SAFETY DATA SHEET

Intermediate Naphtha

Section 1. Identification

Product name : Intermediate Naphtha

Product code : Not available.

Synonyms : ARU Depenatizer Bottoms, Benfree Feed, Benzap Charge, Benzap Product, Coker HPD, Coker LPD, Coker Naphtha, Coker PD, Coker Straight Run, CRU1 Light Reformer Feed, CRU2 Reformer Feed, Crude Splitter Bottoms, DeC2 liquid charge, Dehexanizer Overhead, Depent bottoms, Depentanizer (Rerun) Bottoms, Depentanizer (Rerun) Overhead, Depentanizer Overhead, FCC Debutanizer Bottoms, Feed Splitter bottoms, Feed Splitter charge, Gas Con Debutanizer Bottoms, Gofiner Naphtha, Heavy Naphtha, Heavy Straight Run HSR), HT5 Stripper Naphtha, HTU4 stripper overhead, Hydrobon Charge, Isomerate, Low sulfur gas, Light Straight Run Naphtha (LSR), Naphtha, Naphtha Splitter bottoms, Naphtha Splitter overhead, Naphtha to East, NHDS charge, NHT Charge, NHT Debutanizer Bottoms, NSU Bottoms, NSU Overhead, Overhead liquids, Platformer Charge, PLO - FCCU primary lean oil, Preflash Tower heavy naphtha, Preflash Tower light naphtha, Prefractionator Charge, Reformer Charge, Reformer Stabilizer Feed, Scanfiner Charge, Scanfiner Stripper Bottoms, Scanfiner Stripper Btms, Sour Naphtha, Splitter Bottoms, Splitter Feed Charge, Stabilizer bottoms, Stabilizer Charge, Stabilizer Naphtha, Straight Run Gasoline, Sweet Naphtha, Unifiner Charge, Wild Naphtha

Relevant identified uses of the substance or mixture and uses advised against

Product use : Intermediate.

Area of application : Industrial applications.

Manufacturer : *HF Sinclair*
2828 North Harwood
Suite 1300
Dallas, Texas 75201
USA
Customer Service:
(214) 954-6720

Emergency telephone number : CHEMTREC® (800) 424-9300
CCN 201319

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture :

H226	FLAMMABLE LIQUIDS - Category 3
H315	SKIN IRRITATION - Category 2
H340	GERM CELL MUTAGENICITY - Category 1
H350	CARCINOGENICITY - Category 1B
H361	TOXIC TO REPRODUCTION - Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H304	ASPIRATION HAZARD - Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H226 - Flammable liquid and vapor.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H336 - May cause drowsiness or dizziness.
H340 - May cause genetic defects.
H350 - May cause cancer.
H361 - Suspected of damaging fertility or the unborn child.

Precautionary statements

Prevention : Obtain special instructions before use. Wear protective gloves. Wear protective clothing. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid breathing vapor. Wash thoroughly after handling.

Response : IF exposed or concerned: Get medical advice or attention. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water.

Storage : Store in a well-ventilated place. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and receiving equipment. These alone may be insufficient to remove static electricity.

Hazards not otherwise classified : May release hydrogen sulfide a poisonous gas that can accumulate in confined spaces. Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor may cause flash fire or explosion.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Other names	%	CAS number
Naphtha	-	0 - 100	8030-30-6
n-hexane	-	0 - 15	110-54-3
toluene	-	0 - 15	108-88-3
pentane	-	0 - 15	109-66-0
cyclohexane	-	0 - 13	110-82-7
benzene	-	0 - 10	71-43-2
heptane	-	0 - 10	142-82-5
1,2,4-trimethylbenzene	-	0 - 6	95-63-6
nonane	-	0 - 5	111-84-2
ethylbenzene	-	0 - 4	100-41-4
hydrogen sulfide	-	>0.01	7783-06-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention. Continue to rinse for at least 15 minutes.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : May cause mild eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : pain or irritation; watering; redness

Inhalation : respiratory tract irritation; coughing; nausea or vomiting; headache; drowsiness/fatigue; dizziness/vertigo; unconsciousness

Skin contact : irritation; redness; dryness; cracking

Ingestion : nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents.

Specific treatments : No specific treatment.

