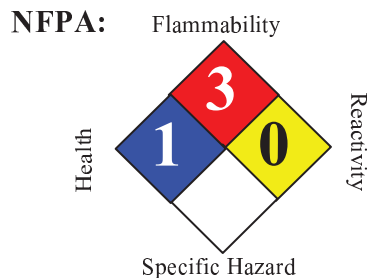


Safety Data Sheet

Naphtha



SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Naphtha			
Synonyms	:	SNG Naphtha, Light Cat Naphtha, Sweet Virgin Naphtha (SVN), Debutanized Naphtha,, Atmospheric Naphtha (DAN), HCU Light Naphtha, Light CR Gasoline, Full Range Cracked Naphtha,, Full Range Hydrocracked Naphtha, Full Range Reformed Naphtha, Light Chemical Treated Naphtha,, Light Cracked Naphtha, Light Hydrocracked Naphtha, Light Hydrotreated Naphtha, Aviation Alkylate Naphtha,, Light Hydrocrackate, Sweetened Naphtha, APPC890, RS108, 888100004450			
SDS Number	:	888100004450	Version	:	2.19
Product Use Description	:	Fuel Component, Refinery Intermediate Stream			
Company	:	For: Tesoro Refining & Marketing Co. 19100 Ridgewood Parkway, San Antonio, TX 78259			
Tesoro Call Center	:	(877) 783-7676	Chemtrec	:	(800) 424-9300
			(Emergency Contact)		

SECTION 2. HAZARDS IDENTIFICATION

Classifications

Flammable Liquid – Category 1 or 2 depending on formulation.
 Aspiration Hazard – Category 1.
 Carcinogenicity – Category 2
 Specific Target Organ Toxicity (Single Exposure) – Category 3
 Skin Irritant – Category 2
 Eye Irritant – Category 2B
 Chronic Aquatic Toxicity – Category 2

Pictograms



Signal Word

Danger

Hazard Statements

Extremely flammable liquid and vapor.
 May be fatal if swallowed and enters airways – do not siphon gasoline by mouth.
 Suspected of causing blood cancer if repeated over-exposure by inhalation and/or skin contact occurs.

Causes eye irritation. Can be absorbed through skin.
 Repeated or prolonged skin contact can cause irritation and dermatitis.
 May cause drowsiness or dizziness. Extreme exposure such as intentional inhalation may cause unconsciousness, asphyxiation and death.
 Harmful to aquatic life.

Precautionary statements

Prevention

Keep away from heat, sparks, open flames, welding and hot surfaces.
 No smoking.
 Keep container tightly closed.
 Ground and/or bond container and receiving equipment.
 Use explosion-proof electrical equipment.
 Use only non-sparking tools (if tools are used in flammable atmosphere).
 Take precautionary measures against static discharge.
 Wear gloves, eye protection and face protection (as needed to prevent skin and eye contact with liquid).
 Wash hands or liquid-contacted skin thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Do not breathe vapors.
 Use only outdoors or in a well-ventilated area.

Response

In case of fire: Use dry chemical, CO₂, water spray or fire fighting foam to extinguish.
 If swallowed: Immediately call a poison center, doctor, hospital emergency room, medical clinic or 911. Do NOT induce vomiting. Rinse mouth.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 If in eye: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If skin or eye irritation persists, get medical attention.
 If inhaled: Remove person to fresh air and keep comfortable for breathing.
 Get medical attention if you feel unwell.

Storage

Store in a well ventilated place. Keep cool. Store locked up. Keep container tightly closed. Use only approved containers.

