SAFETY DATA SHEET

M49063 - ANSI - EN

HEAVY GASOLINE, WASH OILS AND TAR

SDS No.: M49063
Rev. Num. 00-New

SDS Revision Date: 23-Jan-2017

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Identification:	Occidental Chemical Corporation 5005 LBJ Freeway P.O. Box 809050 Dallas, TX 75380-9050 1-800-752-5151
24 Hour Emergency Telephone Number:	1-800-733-3665 or 1-972-404-3228 (USA); CANUTEC (Canada): 1-613-996-6666; CHEMTREC (within USA and Canada): 1-800-424-9300; CHEMTREC (outside USA and Canada): +1 703-527-3887; CHEMTREC Contract No: CCN16186
To Request an SDS:	MSDS@oxy.com or 1-972-404-3245
Customer Service:	1-800-752-5151 or 1-972-404-3700
Product Identifier:	**HEAVY GASOLINE, WASH OILS AND TAR**
Synonyms:	Heavy and Light Pyrolysis Fuel Oil mixture
Product Type:	Chemical Intermediate
Chemical Family:	OLEFINS HEAVY FUEL OIL

SECTION 2. HAZARDS IDENTIFICATION

OSHA REGULATORY STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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EMERGENCY OVERVIEW:

Color: Amber
Physical State: Liquid
Signal Word: **DANGER**

MAJOR HEALTH HAZARDS: TOXIC IF INHALED. MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS. MAY CAUSE DROWSINESS OR DIZZINESS. MAY BE HARMFUL IF SWALLOWED. CAUSES SERIOUS EYE IRRITATION. HARMFUL IN CONTACT WITH SKIN. CAUSES SKIN IRRITATION. MAY CAUSE CANCER. MAY CAUSE GENETIC DEFECTS. MAY DAMAGE FERTILITY OR THE UNBORN CHILD. Causes damage to BLOOD, BONE MARROW, LIVER, KIDNEY, PERIPHERAL NERVOUS SYSTEM, CENTRAL NERVOUS SYSTEM AND EYES through prolonged or repeated exposure.

PHYSICAL HAZARDS: HIGHLY FLAMMABLE LIQUID AND VAPOR.

AQUATIC TOXICITY: TOXIC TO AQUATIC LIFE. TOXIC TO AQUATIC LIFE WITH LASTING EFFECTS.

PRECAUTIONARY STATEMENTS: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/ sparks/ open flames/ hot surfaces. - No smoking. Keep container tightly closed. Ground/ bond container and receiving equipment. Use explosion-proof equipment (eg. electrical, ventilating, and lighting). Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist, vapors, or spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear eye protection, face protection, protective gloves. Use personal protective equipment as required.

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GHS CLASSIFICATION:

GHS: PHYSICAL HAZARDS:	Flammable Liquid - Cat. 2 Highly Flammable
GHS: CONTACT HAZARD - SKIN:	Category 2 - Causes skin irritation
GHS: CONTACT HAZARD - EYE:	Category 2A - Causes serious eye irritation
GHS: ACUTE TOXICITY - INHALATION:	Category 3 - Toxic if inhaled
GHS: ACUTE TOXICITY - DERMAL:	Category 4 - Harmful in contact with skin
GHS: ASPIRATION HAZARD:	Category 1 - May be fatal if swallowed and enters airways
GHS: TARGET ORGAN TOXICITY (SINGLE EXPOSURE):	Category 3 - May cause drowsiness or dizziness
GHS: TARGET ORGAN TOXICITY (REPEATED	Category 1 - Causes damage to BLOOD, BONE

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EXPOSURE):	MARROW, LIVER, KIDNEY, PERIPHERAL NERVOUS SYSTEM, CENTRAL NERVOUS SYSTEM, AND EYES through prolonged or repeated exposure
GHS: CARCINOGENICITY:	Category 1 - May cause cancer
GHS: GERM CELL MUTAGENICITY:	Category 1 - May cause genetic defects
GHS: REPRODUCTION TOXIN:	Category 1 - May damage fertility or the unborn child
HAZARDOUS TO AQUATIC ENVIRONMENT - ACUTE HAZARD:	Category 2 - Toxic to aquatic life
HAZARDOUS TO AQUATIC ENVIRONMENT - CHRONIC HAZARD:	Category 2 - Toxic to aquatic life with long lasting effects

GHS SYMBOL: Flame, Skull and Crossbones, Health hazards, Exclamation mark, Environmental hazard

GHS SIGNAL WORD: **DANGER**

GHS HAZARD STATEMENTS:

GHS - Physical Hazard Statement(s)
• Highly flammable liquid and vapor

GHS - Health Hazard Statement(s)
• May be fatal if swallowed and enters airways
• Harmful in contact with skin
• Causes skin irritation
• Causes serious eye irritation
• Toxic if inhaled
• May cause drowsiness or dizziness
• May cause genetic defects
• May cause cancer
• May damage fertility or the unborn child
• Causes damage to BLOOD, BONE MARROW, LIVER, KIDNEY, PERIPHERAL NERVOUS SYSTEM, CENTRAL NERVOUS SYSTEM AND EYES through prolonged or repeated exposure

GHS - Environmental Hazard Statement(s)
• Toxic to aquatic life with long lasting effects

