SAFETY DATA SHEET

Version 1.0 Date: 3.26.2020

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

SECTION 1- Product and Company Identification

Product name Crude Oil CAS-2068009-57-2/Wax CAS-2052271-50-6 COMPOSITE

Manufacturer Information

Manufacturer : **Nexus Fuels,LLC.**
500 Waterfront Dr. SW
Atlanta, GA 30336 USA
www.nexusfuels.com

Emergency telephone number 404-693-8389 Corporate 24 hr
1-800-222-1222 US Poison Control

Recommended use of the chemical and restrictions

Recommended use Refinery Feedstock, Chemical Feedstock, Fuel Blending Additive

Restrictions on use This product must not be used in applications other than those listed in Section 1 without first seeking the advice of the manufacturer.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids	:	Category 1
Aspiration hazard	:	Category 1
Serious eye damage	:	Category 2
Specific target organ toxicity - single exposure (Inhalation)	:	Category 3 (Central nervous system (CNS).)
Carcinogenicity	:	Category 1B
Specific target organ toxicity - single exposure	:	Category 3 (Bone marrow, Blood., Thymus)
Chronic aquatic toxicity	:	Category 2

GHS Label element

Hazard pictograms :

Signal word Danger

Hazard statements

PHYSICAL HAZARDS:
H224 Extremely flammable liquid and vapor.
HEALTH HAZARDS:
H304 May be fatal if swallowed and enters airways.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
ENVIRONMENTAL HAZARDS:
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention:
P201 Obtain special instructions before use.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
Storage:
No precautionary phrases.
Disposal:
P501 Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

CAS #	Component	Percent
2068009-57-2&2052271-50-6	Crude Oil /Wax(complex mixture of hydrocarbons)Mixtures ranging from 20%-40% wax in oil content	93.9
110-54-3	n-Hexane	0.1
142-82-5	n-Heptane	1.5
111-84-2	n-Nonane	1.4
124-18-5	n-Decane	1.4
540-84-1	2,2,4-trimethylpentane	0.8

SECTION 4. FIRST-AID MEASURES

General advice	:	Maintain respiratory protection to avoid contamination from the victim to rescuer. Mechanical ventilation should be used to resuscitate if at all possible.
If inhaled	:	Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
In case of skin contact	:	Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by washing with soap and water if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.
In case of eye contact	:	Flush eyes with water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision, or swelling persist transport to the nearest medical facility for additional treatment.
If swallowed	:	If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Give nothing by mouth. Do NOT induce vomiting. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.
Most important symptoms and effects, both acute and delayed	:	Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. The onset of respiratory symptoms may be delayed for several hours after exposure. Breathing of high vapor concentrations may cause central nervous system (CNS) depression resulting in dizziness, light- headedness, headache and nausea.

Protection of first-aiders	:	When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	:	Do not use direct water jets on the burning product as they could cause a steam explosion and spread of the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.
Specific hazards during fire-fighting	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Oxides of nitrogen Unidentified organic and inorganic compounds. Flammable vapors may be present even at temperatures below the flash point. The vapor is heavier than air, spreads along the ground and distant ignition is possible. Carbon monoxide may be evolved if incomplete combustion occurs.
Specific extinguishing methods		Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	Keep adjacent containers cool by spraying with water. If possible remove containers from the danger zone. If the fire cannot be extinguished the only course of action is to evacuate immediately.
Special protective equipment for firefighters	:	Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained.
	:	May ignite on surfaces at temperatures above auto-ignition temperature. Do not breathe fumes, vapor. Do not operate electrical equipment.
Environmental precautions	:	Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapor or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.
Methods and materials for containment and cleaning up	:	For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
		Observe all relevant local and international regulations. Remove contaminated clothing. Evacuate the area of all non-essential personnel. Avoid contact with skin, eyes and clothing. Ventilate contaminated area thoroughly.
Additional advice	:	For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet. Local authorities should be advised if significant spillages cannot be contained.