Disposal

Dispose of contents/containers to approved disposal site in accordance with local, regional, and national regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Naphtha; Low boiling point naphtha	8030-30-6	100%
N-hexane	110-54-3	25 - 35%
Xylene	1330-20-7	25 - 35%
Toluene	108-88-3	15 - 20%

Cyclohexane	110-82-7	15 - 20%
Pentane	109-66-0	15 - 20%
Heptane [and isomers]	142-82-5	12.5 - 15%
Ethylbenzene	100-41-4	5 - 7%
Benzene	71-43-2	0.5 - 5%
1,2,4-Trimethylbenzene	95-63-6	2 - 3%
Sulfur	7704-34-9	0 - 1.5%

SECTION 4. FIRST AID MEASURES

General advice	: Remove from exposure, lie down. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). 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.
Inhalation	: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention immediately.
Skin contact	: In case of contact, immediately flush skin with plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Contaminated leather, particularly footwear, must be discarded. Note that contaminated clothing may be a fire hazard. Seek medical advice if symptoms persist or develop.
Eye contact	: Remove contact lenses. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Ingestion	: If swallowed Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention immediately.
Notes to physician	: Symptoms: Dizziness, Discomfort, Headache, Nausea, Kidney disorders, Liver disorders. Aspiration may cause pulmonary edema and pneumonitis. Swallowing naphtha is more likely to be fatal for small children than adults, even if aspiration does not occur.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Do not use a solid water stream as it may scatter and spread fire.
Specific hazards during fire fighting	: SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO ₂ , water spray, fire fighting foam, or Halon. LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.
Special protective equipment for fire-fighters	: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Firefighters' protective clothing will provide limited protection.

Further information : Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam. Exposure to decomposition products may be a hazard to health. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Evacuate personnel to safe areas. Ventilate the area. Remove all sources of ignition. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental precautions : Should not be released into the environment. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains, inform respective authorities.

Methods for cleaning up : Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling : Keep away from fire, sparks and heated surfaces. No smoking near areas where material is stored or handled. The product should only be stored and handled in areas with intrinsically safe electrical classification.

: Hydrocarbon liquids including this product can act as a non-conductive flammable liquid (or static accumulators), and may form ignitable vapor-air mixtures in storage tanks or other containers. Precautions to prevent static-initated 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-initated 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).

Requirements for storage including incompatibilities : 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.
- : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

List	Components	CAS-No.	Type:	Value
OSHA	Benzene - 29 CFR 1910.1028	71-43-2	TWA	1 ppm
		71-43-2	STEL	5 ppm
		71-43-2	OSHA_AL	0.5 ppm
OSHA Z1	Naphtha; Low boiling point naphtha	8030-30-6	PEL	100 ppm 400 mg/m3
	Xylene	1330-20-7	PEL	100 ppm 435 mg/m3
	N-hexane	110-54-3	PEL	500 ppm 1,800 mg/m3
	Cyclohexane	110-82-7	PEL	300 ppm 1,050 mg/m3
	Heptane [and isomers]	142-82-5	PEL	500 ppm 2,000 mg/m3
	Ethylbenzene	100-41-4	PEL	100 ppm 435 mg/m3
ACGIH	Naphtha; Low boiling point naphtha	8030-30-6	TWA	400 ppm
	Xylene	1330-20-7	TWA	100 ppm
		1330-20-7	STEL	150 ppm
	N-hexane	110-54-3	TWA	50 ppm
	Toluene	108-88-3	TWA	50 ppm
	Cyclohexane	110-82-7	TWA	100 ppm
	Pentane	109-66-0	TWA	600 ppm
	Heptane [and isomers]	142-82-5	TWA	400 ppm
		142-82-5	STEL	500 ppm
	Ethylbenzene	100-41-4	TWA	100 ppm
		100-41-4	STEL	125 ppm
Benzene	71-43-2	TWA	0.5 ppm	
	71-43-2	STEL	2.5 ppm	

- Engineering measures** : Use adequate ventilation to keep gas and vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Use only intrinsically safe electrical equipment approved for use in classified areas.
- Eye protection** : Safety glasses or goggles are recommended where there is a possibility of splashing or spraying. Ensure that eyewash stations and safety showers are close to the workstation location.
- Hand protection** : Gloves constructed of nitrile or neoprene are recommended. Consult manufacturer

specifications for further information.