GHS - Precautionary Statement(s) - Prevention
• Obtain special instructions before use
• Do not handle until all safety precautions have been read and understood
• Keep away from heat/sparks/open flames/hot surfaces. — No smoking

• Keep container tightly closed
• Ground/ bond container and receiving equipment
• Use explosion-proof equipment (electrical equipment, ventilating equipment, lighting equipment, etc.)
• Use only non-sparking tools
• Take precautionary measures against static discharge
• Do not breathe mist, vapors, or spray
• Wash hands thoroughly after handling
• Do not eat, drink or smoke when using this product
• Use only outdoors or in a well-ventilated area
• Avoid release to the environment
• Wear eye protection, face protection, protective gloves
• Use personal protective equipment as required

GHS - Precautionary Statement(s) - Response
• IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
• Do NOT induce vomiting
• IF ON SKIN: Gently wash with plenty of soap and water
• IF EXPOSED: Call a POISON CENTER if you feel unwell
• Take off contaminated clothing and wash it before reuse
• IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with soap and water.
• If skin irritation occurs: Get medical advice/attention
• IF INHALED: Remove person to fresh air and keep comfortable for breathing
• Call a POISON CENTER or doctor/physician if you feel unwell
• IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
• If eye irritation persists: Get medical advice/attention
• Get medical advice/attention if you feel unwell
• In case of fire: Use carbon dioxide, regular dry chemical, or foam for extinction
• Contain release

GHS - Precautionary Statement(s) - Storage
• Store in a well-ventilated place. Keep container tightly closed
• Keep cool
• Store in a secure manner

GHS - Precautionary Statement(s) - Disposal
• Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations

Physical Hazards Not Otherwise Classified
• Not Classified

Health Hazards Not Otherwise Classified
• The health hazards listed for this mixture is based upon the components and similarity to other hydrocarbon mixtures, and not on the basis of clinical experience with this specific mixture. Use clinical judgement in evaluation and treatment.

See Section 11: TOXICOLOGICAL INFORMATION

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Heavy and Light Pyrolysis Fuel Oil mixture

Component	Percent [%]	CAS Number
Hydrocarbons, ethylene manufactured by product distillation residues	100	68921-67-5

Notes: *Hydrocarbon Ethylene byproduct distillation residues stream [668921-67-5] is a complex combination of hydrocarbon streams separated by distillation from pyrolysis gasoline as a bottoms product. The reported composition indicates a carbon number distribution from C5 - C8 Non Aromatics and C9s to hydrocarbons boiling at 650F or higher. The reported typical composition includes the following hazardous chemicals: Benzene [71-43-2]; Toluene [108-88-3]; n-Hexane [110-54-3] Styrene [100-42-5]; Butadiene [106-99-0]; and C6-C8 Non Aromatic Naphthas [8002-05-9].*

SECTION 4. FIRST AID MEASURES

General Advice: Wash off with soap and water. There is no antidote, treat symptomatically.

INHALATION: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

SKIN CONTACT: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with soap and water. If on skin or hair, wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention.

EYE CONTACT: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

INGESTION: If swallowed, call a poison control center or physician immediately. If swallowed, do not induce vomiting. This material is an aspiration hazard.

Most Important Symptoms/Effects (Acute and Delayed):

Acute Symptoms/Effects:

Inhalation (Breathing): Respiratory System Effects: May irritate upper airways. May cause cough. May cause drowsiness or dizziness. Aspiration may cause chemical pneumonitis, pulmonary edema, damage to lung tissue, death.

Skin: Skin Irritation. Exposure to liquid may cause redness and irritation. Prolonged contact and occlusion may cause more severe symptoms. Intermittent and long term skin contact may cause the skin to develop a rash. Skin exposures normally result in only mild to moderate skin irritation. Prolonged contact may result in dermal burns, that are typically partial thickness, but full thickness skin loss may occur.

Eye: Serious Eye Damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn.

Ingestion (Swallowing): Vomiting is common. Sore throat, difficulty swallowing, and diarrhea may occur. Suspect aspiration if persistent coughing or choking. Risk of aspiration is high and can lead to moderate to severe lung injury. With large ingestions, CNS depression can occur, ranging from lethargy, drowsiness, listlessness and unconsciousness. Other effects may include metabolic acidosis, leukocytosis, intravascular hemolysis, disseminated intravascular coagulation and occasionally renal and hepatic dysfunction.

Other Health Effects: IV injections can cause systemic effects including tachypnea, dyspnea, respiratory failure, pneumonia, pleural effusions, nausea, weakness, somnolence, tachycardia, hypotension, atrial fibrillation, metabolic abnormalities, leukocytosis, and multi organ dysfunction. Local effects from injection may cause severe damage to skin, connective tissue, muscle and bone. High pressure injections may cause widespread and deep injuries.

Delayed Symptoms/Effects:

Repeated or prolonged exposures to skin that cause irritation may cause a chronic dermatitis.

Target Organ Effects: Blood, Peripheral and central nervous system, bone marrow, liver, kidney and eyes after repeated exposures to components in this mixture.

Protection of First-Aiders: This is a flammable material.

Notes to Physician: Treat for petroleum distillate toxicity.