Maritime spillages should be dealt with using a Shipboard Oil Pollution Emergency Plan (SOPEP), as required by MARPOL Annex 1 Regulation 26.

U.S. regulations may require reporting releases of this material to the environment which exceed the reportable quantity to the National Response Center at (800) 424-8802. Under Section 311 of the Clean Water Act (CWA) this material is considered an oil. As such, spills into surface waters must be reported to the National Response Center at (800) 424- 8802.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Prevent spillages. Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols.
Precautions for safe handling	:	Ensure that all local regulations regarding handling and storage facilities are followed. When using do not eat or drink. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Never siphon by mouth. The vapor is heavier than air, spreads along the ground and distant ignition is possible. Avoid exposure. Use only non-sparking tools. Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols. Bulk storage tanks should be diked
Avoidance of contact		: Strong oxidizing agents.
Product Transfer		: Wait 2 minutes after tank filling (for tanks such as those on road tanker vehicles) before opening hatches or manholes. Wait 30 minutes after tank filling (for large storage tanks) before opening hatches or manholes. Avoid splash filling. Keep containers closed when not in use.

Do not use compressed air for filling discharge or handling.
Contamination resulting from product transfer may give rise to light hydrocarbon vapor in the headspace of tanks that have previously contained gasoline. This vapor may explode if there is a source of ignition. Partly filled containers present a greater hazard than those that are full, therefore handling, transfer and sampling activities need special care.

Storage

Other data : Drum and small container storage:
Keep containers closed when not in use.
Drums should be stacked to a maximum of 3 high.
Use properly labeled and closable containers.
Packaged product must be kept tightly closed and stored in a diked (bunded) well-ventilated area, away from, ignition sources and other sources of heat.
Take suitable precautions when opening sealed containers, as pressure can build up during storage.

Tank storage:
Tanks must be specifically designed for use with this product.
Bulk storage tanks should be diked (bunded).
Locate tanks away from heat and other sources of ignition.
Cleaning, inspection and maintenance of storage tanks is a specialist operation, which requires the implementation of strict procedures and precautions.
Electrostatic charges will be generated during pumping.
Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk.
The vapors in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable.
Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Packaging material : Suitable material: For containers, or container linings use mild steel, stainless steel., Aluminum may also be used for applications where it does not present an unnecessary fire hazard., Examples of suitable materials are: high density polyethylene (HDPE), polypropylene (PP), polyvinyl chloride (PVC), polyvinyl fluoride (PVDF), and fluoroelastomers (FKM), e.g. Viton, which have been specifically tested for compatibility with this product., For container linings, or coatings, use Epoxy (amine-cured), or Epoxy Novolac, or Phenolic Epoxy., For seals and gaskets use: fluoroelastomers (FKM), e.g. Viton A, B, or F , or Neoprene (CR), or nitrile (NBR, HNBR), or graphite, or expanded PTFE (e.g. Gore-Tex).
Unsuitable material: Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Examples of materials to avoid are: natural rubber (NR), nitrile rubber (NBR), ethylene propylene rubber (EPDM), polymethyl methacrylate (PMMA), polystyrene, polyvinyl chloride (PVC), polyisobutylene.

Container Advice : Do not cut, drill, grind, weld or perform similar operations on or near containers. Containers, even those that have been emptied, can contain explosive vapors.

Specific use(s) : Not applicable

See additional references that provide safe handling practices for liquids that are determined to be static accumulators: American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practices on Static Electricity).
CENELEC CLC/TR 50404 (Electrostatics – Code of practice for the avoidance of hazards due to static electricity).