Skin and body protection	: If needed to prevent skin contact, chemical protective clothing such as of DuPont TyChem®, Saranex or equivalent recommended based on degree of exposure. The resistance of specific material may vary from product to product as well as with degree of exposure.
Respiratory protection	: A NIOSH/ MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection. Use a NIOSH/ MSHA-approved positive-pressure supplied-air respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.
Work / Hygiene practices	: Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Clear to straw colored liquid
Odor	Characteristic hydrocarbon-like
Odor threshold	0.5 - 1.1 ppm
pH	Not applicable
Melting point/freezing point	About -101°C (-150°F)
Initial boiling point & range	49 – 177°C
Flash point	Flash point
Evaporation rate	Higher initially and declining as lighter components evaporate
Flammability (solid, gas)	Flammable vapor released by liquid
Upper explosive limit	7.6 %(V)
Lower explosive limit	1.3 %(V)
Vapor pressure	345 - 1,034 hPa at 37.8 °C (100.0 °F)
Vapor density (air = 1)	Approximately 3 to 4
Relative density (water = 1)	0.71 g/mL
Solubility (in water)	Negligible
Partition coefficient	2.1 – 6 as log Pow

(n-octanol/water)

Auto-ignition temperature	Approximately 250°C
Decomposition temperature	Will evaporate or boil and possibly ignite before decomposition occurs.
Kinematic viscosity	10.64 to 0.88 mm ² /s reported for gasoline
Conductivity (conductivity can be reduced by environmental factors such as a decrease in temperature)	Hydrocarbon liquids without static dissipater additive may have conductivity below 1 picoSiemens per meter (pS/m). The highest electro-static ignition risks are associated with "ultra-low conductivities" below 5 pS/m. See Section 7 for sources of information on defining safe loading and handling procedures for low conductivity products.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	Vapors may form explosive mixture with air. Hazardous polymerization does not occur
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Can react with strong oxidizing agents, peroxides, alkaline products and strong acids. Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.
Conditions to avoid	Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Avoid static charge accumulation and discharge (see Section 7).
Hazardous decomposition products	Ignition and burning can release carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

SECTION 11. TOXICOLOGICAL INFORMATION

Skin irritation	Irritating to skin. Can be partially absorbed through skin.
Eye irritation	Irritating to eyes.
Ingestion	Aspiration hazard if liquid is inhaled into lungs, particularly from vomiting after ingestion. Aspiration may result in chemical pneumonia, severe lung damage, respiratory failure and even death. Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death may occur.
Inhalation and further information	<p>Acute toxicity of benzene results primarily from depression of the central nervous system (CNS). Inhalation of concentrations over 50 ppm can produce headache, lassitude, weariness, dizziness, drowsiness, over excitation. Exposure to very high levels can result in unconsciousness and death.</p> <p>Repeated over-exposure may cause liver and kidney injuries. Components of the product may affect the nervous system.</p> <p>Exposure to light hydrocarbons has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain. This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC,</p>

OSHA and ACGIH.

Component

Naphtha

64742-89-9

Acute oral toxicity: LD50 mouse
Dose: 5,000 mg/kg

Acute dermal toxicity: LD50 rabbit
Dose: 3000 mg/kg

Acute inhalation toxicity: LC50 rat
Dose: > 20 mg/L for gasoline
Exposure time: 4 h

Skin irritation: Classification: Irritating to skin.
Result: Skin irritation for gasoline

Eye irritation: Classification: Irritating to eyes.
Result: Mild eye irritation for gasoline

Carcinogenicity

NTP

Benzene (CAS-No.: 71-43-2)

IARC

Ethylbenzene (CAS-No.: 100-41-4)
Benzene (CAS-No.: 71-43-2)

OSHA

Benzene (CAS-No.: 71-43-2)

CA Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

Ethylbenzene (CAS-No.: 100-41-4)
Benzene (CAS-No.: 71-43-2)

WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Toluene (CAS-No.: 108-88-3)
Benzene (CAS-No.: 71-43-2)

SECTION 12. ECOLOGICAL INFORMATION

Additional ecological information

: Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

Component:

Naphtha

64742-89-8

Toxicity to fish:

LC50

Species: Daphnia

Dose: 10 to 100 mg/L by inference

Exposure time: 24 h

Toxicity to algae:

IC50

Species: Selenastrum capricornutum (green algae)

Dose: 6.5 mg/l

Exposure time: 72 h

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal

: Dispose of container and unused contents in accordance with federal, state and

local requirements.

