not regulated
UN Number:	None.
Class:	None.
Packing Group:	None.
Marine Pollutant:	None.

Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations.

SECTION 15 REGULATORY INFORMATION

US Toxic Substance Control Act:	All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
Canadian Domestic Substance List:	All components of this product are listed on the Canadian Domestic Substance List.
EU REACh:	One or more components of this product may not have been pre-listed or registered under REACh. Limited quantities are permitted.
TSCA Sec.12(b) Export Notification:	This product does not contain a chemical at or above de minimis concentrations which requires reporting.
Canadian WHMIS Classification:	D.1.A This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR.
Massachusetts Right-To-Know:	This product contains materials subject to disclosure under the Massachusetts Right-To-Know Law: - Petroleum distillates, hydrotreated heavy paraffinic (as petroleum distillates) - Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (as petroleum distillates)
New Jersey Right-To-Know:	This product contains materials subject to disclosure under the New Jersey Right-To-Know Law: - Petroleum distillates, hydrotreated heavy paraffinic (as petroleum distillates) - Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (as petroleum distillates)
Pennsylvania Right-To-Know:	This product contains materials subject to disclosure under the Pennsylvania Right-To-Know Law: - Petroleum distillates, hydrotreated heavy paraffinic (as petroleum distillates) - Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (as petroleum distillates)
California Proposition 65:	This product contains materials which the State of California has found to cause cancer, birth defects or other reproductive harm: - Toluene (trace residual) - Benzene (trace residual) - Ethylene glycol (trace residual) - Trace Metals (trace residual)
SARA TITLE III-Section 311/312 Categorization (40 CFR 370):	Delayed (chronic) hazard (as of 2018, the EPA has adopted GHS hazard classifications)
SARA TITLE III-Section 313 (40 CFR 372):	This product does not contain materials which are listed in Section 313 at or above de minimis concentrations.
CERCLA Hazardous Substance (40 CFR 302)	This product does not contain materials subject to reporting under CERCLA and Section 304 of EPCRA.
Water Hazard Class (WGK):	This product is slightly water-endangering (WGK=1).
Other Chemical Inventories:	Australia (AICS): All components of this product are listed. China (IECSC): One or more components are not listed. Japan (ENCS): All components of this product are listed. Korea (KCI): All components of this product are listed.

SECTION 15 REGULATORY INFORMATION

Philippines (PICCS):	All components of this product are listed/exempt.
Taiwan (TCSI):	All components of this product are listed.

SECTION 16 OTHER INFORMATION

NFPA Rating - HEALTH:	2
NFPA Rating - FIRE:	1
NFPA Rating - REACTIVITY:	0
NFPA Rating - SPECIAL:	NONE

Full text of H-Statements referred to under Section 3:

H304	May be fatal if swallowed and enters airways
H350	May cause cancer
H361	Suspected of damaging fertility or the unborn child
H360	May damage fertility or the unborn child
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

SDS Date Issued: June 23, 2018

SDS Current Version: 1.0 Version Date: June 23, 2018

SDS Revision History: v1.0 Initial version.

Abbreviations:

GHS:	Globally Harmonized System of Classification and Labeling of Chemicals
CAS#:	Chemical Abstract Services Number
ACGIH:	American Conference of Governmental Industrial Hygienists
OSHA:	Occupational Safety and Health Administration
NFPA:	National Fire Protection Association
DOT:	US Department of Transportation
RCRA:	US Resource Conservation and Recovery Act
TLV:	Threshold Limit Value
TWA:	Time-Weighted Average
PEL:	Permissible Exposure Limit
STEL:	Short Term Exposure Limit
WEEL:	Workplace Environmental Exposure Levels
AIHA:	American Industrial Hygiene Association
NTP:	National Toxicology Program
IARC:	International Agency for Research on Cancer
LD50:	Lethal Dose 50%
LC50:	Lethal Concentration 50%
NOAEL:	No Observed Adverse Effect Level
NOEL:	No Observed Effect Level
EC50:	Effective Concentration 50%
LL50:	Lethal Loading Rate 50%
BCF	Bioconcentration Factor
BOD:	Biological Oxygen Demand
Koc:	Soil Organic Carbon Partition Coefficient.
Tlm:	Median Tolerance Limit

Key References:

United States National Library of Medicine's TOXNET
Patty's Toxicology, 5th Edition
European Commission's Institute for Health and Consumer Protection

SECTION 16 OTHER INFORMATION

European Chemicals Agency (ECHA)
American Conference of Governmental Industrial Hygienists
International Agency for Research on Cancer
United States National Toxicology Program
United States Occupational Safety and Health Administration
United States Department of Transportation
Supplier Material Safety Data Sheets

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