SECTION 5. FIRE-FIGHTING MEASURES

Fire Hazard: HIGHLY FLAMMABLE LIQUID AND VAPOR. The vapor is heavier than air. Vapors or gases may ignite at distant sources and flash back. Closed containers may explode or rupture when exposed to extreme heat (fire). Hydrocarbons will float on surface waters and can be re-ignited. The material is a vapor explosion hazard. Keep away from open flame or other sources of ignition. Electrostatic discharges may be generated by flow or agitation resulting in ignition or explosion.

Extinguishing Media: Use dry chemical, carbon dioxide, foam, or water spray, General purpose synthetic foams (including AR-AFFF type) are preferred, Water may be ineffective, but should be used to keep fire-exposed containers cool, A direct water stream may spread the fire, Contain fire water run-off, if possible. Fire water run-off, if not contained, may cause environmental damage

Unusual Hazards: When heated (fire conditions), vapors/decomposition products may be released forming flammable/explosive mixtures in air.

Fire Fighting: Keep unnecessary people away, isolate hazard area and deny entry. Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Wear protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations.

Component	Immediately Dangerous to Life/ Health (IDLH)
Benzene 71-43-2	500 ppm IDLH
Hexane 110-54-3	1100 ppm IDLH
Pentane 109-66-0	1500 ppm IDLH
Toluene 108-88-3	500 ppm IDLH
Heptane (n-)	750 ppm IDLH

142-82-5	
Styrene 100-42-5	700 ppm IDLH
Octane 111-65-9	1000 ppm IDLH
1,3-Butadiene 106-99-0	2000 ppm IDLH

Hazardous Combustion Products:
Upon combustion, this product emits carbon monoxide, carbon dioxide, and low molecular weight hydrocarbons

Sensitivity to Static Discharge: Electrostatic charges may build up during handling and may form ignitable vapor-air mixtures in storage containers. Ground equipment in accordance with industry standards and best practices such as NFPA 77 [Recommended Practices on Static Electricity (2007)] and American Petroleum Institute (API) RP Recommended Practice 2003 [Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents (2008)].

Lower Flammability Level (air): No information available

Upper Flammability Level (air): No information available

Flash point: > - 11 °C (estimated)

Auto-ignition Temperature: No information available

GHS: PHYSICAL HAZARDS:
- Flammable Liquid - Cat. 2 Highly Flammable

Physical Hazards Not Otherwise Classified
- Not Classified

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:
Wear personal protective equipment as per Section 8. Keep people away from and upwind of spill/leak. Pay attention to flashback. Evacuate unnecessary personnel to safe areas. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Environmental Precautions:
Contain liquids and prevent discharges to streams or sewers, control or stop the loss of volatile materials to the atmosphere. Fire fighting foam may be useful in certain situations to reduce vapors. Liquid material may be removed with industrial vacuum truck equipped with zero emissions hydrocarbon scrubber and properly rated to handle highly flammable liquids and vapors.

Methods and Materials for Containment and Cleaning Up:
Small spills: Remove liquid material with non-sparking approved pumps, skimmers or vacuum equipment. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Use only non-sparking tools. Large spills: Consider downwind evacuation for 300 meters (1000 feet). Spills on water will volatilize rapidly, making containment or recovery difficult. A vapor-suppressing foam may be used to reduce vapors. Remove pooled liquid material with approved, non-sparking pumps, skimmers or vacuum equipment. Absorb or cover with dry earth,

sand or other non-combustible material and transfer to containers. Soil remediation may be required.

Additional Disaster Prevention Measures:
Evacuation of surrounding area may be necessary for large spills.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling:
Obtain appropriate training prior to handling. Do not use until manufacturer's precautions have been read and understood. This material presents a fire hazard. Fire hazard is greater as liquid temperature rises. Liquid quickly evaporates and may form a vapor cloud which can catch fire and burn with explosive force. Invisible vapor spreads quickly and can be set on fire by many sources such as welding equipment, electric motors/switches, and pilot lights. Precautions to prevent static-initiated fire or explosion during transfer, storage or handling, include but are not limited to these examples: (1) Ground and bond containers during product transfers. Grounding and bonding may not be adequate protection to prevent ignition or explosion of hydrocarbon liquids and vapors that are static accumulators. (2) Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such gasoline or naphtha). (3) Storage tank level floats must be effectively bonded. For more information on precautions to prevent static-initiated fire or explosion, see NFPA 77, Recommended Practice on Static Electricity (2007), and API Recommended Practice 2003, Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents (2008).

Safe Storage Conditions:
Storage area should be clearly identified and employers must label containers of benzene, except for pipes, located in the workplace. The labels must comply with the requirements of 29 CFR 1910.1200(f) and, in addition, must read as follows: "Danger: Contains Benzene-Cancer hazard". Keep containers tightly closed in a dry, cool and well-ventilated place. Store and handle in properly designed pressure vessels and equipment. Storage tanks should be above ground and diked to hold entire contents. Store according to applicable regulations and standards for flammable materials. For indoor storage, use a fireproof, well-ventilated area isolated from any sources of ignition. Ample fire water supply should be available. A fixed sprinkler/deluge system is recommended. Consider the need for flammable gas detectors in storage areas. Keep absorbents for leaks and spills readily available. Make daily inspections for leaks. Implement a safety release vent inspection program for storage tanks.

