SAFETY DATA SHEET

Revision Date 14-Jun-2017 **SDS Number** 888100004846 **Revision Number** 2.01

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Product Name **Cycle Oil, Light**

Synonyms Light Hydrocarbon, LCO; Petroleum Distillates, CAT Cracked Distillate, Light; Light Distillate, GAS OIL, Light Cracked, Kerosine, Diesel, Gas Oil, Light Hydrotreated, Light Cycle Oil; CCO, Stove Oil with Sulfur, RS205, Cutter Stock, RS206

Recommended Use Fuel, Intermediate Stream
Uses advised against All others

Manufacturer
Tesoro Refining & Marketing Co.
19100 Ridgewood Parkway
San Antonio, TX 78259

Emergency Telephone Chemtrec: 1-800-424-9300
Tesoro Call Center: 1-877-783-7676

E-mail address ProductStewardship@TSOCORP.com

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 4 Category 3
Acute Oral Toxicity	Category 4
Acute dermal toxicity	Category 3
Carcinogenicity	Category 1B
Chronic Aquatic Toxicity	Category 2
Aspiration toxicity	Category 1

Label elements

Danger

Combustible liquid
Flammable liquid and vapor
Harmful if swallowed
Toxic in contact with skin
May cause cancer
Toxic to aquatic life with long lasting effects
May be fatal if swallowed and enters airways

Appearance Liquid | **Physical State @20°C** Liquid | **Odor** Characteristic petroleum or kerosene-like

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
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/or bond container and receiving equipment
Use explosion-proof electrical/ ventilating / lighting / equipment
Use only non-sparking tools
Take precautionary measures against static discharge

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Call a POISON CENTER or doctor if you feel unwell
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
Wash contaminated clothing before reuse
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Do NOT induce vomiting
Rinse mouth
In case of fire: Use CO2, dry chemical, or foam to extinguish

Precautionary Statements - Storage
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Causes mild skin irritation. Toxic to aquatic life.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Percent
Kerosene (petroleum)	8008-20-6	0-100
Distillates (petroleum), light catalytic cracked; Cracked gas oil	64741-59-9	0-100
Xylene	1330-20-7	0-2
Trimethylbenzene	25551-13-7	0-2
Naphthalene	91-20-3	0-1

4. FIRST AID MEASURES

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Remove from exposure, lie down. In case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt, seek medical advice. Never give anything by mouth to an unconscious person. Take off all contaminated clothing immediately and thoroughly wash material from skin. Immediate medical attention is required.
Inhalation	Aspiration into lungs can produce severe lung damage. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical advice/attention. Delayed pulmonary edema may occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Get immediate medical advice/attention.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Wear personal protective clothing (see section 8). Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid breathing vapors or mists.

Most important symptoms and effects, both acute and delayed

Symptoms	Difficulty in breathing. Coughing and/ or wheezing. Dizziness.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances.

5. FIRE-FIGHTING MEASURES

Small Fire	Any extinguisher suitable for Class B fires, dry chemical, CO2, foam (AFFF/ATC), or water spray can be used.
Large Fire	Water spray, fog or alcohol-resistant foam. CAUTION: Use of water spray when fighting fire may be inefficient. Cool containers with flooding quantities of water until well after fire is out.
Unsuitable extinguishing media	CAUTION: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.). Vapors may form explosive mixture with air. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. May accumulate electrostatic charge and ignite or explode.
Hazardous combustion products	Smoke, CO, and other products of incomplete combustion.

Explosion data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	Yes.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn.

Further information ALWAYS stay away from tanks engulfed in fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Do not direct water at source of leak or safety devices; icing may occur. Cool containers with flooding quantities of water until well after fire is out. Do not allow run-off from fire-fighting to enter drains or water courses.

NFPA **Health hazards** 0 **Flammability** 2 **Stability** 0 **Physical and chemical properties** -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Avoid breathing vapors or mists.

Other Information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product.

Hydrocarbon liquids including this product can act as a non-conductive flammable liquid (or static accumulator), and may form ignitable vapor-air mixtures in storage tanks or other containers. 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 liquid 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 or diesel) is loaded into tanks previously containing low flash point products (such as 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 and API Recommended Practice 2003 Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up. Keep out of the reach of children. Store away from other materials.