SECTION 8. Exposure Controls/Personal Protection

Personal Protective Equipment

Respiratory In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/ MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face Wear chemical splash safety goggles

Skin/Body Wear appropriate gloves

Exposure Limits and Guidelines				
				OSHA
Benzene (71-43-2)	Ceilings	Not established	Not established	25 ppm Ceiling
	STELs	2.5 ppm STEL	1 ppm STEL	5 ppm STEL (see 29 CFR 1910.1028)
	TW As	0.5 ppm TW A	0.1 ppm TW A	10 ppm TW A (applies to industry segments exempt from the benzene standard at 29 CFR 1910.1028); 1 ppm TW A
Petroleum (8002-05-9)	Ceilings	Not established	1800 mg/m3 Ceiling (15 min)	Not established
	TW As	Not established	350 mg/m3 TW A	Not established

Engineering Measures/Controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use explosion-proof electrical/ventilating/lighting/equipment.

Environmental Exposure Controls

Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Yellow to dark brown liquid
Physical Form	Liquid.
Color	Clear to dark yellow
Specific Gravity	6.5-7.1lbs pergallon
Odor	Typical Petroleum Odor
pH	Not applicable
Melting point/freezing point	Data not available
Initial boiling point and boiling range	53°C->316°C
Viscosity	[N/A @ 40°C] 2.5-4.1 mm2/sec (cSt) at 100°C (212°F)
Vapor Pressure	No data available
Vapor Density	>1 Air = 1
Evaporation Rate	No data available
Flash Point	11.6°C
UEL	No data available
LEL	No data available
Auto ignition	229 C
Flammability(solid,gas)	Not relevant
Octanol/Water Partition coefficient	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	No dangerous reaction known under conditions of normal use
Chemical stability	Stable under normal conditions of use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. In certain circumstances product can ignite due to static electricity.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Hazardous decomposition products are not expected to form during normal storage. Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment : Information given is based on data on the components and the toxicology of similar products.Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Information on likely routes of exposure
Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

Acute toxicity

Product:

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg
Remarks: Low toxicity:

Acute inhalation toxicity : Remarks: Expected to be of low toxicity if inhaled.

Remarks: Contains hydrogen sulphide.
Extremely toxic:
LC100 = 600ppm(v)

(Man): Exposure time: 30 min

Acute dermal toxicity : LD 50 (Rabbit): > 2,000 mg/kg
Remarks: Low toxicity:

Skin corrosion/irritation

Product:

Remarks: Not irritating to skin., Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

Serious eye damage/eye irritation

Product:

Remarks: Causes serious eye irritation.

Respiratory or skin sensitisation

Product:

Test Type: Skin sensitisation

Remarks: Not expected to be a sensitiser.

Test Type: Respiratory sensitisation Remarks: Not expected to be a sensitiser.

Germ cell mutagenicity

Product:

Remarks: Not expected to be mutagenic.

Carcinogenicity

Product:

Remarks: Causes cancer in laboratory animals.

Remarks: Known human carcinogen., May cause leukemia (AML - acute myelogenous leukemia)., Contains Benzene, CAS # 71-43-2.

IARC	Group 1: Carcinogenic to humans	
	benzene	71-43-2
	Group 2B: Possibly carcinogenic to humans	
	Cumene	98-82-8
	Naphthalene	91-20-3
ACGIH	Confirmed human carcinogen	
	benzene	71-43-2
	Confirmed animal carcinogen with unknown relevance to humans	
	Naphthalene	91-20-3
	Ethylbenzene	100-41-4
	crude oil	8002-05-9
OSHA	OSHA specifically regulated carcinogen	
	benzene	71-43-2

NTP	Known to be human carcinogen	
	benzene	71-43-2
	Reasonably anticipated to be a human carcinogen	
	crude oil	8002-05-9
	Naphthalene	91-20-3

Reproductive toxicity
Product:

Remarks: Not expected to impair fertility., Not expected to be a developmental toxicant.