Incompatibilities/ Materials to Avoid:
Oxidizing agents, Corrosive to copper and copper bearing alloys

Additional Information: Avoid work practices that may release volatile components in the atmosphere. Avoid release to the environment.

GHS: PHYSICAL HAZARDS:
- Flammable Liquid - Cat. 2 Highly Flammable

Physical Hazards Not Otherwise Classified
- Not Classified

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

HEAVY GASOLINE, WASH OILS AND TAR

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Regulatory Exposure Limit(s): As listed below.

Component	OSHA Final PEL TWA	OSHA Final PEL STEL	OSHA Final PELCeiling
Benzene 71-43-2	10 ppm 1 ppm	5 ppm	25 ppm
Hexane 110-54-3	500 ppm 1800 mg/m³	-----	-----
Pentane 109-66-0	1000 ppm 2950 mg/m³	-----	-----
Toluene 108-88-3	200 ppm	-----	300 ppm
Heptane (n-) 142-82-5	500 ppm 2000 mg/m³	-----	-----
Styrene 100-42-5	100 ppm	-----	200 ppm
Octane 111-65-9	500 ppm 2350 mg/m³	-----	-----
Xylene (Dimethylbenzene) 1330-20-7	100 ppm 435 mg/m³	-----	-----
1,3-Butadiene 106-99-0	1 ppm Butadiene	5 ppm	-----

OEL: Occupational Exposure Limit; OSHA: United States Occupational Safety and Health Administration; PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL: Short Term Exposure Limit

NON-REGULATORY EXPOSURE LIMIT(S): As listed below.

Component	ACGIH TWA	ACGIH STEL	ACGIH Ceiling	OSHA TWA (Vacated)	OSHA STEL (Vacated)	OSHA Ceiling (Vacated)
Benzene	0.5 ppm	2.5 ppm	-----	10 ppm	50 ppm	25 ppm
Hexane	50 ppm	-----	-----	50 ppm 180 mg/m³ 500 ppm 1800 mg/m³	1000 ppm 3600 mg/m³	-----
Pentane	1000 ppm	-----	-----	600 ppm 1800 mg/m³	750 ppm 2250 mg/m³	-----
Toluene	20 ppm	-----	-----	100 ppm 375 mg/m³	150 ppm 560 mg/m³	-----
Heptane (n-)	400 ppm	500 ppm	-----	400 ppm 1600 mg/m³	500 ppm 2000 mg/m³	-----
Styrene	20 ppm	40 ppm	-----	50 ppm 215 mg/m³	100 ppm 425 mg/m³	-----
Octane	300 ppm	-----	-----	300 ppm 1450 mg/m³	375 ppm 1800 mg/m³	-----
Xylene (Dimethylbenzene)	100 ppm	150 ppm	-----	100 ppm 435 mg/m³	150 ppm 655 mg/m³	-----
1,3-Butadiene	2 ppm	-----	-----	1000 ppm 2200 mg/m³	-----	-----

- The Non-Regulatory United States Occupational Safety and Health Administration (OSHA) limits, if shown, are the Vacated 1989 PEL's (vacated by 58 FR 35338, June 30, 1993).

- The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.

ENGINEERING CONTROLS: Use closed systems when possible. Use flange guards for pressurized systems. Ensure adequate ventilation, especially in confined areas. Exposure monitoring should be performed to determine acceptability of engineering controls as required by governmental regulations.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Tight fitting chemical goggles and/or a face shield are recommended if splashing is possible and to prevent eye irritation from vapors.

Skin and Body Protection: Where there is a possibility of benzene contact to eyes or skin, safety showers, eye-wash fountains, and cleansing facilities shall be installed and maintained. If splashes are likely to occur, wear chemical resistant clothing and footwear (aprons, suits, boots, etc.). In certain situations, a full body suit with hood and boots may provide short term protection. Consider using flame resistant, anti-static safety clothing and footwear.

Hand Protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: NITRILE, NEOPRENE. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Protective Material Types:
Nitrile, Neoprene

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). When an air purifying respirator is not adequate for spills and/or emergencies of unknown concentrations, an approved self-contained breathing apparatus operated in the pressure demand mode is required.

Component	Immediately Dangerous to Life/ Health (IDLH)
Benzene 71-43-2	500 ppm IDLH
Hexane 110-54-3	1100 ppm IDLH
Pentane 109-66-0	1500 ppm IDLH
Toluene 108-88-3	500 ppm IDLH
Heptane (n-) 142-82-5	750 ppm IDLH
Styrene	700 ppm IDLH

100-42-5	
Octane 111-65-9	1000 ppm IDLH
1,3-Butadiene 106-99-0	2000 ppm IDLH

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Color: Amber
Odor Threshold [ppm]: No data available.
Molecular Weight: NA/mixture
Chemical Family: OLEFINS HEAVY FUEL OIL
Decomposition Temperature: No information available
Boiling Point/Range: 114-248 °C
Freezing Point/Range: Not applicable.
Melting Point/Range: Not applicable
Vapor Pressure: 3.7 mmHg @30 °C
Vapor Density (air=1): No data available
Relative Density/Specific Gravity (water=1): No data available
Density: No data available
Relative Density: No data available
Water Solubility: 20-31 mg/L @ 25 °C
pH: No data available
Partition Coefficient (n-octanol/water): 3.3-5.4
Flash point: > - 11 °C (estimated)
Lower Flammability Level (air): No information available
Upper Flammability Level (air): No information available
Auto-ignition Temperature: No information available
Viscosity: <20.5 mm2/s

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Decomposes on heating.