Keep away from flame, sparks, excessive temperatures and open flame. Use approved containers. Keep containers closed and clearly labeled. Empty or partially full product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose containers to sources of ignition. Store in a well-ventilated area. The storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks". Keep away from food, drink and animal feed. Incompatible with oxidizing agents. Incompatible with acids. Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL
Kerosene (petroleum) 8008-20-6	TWA: 200 mg/m³ total hydrocarbon vapor application restricted to conditions in which there are negligible aerosol exposures S*	-
Xylene 1330-20-7	STEL: 150 ppm TWA: 100 ppm	TWA: 100 ppm TWA: 435 mg/m³ (vacated) TWA: 100 ppm (vacated) TWA: 435 mg/m³ (vacated) STEL: 150 ppm (vacated) STEL: 655 mg/m³
Trimethylbenzene 25551-13-7	TWA: 25 ppm	(vacated) TWA: 25 ppm (vacated) TWA: 125 mg/m³
Naphthalene 91-20-3	TWA: 10 ppm S*	TWA: 10 ppm TWA: 50 mg/m³ (vacated) TWA: 10 ppm (vacated) TWA: 50 mg/m³ (vacated) STEL: 15 ppm (vacated) STEL: 75 mg/m³

S* - Potential exposure by cutaneous route

NOTE: Limits shown for guidance only. For additional information, OSHA's 1989 air contaminants standard exposure limits provided even though the limits were vacated in 1992. State, local or other agencies or advisory groups may have established more stringent limits. Follow applicable regulations.

Appropriate engineering controls

Engineering controls Showers

Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Use goggles or face-shield where there is a possibility of splashing.

Hand Protection Wear suitable gloves. Polyvinyl alcohol. Nitrile rubber. Neoprene gloves. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.

Skin and body protection If there is a risk of contact:. Wear suitable protective clothing. Wear fire/flame resistant/retardant clothing.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Use a NIOSH approved respirator when there is a potential for airborne concentrations to exceed occupational exposure limits. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2, NIOSH Respirator Decision Logic, and the respirator manufacturer for additional guidance on respiratory protection selection. A Self-Contained Breathing Apparatus (SCBA) should be used for fire fighting. Use a NIOSH approved positive-pressure supplied air respirator if there is a potential for uncontrolled release, exposure levels are unknown, in oxygen deficient (less than 19.5% oxygen), or any other circumstance where an air-purifying respirator may not provide adequate protection.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing. Wash hands before breaks and immediately after handling the product. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State @20°C	Liquid
Appearance	Liquid
Odor	Characteristic petroleum or kerosene-like
Color	Clear to straw
Odor threshold	0.1 - 1 ppm typically reported

Property	**Values**	**Remarks • Method**
pH	Not applicable	
Melting point / freezing point	-26 °C / -15 °F	Gel point can be about -15°F; freezing requires laboratory conditions
Boiling range	150 - 150 to 400 °C	
Flash point	61 °C / 142 °F	Minimum
Evaporation rate	No data available	
Flammability (solid, gas)	Flammable vapor released by liquid	
Flammability Limit in Air %		
Upper flammability limit:	6.5	
Lower flammability limit:	0.6	
Vapor pressure	4	
Vapor density	>4.5	
Relative density	0.86	
Water solubility	0.0005 g/100 mL	
Solubility in other solvents	No data available	
Partition coefficient	3.9 to 6	
Autoignition temperature	257 °C / 495 °F	
Decomposition temperature	No data available	
Kinematic viscosity	3 to 3.6 mm2/s	
Dynamic viscosity	No data available	
Explosive properties	No data available	
Oxidizing properties	No data available	

Minimum Ignition Energy (mJ)	No data available
K_{st} (bar.m/s)	No data available
Softening point	No data available
VOC Content (%)	No data available
Density	No data available
Bulk density	Not applicable
Conductivity	Diesel Fuel Oils at terminal load rack: At least 25 pS/m. Ultra Low Sulfur Diesel (ULSD) without conductivity additive: 0 pS/m to 5 pS/m. ULSD at terminal load rack with conductivity additive: At least 50 pS/m. JP-8 at terminal load rack: 150 pS/m to 600 pS/m.

10. STABILITY AND REACTIVITY

Reactivity This product is non-reactive under normal conditions.

Chemical stability Stable under recommended storage conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid Heat, flames and sparks. Excessive heat.