Protection of medical responders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static accumulation may be significantly increased by the presence of small quantities of water or other contaminants. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. May release hydrogen sulfide a poisonous gas that can accumulate in confined spaces.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. May release hydrogen sulfide a poisonous gas that can accumulate in confined spaces.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, waterways, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the

same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Restrict flow velocity according to API 2003 (2008), NFPA 77 (2007), and Laurence Britton, “Avoiding Static Ignition Hazards in Chemical Operations”. To reduce potential for static discharge, ensure that all equipment is properly grounded and bonded and meets appropriate electrical classification requirements. High pressure skin injections are serious medical emergencies. Injury will not appear serious at first. Within a few hours, tissue will become swollen, discolored and extremely painful. May release hydrogen sulfide a poisonous gas that can accumulate in confined spaces.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Naphtha	**NIOSH REL (United States, 10/2016).** TWA: 400 mg/m³ 10 hours. TWA: 100 ppm 10 hours. **OSHA PEL (United States, 6/2016).** TWA: 400 mg/m³ 8 hours. TWA: 100 ppm 8 hours.
n-hexane	**NIOSH REL (United States, 10/2016).** TWA: 50 ppm 10 hours. TWA: 180 mg/m³ 10 hours. **ACGIH TLV (United States, 3/2017). Absorbed through skin.** TWA: 50 ppm 8 hours. **OSHA PEL (United States, 6/2016).** TWA: 500 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.
toluene	**OSHA PEL Z2 (United States, 2/2013).** TWA: 200 ppm 8 hours. CEIL: 300 ppm

	AMP: 500 ppm 10 minutes. **NIOSH REL (United States, 10/2016).** TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes. **ACGIH TLV (United States, 3/2017).** TWA: 20 ppm 8 hours.
pentane	**NIOSH REL (United States, 10/2016).** TWA: 120 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 610 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes. **ACGIH TLV (United States, 3/2017).** TWA: 1000 ppm 8 hours. **OSHA PEL (United States, 6/2016).** TWA: 1000 ppm 8 hours. TWA: 2950 mg/m³ 8 hours.
cyclohexane	**ACGIH TLV (United States, 3/2017).** TWA: 100 ppm 8 hours. **NIOSH REL (United States, 10/2016).** TWA: 300 ppm 10 hours. TWA: 1050 mg/m³ 10 hours. **OSHA PEL (United States, 6/2016).** TWA: 300 ppm 8 hours. TWA: 1050 mg/m³ 8 hours.
benzene	**ACGIH TLV (United States, 3/2017). Absorbed through skin.** TWA: 0.5 ppm 8 hours. TWA: 1.6 mg/m³ 8 hours. STEL: 2.5 ppm 15 minutes. STEL: 8 mg/m³ 15 minutes. **OSHA PEL Z2 (United States, 2/2013).** TWA: 10 ppm 8 hours. CEIL: 25 ppm AMP: 50 ppm 10 minutes. **NIOSH REL (United States, 10/2016).** TWA: 0.1 ppm 10 hours. STEL: 1 ppm 15 minutes. **OSHA PEL (United States, 6/2016).** TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes.
heptane	**ACGIH TLV (United States, 3/2017).** TWA: 400 ppm 8 hours. TWA: 1640 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 2050 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2016).** TWA: 85 ppm 10 hours. TWA: 350 mg/m³ 10 hours. CEIL: 440 ppm 15 minutes. CEIL: 1800 mg/m³ 15 minutes. **OSHA PEL (United States, 6/2016).** TWA: 500 ppm 8 hours. TWA: 2000 mg/m³ 8 hours.
1,2,4-trimethylbenzene	**ACGIH TLV (United States, 3/2017).** TWA: 25 ppm 8 hours. TWA: 123 mg/m³ 8 hours. **NIOSH REL (United States, 10/2016).** TWA: 25 ppm 10 hours. TWA: 125 mg/m³ 10 hours.
nonane	**ACGIH TLV (United States, 3/2017).** TWA: 200 ppm 8 hours. TWA: 1050 mg/m³ 8 hours. **NIOSH REL (United States, 10/2016).** TWA: 200 ppm 10 hours. TWA: 1050 mg/m³ 10 hours.
ethylbenzene	**ACGIH TLV (United States, 3/2017).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2016).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes.

hydrogen sulfide	**PEL (United States, 6/2016).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. **ACGIH TLV (United States, 3/2017).** TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes. **OSHA PEL Z2 (United States, 2/2013).** CEIL: 20 ppm AMP: 50 ppm 10 minutes. **NIOSH REL (United States, 10/2016).** CEIL: 10 ppm 10 minutes. CEIL: 15 mg/m³ 10 minutes.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. May release hydrogen sulfide a poisonous gas that can accumulate in confined spaces.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Clear./Amber.