Conditions to Avoid: Keep away from open flames, hot surfaces and sources of ignition. Exposure to open flame or excessive heat can cause fire or explosion.

Incompatibilities/ Materials to Avoid: Oxidizing agents, Corrosive to copper and copper bearing alloys.

Hazardous Decomposition Products: Decomposition products depend on temperatures, air supply and the presence of other materials. Upon decomposition, this product emits carbon monoxide, carbon dioxide, low molecular

weight hydrocarbons.

Hazardous Polymerization: Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

TOXICITY DATA:

PRODUCT TOXICITY DATA: HEAVY GASOLINE, WASH OILS AND TARS
Note: This material has not undergone toxicological testing, so the current GHS classification is based on the GHS classification of a material with a similar composition.

COMPONENT TOXICITY DATA:
Note: The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given.

Component	LD50 Oral:	LD50 Dermal:	LC50 Inhalation:
Benzene 71-43-2	810 mg/kg (Rat)	8200 mg/kg (Rabbit)	44.66 mg/L (4 hr-Rat)
Hexane 110-54-3	25 g/kg (Rat) 15000 mg/kg (Rat)	3000 mg/kg (Rabbit)	48000 ppm (4 hr-Rat)
Pentane 109-66-0	5000 mg/kg (Mouse)	3000 mg/kg (Rabbit)	364 g/m^3 (4 hr-Rat)
Toluene 108-88-3	2600 mg/kg (Rat)	12000 mg/kg (Rabbit)	12.5 mg/L (4 hr-Rat)
Residues, petroleum, steam-cracked 64742-90-1	4320 mg/kg (Rat)	2000 mg/kg (Rabbit)	-----
Heptane (n-) 142-82-5	5000 mg/kg (Mouse)	3000 mg/kg (Rabbit)	103 g/m^3 (4 hr-Rat)
Styrene 100-42-5	1000 mg/kg (Rat)	-----	11.7 mg/L (4 hr-Rat)
Octane 111-65-9	16.8 mg/kg (Rat)	-----	118 g/m^3 (4 hr-Rat)
Xylene (Dimethylbenzene) 1330-20-7	3500 - 4820 mg/kg (Rat)	2000 - 4350 mg/kg (Rabbit)	5.04 - 29.08 mg/L (4 hr-Rat)
1,3-Butadiene 106-99-0	5480 mg/kg (Rat)	-----	285 g/m^3 (4 hr-Rat)

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POTENTIAL HEALTH EFFECTS:

Eye contact: Causes serious eye irritation. May cause slight corneal injury. Effects may be slow to heal. Vapors may cause mild eye irritation with tearing, redness, or a stinging or burning feeling.

Skin contact:	Brief skin contact may cause irritation with local redness. Prolonged contact and/or occlusion may cause more serious irritation and possibly burns. May cause more severe response on covered skin (under clothing, gloves). Long-term contact may cause the skin to dry and crack or develop a rash. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Prolonged or widespread skin contact may result in absorption of harmful amounts.
Inhalation:	May cause Central Nervous System (CNS) depression (narcotic effects). In confined spaces or poorly ventilated areas, vapor can readily accumulate causing unconsciousness and death. Inhalation may cause coughing, choking, irritation and pulmonary edema.
Ingestion:	May be harmful if swallowed. If swallowed, may pose a lung aspiration hazard during vomiting. Lung aspiration may result in chemical pneumonitis, pulmonary edema, and damage to lung tissue or death.

SIGNS AND SYMPTOMS OF EXPOSURE:

Inhalation (Breathing): Respiratory System Effects: May irritate upper airways. May cause cough. May cause drowsiness or dizziness. Aspiration may cause chemical pneumonitis, pulmonary edema, damage to lung tissue, death.
Skin: Skin Irritation. Exposure to liquid may cause redness and irritation. Prolonged contact and occlusion may cause more severe symptoms. Intermittent and long term skin contact may cause the skin to develop a rash. Skin exposures normally result in only mild to moderate skin irritation. Prolonged contact may result in dermal burns, that are typically partial thickness, but full thickness skin loss may occur.
Eye: Serious Eye Damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn.
Ingestion (Swallowing): Vomiting is common. Sore throat, difficulty swallowing, and diarrhea may occur. Suspect aspiration if persistent coughing or choking. Risk of aspiration is high and can lead to moderate to severe lung injury. With large ingestions, CNS depression can occur, ranging from lethargy, drowsiness, listlessness and unconsciousness. Other effects may include metabolic acidosis, leukocytosis, intravascular hemolysis, disseminated intravascular coagulation and occasionally renal and hepatic dysfunction.
Other Health Effects: IV injections can cause systemic effects including tachypnea, dyspnea, respiratory failure, pneumonia, pleural effusions, nausea, weakness, somnolence, tachycardia, hypotension, atrial fibrillation, metabolic abnormalities, leukocytosis, and multi organ dysfunction. Local effects from injection may cause severe damage to skin, connective tissue, muscle and bone. High pressure injections may cause widespread and deep injuries.