Incompatible materials Oxidizing or reducing agents. Acids. Alkali.

Hazardous decomposition products None under normal use conditions.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation Specific test data for the substance or mixture is not available. Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye contact Specific test data for the substance or mixture is not available. May cause irritation.

Skin contact Repeated exposure may cause skin dryness or cracking. Specific test data for the substance or mixture is not available. Toxic in contact with skin. (based on components).

Ingestion Specific test data for the substance or mixture is not available. Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways. (based on components).

Information on toxicological effects

Symptoms Difficulty in breathing. Coughing and/ or wheezing. Dizziness.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	1,851.00 mg/kg
ATEmix (dermal)	983.00 mg/kg
ATEmix (inhalation-dust/mist)	7.60 mg/l

Chemical Name	Oral LD50	LD50/dermal/rat - NO UNITS (Wizards mg/kg)	Inhalation LC50
Kerosene (petroleum) 8008-20-6	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.28 mg/L (Rat) 4 h
Distillates (petroleum), light catalytic cracked; Cracked gas oil 64741-59-9	6790 - 7180 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 5.4 g/L (Rat) 4 h

Xylene 1330-20-7	= 3500 mg/kg (Rat)	> 1700 mg/kg (Rabbit) > 4350 mg/kg (Rabbit)	= 29.08 mg/L (Rat) 4 h = 5000 ppm (Rat) 4 h
Trimethylbenzene 25551-13-7	= 8970 mg/kg (Rat)	-	-
Naphthalene 91-20-3	= 1110 mg/kg (Rat) = 490 mg/kg (Rat)	= 1120 mg/kg (Rabbit) > 20 g/kg (Rabbit)	> 340 mg/m^3 (Rat) 1 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chemical Name

Distillates (petroleum), light catalytic cracked; Cracked gas oil

Gas oils and distillate fuels may be fatal if they are swallowed and enter the airway. If inhaled, short-term overexposure can cause disorientation, nausea, vomiting, signs of central nervous system effects such as headache or disorientation, immediate unconsciousness and death. In animal studies, gas oil streams and distillate fuels demonstrated minimal acute toxicity by the oral, dermal and inhalation routes, minimal eye irritation, moderate to severe skin irritation with 24 hours exposure, and no dermal sensitization. Generally, results suggest that the degree of toxicity is associated with the concentrations and ring distributions of aromatic constituents in the fuels. When dermal exposures last 24 hours or longer, moderate to severe skin irritation, but not sensitization, has been reported in animal studies. Repeated dermal exposures have been reported to cause systemic effects in animals, including changes in liver and thymus weight and blood chemistry. Some gas oil streams and distillate fuels can cause gene mutations in studies using bacteria and animal tissue. Results of developmental studies with gas oils demonstrate that some gas oils induce developmental effects and others do not. Effects observed include reduced litter size through resorptions, lower body weights, and fetal malformations were reported for 2 members of the category. Studies in animals indicate that gas oils and distillate fuels are potential skin carcinogens after repeated skin application, but are not associated with tumors in other parts of the body (systemic tumors). The carcinogenicity of individual petroleum streams varies due to factors such as source and processing; IARC and ECHA C&L Inventory reports individually on the carcinogenicity of these substances.

Xylene

Mixed xylenes can cause skin, eye, and respiratory irritation. Both short- and long-term repeated exposures to high enough levels in humans have resulted in a variety of adverse nervous system effects that include headache, mental confusion, narcosis, equilibrium, impaired short-term memory, dizziness and tremors. Studies in laboratory animals indicate that xylene can cause changes in the liver and harmful effects on the kidneys, lungs, heart, and nervous system as well as hearing loss. The relevance of these observations to humans is not clear at this time. In general, developmental studies in animals reported adverse fetal effects only at concentrations that caused maternal toxicity. The relevance of these observations to humans is unclear at this time. The available data from in vitro and in vivo studies suggest that xylenes are not mutagenic and do not produce chromosomal abnormalities. Furthermore, rats exposed up to 500 mg/kg bw and mice exposed up to 1000 mg/kg bw mixed xylenes for 103 weeks showed no treatment-related increases in any tumor type. IARC has determined that the carcinogenicity of xylenes is not classifiable (Group 3).