STOT - single exposure

Product:
Remarks: High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

Remarks: Inhalation of vapors or mists may cause irritation to the respiratory system

STOT - repeated exposure

Product:
Remarks: May cause damage to organs or organ systems through prolonged or repeated exposure., Blood-forming organs: repeated exposure affects the bone marrow., Liver, Thymus

Further information

Product:
Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

Remarks: Contains Benzene, CAS # 71-43-2., May cause MDS (Myelodysplastic Syndrome).

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment : Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Ecotoxicity

Product:

Toxicity to fish (Acute toxicity)		Remarks: Expected to be harmful: LL/EL/IL50 10-100 mg/l
Toxicity to daphnia and other aquatic invertebrates (Acute toxicity)	:	Remarks: Expected to be toxic: LL/EL/IL50 > 1 <= 10 mg/l
Toxicity to algae (Acute toxicity)	:	Remarks: Expected to be harmful: LL/EL/IL50 >10 <= 100 mg/l
Toxicity to fish (Chronic toxicity)	:	Remarks: NOEC/NOEL expected to be > 0.1 - <= 1.0 mg/l (based on modeled data)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	Remarks: NOEC/NOEL expected to be > 0.1 - <= 1.0 mg/l (based on modeled data)
Toxicity to bacteria (Acute toxicity)	:	Remarks: Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l

Persistence and degradability

Product:

Biodegradability	:	Remarks: Major constituents are inherently biodegradable, but contains components that may persist in the environment. The volatile constituents will oxidize rapidly by photochemical reactions in air.

Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: Contains constituents with the potential to bioaccumulate.

Mobility in soil

Product:

Mobility	:	Remarks: If the product enters soil, one or more constituents will or may be mobile and may contaminate groundwater. Contains volatile components. Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day.

Other adverse effects

no data available

Product:

Additional ecological information	:	Films formed on water may affect oxygen transfer and damage organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses Do not dispose of tank water bottoms by allowing them to drain into the ground. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.
Contaminated packaging	:	Send to drum recoverer or metal reclaimer. Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard if heated above the flash point. Do not puncture, cut or weld uncleaned drums. Do not pollute the soil, water or environment with the waste container. Comply with any local recovery or waste disposal regulations.
Local legislation Remarks	:	Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14. TRANSPORT INFORMATION

National Regulations

US Department of Transportation Classification (49 CFR Parts 171-180)

UN/ID/NA number	:	UN 1267
Proper shipping name	:	PETROLEUM CRUDE OIL
Class	:	3
Packing group	:	II

Labels	: 3
ERG Code	: 128
Marine pollutant	: no
Remarks	: Oil: This product is an oil under 49CFR (DOT) Part 130. If shipped by rail or highway in a tank with a capacity of 3500 gallons or more, it is subject to these requirements. Mixtures or solutions containing 10% or more of this product may also be subject to this rule.

International Regulation

IATA-DGR

UN/ID No.	: UN 1267
Proper shipping name	: PETROLEUM CRUDE OIL
Class	: 3
Packing group	: II
Labels	: 3

IMDG-Code

UN number	: UN 1267
Proper shipping name	: PETROLEUM CRUDE OIL
Class	: 3
Packing group	: II
Labels	: 3
Marine pollutant	: yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Pollution category	: Not applicable
Ship type	: Not applicable
Product name	: Not applicable
Special precautions	: Not applicable

Special precautions for user

Remarks	: Special Precautions: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

Additional Information **:** MARPOL Annex 1 rules apply for bulk shipments by sea.

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Flammable liquid, Carcinogen

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards Fire Hazard

Chronic Health Hazard

SARA 302 No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 The following components are subject to reporting levels established by SARA Title III, Section 313:

Naphthalene	91-20-3	0.5 %
Ethylbenzen	100-41-4	1 %
Benzene	71-43-2	2 %

Clean Water Act

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Naphthalene	91-20-3	0.5 %
Ethylbenzene	100-41-4	1 %
Benzene	71-43-2	2 %

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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 this data sheet, which we received from sources outside our Company. We believe that 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 safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe on existing patents. No warranty is made either express or implied.