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GHS HEALTH HAZARDS:

GHS: ACUTE TOXICITY - ORAL: Category 5 - May be harmful if swallowed.

GHS: ACUTE TOXICITY - DERMAL: Category 4 - Harmful in contact with skin.

GHS: ACUTE TOXICITY - INHALATION: Category 3 - Toxic if inhaled.

GHS: CONTACT HAZARD - EYE: Category 2A - Causes serious eye irritation

GHS: CONTACT HAZARD - SKIN: Category 2 - Causes skin irritation.

GHS: CARCINOGENICITY:
Category 1 - May cause cancer.

Carcinogenicity comment: Carcinogenicity is based upon the Benzene, 1,3-Butadiene and Styrene content of this mixture.

SPECIFIC TARGET ORGAN TOXICITY (Single Exposure):
Several of the major components of this mixture are known to cause CNS impairment with inhalation and ingestion: pentane, hexane, heptane, octatine, benzene, toluene, xylene and styrene.

SPECIFIC TARGET ORGAN TOXICITY (Repeated or Prolonged Exposure):
This mixture has multiple components which are known to cause target organ effects after repeated and prolonged exposures. 1,3-Butadiene, Pentane, Hexane, Heptane, Octane, Benzene, Toluene, Xylene and Styrene have been reported to impact eyes, central and peripheral nervous system, blood and bone marrow, liver, kidney and respiratory system

REPRODUCTIVE TOXICITY:
The reproductive toxicity is based upon the toluene component of this mixture. Recreational use of toluene during human pregnancy has been associated with microcephaly, central nervous system dysfunction, growth deficiency and craniofacial abnormalities. Miscarriage has been reported in female laboratory workers with chronic exposure to toluene.

ASPIRATION HAZARD:
This classification as an aspiration hazard is based upon its physical properties.

Health Hazards Not Otherwise Classified
• The health hazards listed for this mixture is based upon the components and similarity to other hydrocarbon mixtures, and not on the basis of clinical experience with this specific mixture. Use clinical judgement in evaluation and treatment.

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

Component	Freshwater Fish	Invertebrate Toxicity:	Algae Toxicity:	Other Toxicity:
Benzene	No data available	8.76 - 15.6 mg/L EC50 = 10 mg/L EC50	29 mg/L (72 h - Pseudokirchneriella subcapitata)	No data available
Pentane	No data available	= 9.74 mg/L EC50	No data available	No data available
Toluene	No data available	5.46 - 9.83 mg/L EC50 = 11.5 mg/L EC50	12.5 mg/L (72 h - Pseudokirchneriella subcapitata) 433 mg/L (96 h - Pseudokirchneriella subcapitata)	No data available
Styrene	No data available	3.3 - 7.4 mg/L EC50	0.15 - 3.2 mg/L (96 h - Pseudokirchneriella subcapitata) 0.46 -	No data available

			4.3 mg/L (72 h - Pseudokirchneriella subcapitata) 0.72 mg/L (96 h - Pseudokirchneriella subcapitata) 1.4 mg/L (72 h - Pseudokirchneriella subcapitata)	

Aquatic Toxicity:
The material is expected to be toxic to aquatic life with long lasting effects

FATE AND TRANSPORT:

BIODEGRADATION: Not readily biodegradable (estimated at 3-12 % after 28 days).

PERSISTENCE: This material is expected to have moderate persistence in the environment.

BIOACCUMULATIVE POTENTIAL: Component's BAF range from low to high (BAF = 59.6 -7952 (estimated)).

ADDITIONAL ECOLOGICAL INFORMATION: No components of this product are on the Montreal Protocol Ozone Depleting (ODP) lists.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from material:
All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Report spills if applicable. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. FOR UNUSED & UNCONTAMINATED PRODUCT, the recommended options include recycle and reuse. If disposing as a waste, it is likely that the pyrolysis gasoline would be classified as a hazardous waste. Therefore, it should be managed according to all applicable regulations and be sent to a licensed facility for treatment and disposal.

Container Management:
Do not re-use empty containers. May contain product residues which could produce flammable vapors. Recovered liquids may be sent to an EPA permitted reclaimer or incineration facility.

SECTION 14. TRANSPORT INFORMATION

LAND TRANSPORT

U.S. DOT 49 CFR 172.101:

UN NUMBER: UN3295
PROPER SHIPPING NAME: HYDROCARBONS, LIQUID, N.O.S. (BENZENE, TOLUENE)
HAZARD CLASS/ DIVISION: 3
PACKING GROUP: II
LABELING REQUIREMENTS: 3

MARINE POLLUTANT: Marine Pollutant

RQ (lbs): RQ 10 Lbs. (Benzene)
RQ 5,000 Lbs. (Hexane)
RQ 1,000 Lbs. (Toluene)
RQ 1,000 Lbs. (Styrene)

*** NOTE:** This product is regulated as a Marine Pollutant when shipped by Rail, Highway, or Air in bulk quantities (greater than 119 gallons), and when shipped by Water in all quantities. Use DOT Guide 128 for Emergency Response.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:

UN NUMBER: UN3295
SHIPPING NAME: HYDROCARBONS, LIQUID N.O.S. (BENZENE, TOLUENE)
CLASS OR DIVISION: 3
PACKING/RISK GROUP: II
LABELING REQUIREMENTS: 3
CAN. MARINE POLLUTANT: Marine Pollutant

SECTION 15. REGULATORY INFORMATION

U.S. REGULATIONS

OSHA REGULATORY STATUS:
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
If a release is reportable under CERCLA section 103, notify the state emergency response commission and local emergency planning committee. In addition, notify the National Response Center at (800) 424-8802 or (202) 426-2675.