Odor : Gasoline

Odor threshold : Not available.

pH : Not available.

Melting point : <-77°C (<-106.6°F)

Boiling point : 53 to 397°C (127to 747°F)

Flash point : <38°C (<100°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not applicable.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : 6.9 to 68.9 kPa (51.711 to 517.11 mm Hg)
1 - 10 psi

Vapor density : Not available.

Specific gravity : 0.62 to 0.87

Density : Not available.

Solubility : Insoluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): 0.003 to 0.08 cm^2/s (0.3 to 8 cSt)

Flow time (ISO 2431) : Not available.

Molecular weight : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Naphtha	LC50 Inhalation Vapor LD50 Dermal LD50 Oral	Rat Rabbit Rat	>5.2 mg/l >2000 mg/kg >5000 mg/kg	4 hours - -

Conclusion/Summary : Based on CONCAWE assessment of low boiling point naphthas (Gasolines).

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Naphtha	Eyes - Mild irritant Skin - Moderate irritant	Rabbit Rabbit	- -	100 microliters 500 microliters	- -

Conclusion/Summary

Skin : Based on CONCAWE assessment of low boiling point naphthas (Gasolines) . Slight to moderate/severe irritating to skin.

Eyes : Based on CONCAWE assessment of low boiling point naphthas (Gasolines). Non-irritating to the eyes.

Sensitization

Conclusion/Summary

Skin : Based on CONCAWE assessment of low boiling point naphthas (Gasolines). Not sensitizing.

Respiratory : No data available.

Carcinogenicity

Product/ingredient name	OSHA	IARC	NTP
ethylbenzene	-	2B	-

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Naphtha	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
n-hexane nonane ethylbenzene	Category 2 Category 2 Category 2	inhalation - -	nervous system central nervous system (CNS) hearing organs

Aspiration hazard

Name	Result
Naphtha	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : Based on CONCAWE assessment of low boiling point naphthas (Gasolines). Inhalation: No systemic toxicity. Dermal: No systemic toxicity.

General : No known significant effects or critical hazards.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : May cause genetic defects.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Intermediate Naphtha	4617.9	60416.7	113280	178.6	N/A
Naphtha	N/A	2500	N/A	N/A	N/A
n-hexane	15840	N/A	N/A	169.2	N/A
pentane	2500	N/A	N/A	364	N/A
cyclohexane	6240	N/A	N/A	N/A	N/A
heptane	N/A	N/A	48000	103	N/A
1,2,4-trimethylbenzene	3280	2500	N/A	18	N/A
nonane	N/A	N/A	3200	17	N/A
ethylbenzene	3500	N/A	N/A	11	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Naphtha	Acute EC50 1 to 10 mg/l Acute IC50 1 to 10 mg/l Acute LC50 1 to 10 mg/l	Daphnia Algae Fish	48 hours 96 hours 96 hours

Conclusion/Summary : Based on CONCAWE assessment of low boiling point naphthas (Gasolines).

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
pentane	OECD 301F Ready Biodegradability - Manometric Respirometry Test	87 % - Readily - 28 days	-	-
ethylbenzene	ISO	70 to 80 % - Readily - 28 days	-	Activated sludge

Conclusion/Summary : Based on CONCAWE assessment of low boiling point naphthas (Gasolines).