Trimethylbenzene

Trimethylbenzenes are a commercially available mixture of three separate isomers: 1,2,3-, 1,2,4-, 1,3,5-trimethylbenzene. Overexposure to trimethylbenzenes is known to result in irritation of the eyes, skin, and respiratory tract in humans and animals. Acute (short-term) and chronic (long-term) inhalation exposure to high enough levels of trimethylbenzenes has been shown to result in neurological effects in humans and animals. There is limited evidence that overexposure by inhalation of trimethylbenzenes can result in hematological effects such as alterations in blood clotting and anemia in humans. Animal studies have also found evidence that inhalation exposure to trimethylbenzenes can result in hematological effects. No human studies have investigated the reproductive or developmental effects of trimethylbenzenes. Reproductive and developmental effects in animals exposed to trimethylbenzene has been reported.

Naphthalene

Acute (short term) exposure to large amounts of naphthalene may damage or destroy red blood cells, a condition termed hemolytic anemia. Symptoms of hemolytic anemia include fatigue, lack of appetite, restlessness, and pale skin. Acute inhalation or oral exposure to

large amounts of naphthalene may also cause nausea, vomiting, diarrhea, blood in the urine, and a yellow color to the skin. Ingestion may result in death. Chronic (long term) exposure in rats and mice can lead to irritation and inflammation of their nose and lungs; nasal hyperplasia and metaplasia in respiratory and olfactory epithelium has been reported in studies in mice. Exposure to high enough levels may have effects on the blood, resulting in chronic hemolytic anemia, and effects on the eyes, resulting in the development of cataracts. Cancer from naphthalene exposure has been observed in animals, but not humans. IARC has classified naphthalene as possibly carcinogenic to humans (Group 2B), and the ECHA C&L Inventory reports that naphthalene is suspected of causing cancer (Carc. 2).

Health hazard and classification information

Skin Corrosion/Irritation Category No information available.

Serious eye damage/eye irritation No information available.

No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Classification based on data available for ingredients. Contains a known or suspected carcinogen.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Kerosene (petroleum) 8008-20-6	A3	Group 3	-	-
Xylene 1330-20-7	-	Group 3	-	-
Naphthalene 91-20-3	A3	Group 2B	Reasonably Anticipated	X

Reproductive toxicity No information available.

Target Organ Systemic Toxicant - Single Exposure No information available.

Target Organ Systemic Toxicant - Repeated Exposure No information available.

Target organ effects liver, kidney, Respiratory system, Eyes, Skin, Central nervous system, blood.

Aspiration hazard May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Additional Ecological Information Release of this product should be prevented from contaminating soil and water and from entering drainage and sewer systems. U.S.A. regulations require reporting spills of this material that could reach any surface waters. The toll free number to the U.S. Coast Guard National Response Center is (800) 424-8802

Ecotoxicity Toxic to aquatic life with long lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Distillates (petroleum), light catalytic cracked; Cracked gas oil 64741-59-9	-	7.3: 96 h Brachydanio rerio mg/L LC50 semi-static	-	-
Xylene 1330-20-7	-	13.4: 96 h Pimephales promelas mg/L LC50	-	0.6: 48 h Gammarus lacustris mg/L LC50 3.82:

		flow-through 780: 96 h Cyprinus carpio mg/L LC50 semi-static 780: 96 h Cyprinus carpio mg/L LC50 13.5 - 17.3: 96 h Oncorhynchus mykiss mg/L LC50 19: 96 h Lepomis macrochirus mg/L LC50 13.1 - 16.5: 96 h Lepomis macrochirus mg/L LC50 flow-through 23.53 - 29.97: 96 h Pimephales promelas mg/L LC50 static 30.26 - 40.75: 96 h Poecilia reticulata mg/L LC50 static 2.661 - 4.093: 96 h Oncorhynchus mykiss mg/L LC50 static 7.711 - 9.591: 96 h Lepomis macrochirus mg/L LC50 static		48 h water flea mg/L EC50
Trimethylbenzene 25551-13-7	-	7.72: 96 h Pimephales promelas mg/L LC50 flow-through	-	-
Naphthalene 91-20-3	0.4: 72 h Skeletonema costatum mg/L EC50	5.74 - 6.44: 96 h Pimephales promelas mg/L LC50 flow-through 31.0265: 96 h Lepomis macrochirus mg/L LC50 static 0.91 - 2.82: 96 h Oncorhynchus mykiss mg/L LC50 static 1.6: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 1.99: 96 h Pimephales promelas mg/L LC50 static	-	1.96: 48 h Daphnia magna mg/L EC50 Flow through 1.09 - 3.4: 48 h Daphnia magna mg/L EC50 Static 2.16: 48 h Daphnia magna mg/L LC50

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Component Information

Chemical Name	Partition coefficient
Xylene 1330-20-7	2.77 - 3.15
Naphthalene 91-20-3	3.6

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture of weld

containers.