Component	CERCLA Reportable Quantities:
Benzene	10 lb (final RQ)
Hexane	5000 lb (final RQ)
Toluene	1000 lb (final RQ)
Styrene	1000 lb (final RQ)
Xylene (Dimethylbenzene)	100 lb (final RQ)
1,3-Butadiene	10 lb (final RQ)

SARA EHS Chemical (40 CFR 355.30)
If a release is reportable under EPCRA, notify the state emergency response commission and local emergency planning committee. If the TPQ is met, facilities are subject to reporting requirements under EPCRA Sections 311 and 312.

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):
Fire Hazard, Acute Health Hazard, Chronic Health Hazard

SARA HAZARD CATEGORIES ALIGNED WITH GHS (2018):
Physical Hazard - Flammable
Health Hazard - Carcinogen
Health Hazard - Acute Toxin
Health Hazard - Reproductive Toxin
Health Hazard - Skin Corrosive / Irritant
Health Hazard - Eye Corrosive / Irritant
Health Hazard - STOT SE
Health Hazard - STOT RE
Health Hazard - Aspiration Hazard
Health Hazard - Mutagen

EPCRA SECTION 313 (40 CFR 372.65):
The following chemicals are listed in 40 CFR 372.65 and may be subject to Community Right-to Know Reporting requirements

Component	Status:
Benzene	0.1 %
Hexane	1.0 %
Toluene	1.0 %
Styrene	0.1 %
Xylene (Dimethylbenzene)	1.0 %
1,3-Butadiene	0.1 %

OSHA SPECIFICALLY REGULATED SUBSTANCES:
• OSHA 29 CFR 1910.1028 (Benzene); The U.S. Department of Labor, Occupational Safety and Health Administration specifically regulates manufacturing, handling and processing of benzene. Such regulations have been published at 29 CFR 1910.1028. It is necessary that handlers and processors of benzene be familiar with these regulations. This product may contain low levels of benzene. Under normal working conditions with adequate ventilation, neither the OSHA 8-hour TWA-PEL of 1.0 ppm, the 0.5 ppm action level, nor the C/STEL of 5.0 ppm should be exceeded. The workplace should be monitored, and if the level exceeds the PELs or action levels, refer to 29 CFR 1910.1028
• OSHA 29 CFR 1910.1051 (Butadiene): The U.S. Department of Labor, Occupational Safety and Health Administration specifically regulates manufacturing, handling and processing of 1,3 butadiene. Such regulations have been published at 29 CFR 1910.1051. It is necessary that handlers and processors of butadiene be familiar with these regulations. This product may contain low levels of butadiene. Under normal working conditions with adequate ventilation, neither the OSHA 8-hour TWA-PEL of 1.0 ppm, the 0.5 ppm action level, nor the C/STEL of 5.0 ppm should be exceeded. The workplace should be monitored, and if the level exceeds the PELs or action levels, refer to 29 CFR 1910.1051

NATIONAL INVENTORY STATUS

HEAVY GASOLINE, WASH OILS AND TAR

SDS No.: M49063 **SDS Revision Date:** 23-Jan-2017
Rev. Num. 00-New

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA): All components are listed or exempt.

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA): All components are listed or exempt.

TSCA 12(b): THIS PRODUCT IS SUBJECT TO EXPORT NOTIFICATION.

Canadian Chemical Inventory: All components of this product are listed on either the DSL or the NDSL.

Component	DSL	NDSL
Distillates, petroleum, cracked stripped steam-cracked petroleum distillates, C10-12 fraction 68477-40-7	Not Listed	Listed
Benzene 71-43-2	Listed	Not Listed
Hexane 110-54-3	Listed	Not Listed
Pentane 109-66-0	Listed	Not Listed
Toluene 108-88-3	Listed	Not Listed
Aromatic Hydrocarbons, C9-C17 68333-88-0	Listed	Not Listed
Residues, petroleum, steam-cracked 64742-90-1	Listed	Not Listed
Heptane (n-) 142-82-5	Listed	Not Listed
Styrene 100-42-5	Listed	Not Listed
Octane 111-65-9	Listed	Not Listed
Xylene (Dimethylbenzene) 1330-20-7	Listed	Not Listed
1,3-Butadiene 106-99-0	Listed	Not Listed