SECTION 14. TRANSPORT INFORMATION

CFR

Proper shipping name : PETROLEUM DISTILLATES, N.O.S. (Naphtha)
 UN-No. : 1268
 Class : 3
 Packing group : II
 Hazard inducer : (Naphtha; Low boiling point naphtha)

TDG

Proper shipping name : PETROLEUM DISTILLATES, N.O.S. (Naphtha)
 UN-No. : UN1268
 Class : 3
 Packing group : II
 Hazard inducer : (Naphtha; Low boiling point naphtha)

IATA Cargo Transport

UN UN-No. : UN1268
 Description of the goods : PETROLEUM DISTILLATES, N.O.S.
 (Naphtha; Low boiling point naphtha)
 Class : 3
 Packaging group : II
 ICAO-Labels : 3
 Packing instruction (cargo aircraft) : 364
 Packing instruction (cargo aircraft) : Y341

IATA Passenger Transport

UN UN-No. : UN1268
 Description of the goods : PETROLEUM DISTILLATES, N.O.S.
 (Naphtha; Low boiling point naphtha)
 Class : 3
 Packaging group : II
 ICAO-Labels : 3
 Packing instruction (passenger aircraft) : 353
 Packing instruction (passenger aircraft) : Y341

IMDG-Code

UN-No. : UN 1268
 Description of the goods : PETROLEUM DISTILLATES, N.O.S.
 (Naphtha; Low boiling point naphtha)
 Class : 3
 Packaging group : II
 IMDG-Labels : 3
 EmS Number : F-E S-E
 Marine pollutant : No

SECTION 15. REGULATORY INFORMATION

TSCA Status : On TSCA Inventory

DSL Status : All components of this product are on the Canadian DSL list.

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

SARA III US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

<u>Components</u>	<u>CAS-No.</u>
1,2,4-Trimethylbenzene	95-63-6
Benzene	71-43-2
Ethylbenzene	100-41-4
Cyclohexane	110-82-7
Toluene	108-88-3
N-hexane	110-54-3
Xylene	1330-20-7

PENN RTK US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

<u>Components</u>	<u>CAS-No.</u>
Heptane [and isomers]	142-82-5
Ethylbenzene	100-41-4
Benzene	71-43-2
1,2,4-Trimethylbenzene	95-63-6
Sulfur	7704-34-9
Pentane	109-66-0
Naphtha; Low boiling point naphtha	8030-30-6
Xylene	1330-20-7
N-hexane	110-54-3
Toluene	108-88-3
Cyclohexane	110-82-7

MASS RTK US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

<u>Components</u>	<u>CAS-No.</u>
Heptane [and isomers]	142-82-5
Ethylbenzene	100-41-4
Benzene	71-43-2
1,2,4-Trimethylbenzene	95-63-6

Sulfur	7704-34-9
Naphtha; Low boiling point naphtha	8030-30-6
Xylene	1330-20-7
N-hexane	110-54-3
Toluene	108-88-3
Cyclohexane	110-82-7

NJ RTK US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

<u>Components</u>	<u>CAS-No.</u>
Heptane [and isomers]	142-82-5
Ethylbenzene	100-41-4
Benzene	71-43-2
1,2,4-Trimethylbenzene	95-63-6
Sulfur	7704-34-9
Naphtha; Low boiling point naphtha	8030-30-6
Xylene	1330-20-7
N-hexane	110-54-3
Toluene	108-88-3
Cyclohexane	110-82-7

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIROMENT)

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.

California Prop. 65 : WARNING! This product contains a chemical known to the State of California to cause cancer.

Ethylbenzene 100-41-4

Benzene 71-43-2

WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Toluene 108-88-3

Benzene 71-43-2

SECTION 16. OTHER INFORMATION

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Date : 06/10/2014

257, 258, 1,017, 1,019, 1,021, 1,027, 1,716