US EPA Waste Number U165 U239

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Xylene 1330-20-7	-	Included in waste stream: F039	-	U239
Naphthalene 91-20-3	U165	Included in waste streams: F024, F025, F034, F039, K001, K035, K060, K087, K145	-	U165

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Naphthalene 91-20-3	-	-	Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	-

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Xylene 1330-20-7	Toxic Ignitable
Naphthalene 91-20-3	Toxic

14. TRANSPORT INFORMATION

DOT

UN/ID no UN1993
Proper Shipping Name Flammable liquid, n.o.s.
Hazard Class 3
Packing group III
Reportable Quantity (RQ) (Naphthalene: RQ (kg)= 45.40, Xylenes (mixed isomers): RQ (kg)= 45.40)
Special Provisions B1, B52, IB3, T4, TP1, TP29
Description UN1993, Flammable liquid, n.o.s. (Xylene), III
Emergency Response Guide Number 128

TDG

UN/ID no UN1993
Proper Shipping Name Flammable liquid, n.o.s.
Hazard Class 3

Packing group	III
Description	UN1993, Flammable liquid, n.o.s. (Xylene), III

MEX

UN/ID no	UN1993
Proper Shipping Name	Flammable liquid, n.o.s.
Hazard Class	3
Special Provisions	223, 274
Packing group	III
Description	UN1993, Flammable liquid, n.o.s. (Xylene), III

IATA

UN/ID no	UN1993
Proper Shipping Name	Flammable liquid, n.o.s.
Hazard Class	3
Packing group	III
ERG Code	3L
Description	UN1993, Flammable liquid, n.o.s. (Xylene), III

IMDG

UN/ID no	UN1993
Proper Shipping Name	Flammable liquid, n.o.s.
Hazard Class	3
Packing group	III
EmS No.	F-E, S-E
Special Provisions	223, 274, 955
Description	UN1993, Flammable liquid, n.o.s. (XYLENE), III, Marine pollutant

15. REGULATORY INFORMATION

International Inventories

TSCA	Listed
DSL/NDSL	Listed
ENCS	Not Listed
IECSC	Listed
KECL	Listed
PICCS	Listed
AICS	Listed

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Xylene 1330-20-7	100 lb	-	-	X
Naphthalene 91-20-3	100 lb	X	X	X

CERCLA
The CERCLA definition of hazardous substances contains a “petroleum exclusion” clause which exempts crude oil, fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting requirements, including SARA Section 304, as well as the Clean Water Act may still apply.

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Naphthalene - 91-20-3	Carcinogen

U.S. State Right-to-Know Regulations

US State Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Kerosene (petroleum) 8008-20-6	X	X	X
Xylene 1330-20-7	-	-	X
Trimethylbenzene 25551-13-7	X	X	X
Naphthalene 91-20-3	X	X	X

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Revision Date 14-Jun-2017

Revision Note No information available.

Disclaimer
Tesoro Companies, Inc. (Tesoro) provides the information on this Safety Data Sheet (SDS) in order to meet its obligations under 29 CFR 1910.1200, and does not hereby make any guarantee of product specifications or suitability for any particular purpose. Tesoro does not assume any liability arising out of the use of Tesoro’s product or the use of information provided on this SDS. The end user of the product has the responsibility for evaluating the adequacy of the data under the conditions of use, determining the safety, toxicity and suitability of the product under these conditions, and obtaining additional or clarifying information where uncertainty exists. No guarantee expressed or implied is made as to the effects of such use, the results to be obtained, or the safety and toxicity of the product in any specific application. Furthermore, the information herein is not represented as absolutely complete, since it is not practicable to provide all relevant information in the format of this document, since additional information may be necessary under exceptional conditions of use, and since Tesoro prepared this SDS based on information available on the date of its publication.

170

End of Safety Data Sheet