STATE REGULATIONS

Component	California Proposition 65 Cancer WARNING:	California Proposition 65 CRT List - Male reproductive toxin:	California Proposition 65 CRT List - Female reproductive toxin:	Massachusetts Right to Know Hazardous Substance List	New Jersey Right to Know Hazardous Substance List	New Jersey Special Health Hazards Substance List
Benzene 71-43-2	Listed developmental toxicity	Not Listed	Not Listed	Listed	0197	carcinogen; flammable - third degree; mutagen
Hexane 110-54-3	Not Listed	Not Listed	Not Listed	Listed	1340	flammable - third degree
Pentane 109-66-0	Not Listed	Not Listed	Not Listed	Listed	1476	flammable - fourth degree
Toluene 108-88-3	developmental toxicity	Not Listed	Not Listed	Listed	1866	flammable - third degree

HEAVY GASOLINE, WASH OILS AND TAR

SDS No.: M49063 **SDS Revision Date:** 23-Jan-2017
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Heptane (n-) 142-82-5	Not Listed	Not Listed	Not Listed	Listed	1339	flammable - third degree
Styrene 100-42-5	Not Listed	Not Listed	Not Listed	Listed	1748	flammable - third degree; mutagen; reactive - second degree
Octane 111-65-9	Not Listed	Not Listed	Not Listed	Listed	1434	flammable - third degree
Xylene (Dimethylbenzene) 1330-20-7	Not Listed	Not Listed	Not Listed	Listed	2014	flammable - third degree
1,3-Butadiene 106-99-0	Listed developmental toxicity	Not Listed	Not Listed	Listed	0272	flammable - fourth degree; reactive - second degree

Component	New Jersey - Environmental Hazardous Substance List	Pennsylvania Right to Know Hazardous Substance List	Pennsylvania Right to Know Special Hazardous Substances	Pennsylvania Right to Know Environmental Hazard List	Rhode Island Right to Know Hazardous Substance List
Benzene 71-43-2	Listed	Listed	Present	Present	Not Listed
Hexane 110-54-3	Listed	Listed	Not Listed	Not Listed	Listed
Pentane 109-66-0	Listed	Listed	Not Listed	Not Listed	Listed
Toluene 108-88-3	Listed	Listed	Not Listed	Present	Listed
Heptane (n-) 142-82-5	Not Listed	Listed	Not Listed	Not Listed	Listed
Styrene 100-42-5	Listed	Listed	Not Listed	Present	Listed
Octane 111-65-9	Not Listed	Listed	Not Listed	Not Listed	Listed
Xylene (Dimethylbenzene) 1330-20-7	Listed	Listed	Not Listed	Present	Listed
1,3-Butadiene 106-99-0	Listed	Listed	Present	Present	Listed

CANADIAN REGULATIONS

• This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations

Component	Canadian Chemical Inventory:	NDSL:	WHMIS - Classifications of Substances:
Distillates, petroleum, cracked stripped steam-cracked petroleum distillates, C10-12 fraction	Listed	Present	
Benzene	Listed Present (that participate in atmospheric photochemical reactions except those under item		B2,D2A,D2B

HEAVY GASOLINE, WASH OILS AND TAR

SDS No.: M49063 **SDS Revision Date:** 23-Jan-2017
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	number 65 on the Toxic Substances List source)		
Hexane	Listed Present (that participate in atmospheric photochemical reactions except those under item number 65 on the Toxic Substances List source)		B2,D2A,D2B
Pentane	Listed Present (that participate in atmospheric photochemical reactions except those under item number 65 on the Toxic Substances List source)		B2
Toluene	Listed Present (that participate in atmospheric photochemical reactions except those under item number 65 on the Toxic Substances List source)		B2,D2A,D2B
Aromatic Hydrocarbons, C9-C17	Listed		
Residues, petroleum, steam-cracked	Listed		
Heptane (n-)	Listed Present (that participate in atmospheric photochemical reactions except those under item number 65 on the Toxic Substances List source)		B2,D2B
Styrene	Listed Present (that participate in atmospheric photochemical reactions except those under item number 65 on the Toxic Substances List source)		B2,D2A
Octane	Listed Present (that participate in atmospheric photochemical reactions except those under item number 65 on the Toxic Substances List source)		B2,D2B
Xylene (Dimethylbenzene)	Listed Present (that participate in atmospheric photochemical reactions		B2,D2A,D2B

	except those under item number 65 on the Toxic Substances List source)		
1,3-Butadiene	Listed Present (that participate in atmospheric photochemical reactions except those under item number 65 on the Toxic Substances List source)		A,B1,D2A,F

SECTION 16. OTHER INFORMATION

Prepared by: OxyChem Corporate HESS - Product Stewardship

Rev. Date: 23-Jan-2017

Reason for Revision:
• New Product

IMPORTANT:
The information presented herein, while not guaranteed, was prepared by technical personnel and is true and accurate to the best of our knowledge. NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY OR GUARANTY OF ANY OTHER KIND, EXPRESSED OR IMPLIED, IS MADE REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY OR OTHERWISE. This information is not intended to be all-inclusive as to the manner and conditions of use, handling, storage, disposal and other factors that may involve other or additional legal, environmental, safety or performance considerations, and Occidental Chemical Corporation assumes no liability whatsoever for the use of or reliance upon this information. While our technical personnel will be happy to respond to questions, safe handling and use of the product remains the responsibility of the customer. No suggestions for use are intended as, and nothing herein shall be construed as, a recommendation to infringe any existing patents or to violate any Federal, State, local or foreign laws

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees

End of Safety Data Sheet