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Naphtha	-	-	Inherent

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Naphtha	>4	10 to 2500	high

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Toluene; Benzene, methyl-	108-88-3	Listed	U220
Cyclohexane (I); Benzene, hexahydro- (I)	110-82-7	Listed	U056
Benzene (I,T)	71-43-2	Listed	U019

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN1268	UN1268	UN1268
UN proper shipping name	Petroleum distillates, n.o.s.	PETROLEUM DISTILLATES, N. O.S.	Petroleum distillates, n.o.s.
Transport hazard class(es)	3 	3 	3 
Packing group	III	III	III
Environmental hazards	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

DOT Classification : **Reportable quantity** 200 lbs / 90.8 kg [32.197 gal / 121.88 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
Limited quantity Yes.
Packaging instruction Exceptions: 150. Non-bulk: 203. Bulk: 242.
Quantity limitation Passenger aircraft/rail: 60 L. Cargo aircraft: 220 L.
Special provisions 144, B1, IB3, T4, TP1, TP29

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-E, S-E
Special provisions 223, 955

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 L. Packaging instructions: Y344.
Special provisions A3

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations :

TSCA 4(a) final test rules: nonane

TSCA 8(a) PAIR: pentane; heptane; nonane

TSCA 12(b) one-time export: nonane

United States inventory (TSCA 8b): All components are active or exempted.

Clean Water Act (CWA) 307: toluene; benzene; ethylbenzene

Clean Water Act (CWA) 311: toluene; cyclohexane; benzene; ethylbenzene; hydrogen sulphide

Clean Air Act (CAA) 112 regulated flammable substances: pentane

RCRA (Resource Conservation and Recovery Act) Hazardous waste constituents appendix VIII to 40 CFR part 261

Name	%	Status
toluene	0 - 15	Listed
benzene	0 - 10	Listed

Department of homeland security (DHS), Chemical Facility Anti-terrorism Standards (6 CFR 27), Appendix A, Chemicals of Interest

	Name	%	Status
Release	pentane	0 - 15	Listed
Security	pentane	0 - 15	Listed
	hydrogen sulphide	>0.01	Listed

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

DEA List II Chemicals (Essential Chemicals) : Listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ (lbs)	SARA 302 TPQ (gallons)	SARA 304 RQ (lbs)	SARA 304 RQ (gallons)
hydrogen sulphide	>0.01	Yes.	500	-	100	-

SARA 304 RQ : 909090.9 lbs / 412727.3 kg [146350.3 gal / 553996.3 L]

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 3
SKIN IRRITATION - Category 2
GERM CELL MUTAGENICITY - Category 1
CARCINOGENICITY - Category 1B
TOXIC TO REPRODUCTION - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
ASPIRATION HAZARD - Category 1
HNOC - Static-accumulating flammable liquid

Composition/information on ingredients

Name	%	Classification
Naphtha	0 - 100	FLAMMABLE LIQUIDS - Category 1 SKIN IRRITATION - Category 2 GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1B TOXIC TO REPRODUCTION (Fertility) - Category 2 TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
n-hexane	0 - 15	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Fertility) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (nervous system, peripheral nervous system) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
toluene	0 - 15	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4

		SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (nervous system) (inhalation) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
pentane	0 - 15	FLAMMABLE LIQUIDS - Category 2 SIMPLE ASPHYXIANTS HNOC - Defatting irritant
cyclohexane	0 - 13	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
benzene	0 - 10	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (haematopoietic system) (oral) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (haematopoietic system) (inhalation) - Category 1 ASPIRATION HAZARD - Category 1
heptane	0 - 10	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
1,2,4-trimethylbenzene	0 - 6	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
nonane	0 - 5	FLAMMABLE LIQUIDS - Category 3

		ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS)) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
ethylbenzene	0 - 4	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
hydrogen sulfide	>0.01	HNOC - Static-accumulating flammable liquid FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas ACUTE TOXICITY (inhalation) - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	n-hexane toluene cyclohexane benzene 1,2,4-trimethylbenzene ethylbenzene	110-54-3 108-88-3 110-82-7 71-43-2 95-63-6 100-41-4	0 - 15 0 - 15 0 - 13 0 - 10 0 - 6 0 - 4
Supplier notification	n-hexane toluene cyclohexane benzene 1,2,4-trimethylbenzene ethylbenzene	110-54-3 108-88-3 110-82-7 71-43-2 95-63-6 100-41-4	0 - 15 0 - 15 0 - 13 0 - 10 0 - 6 0 - 4

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: NAPHTHA VM&P; NAPHTHA; HEXANE; N-HEXANE; TOLUENE; METHYLBENZENE; PENTANE; CYCLOHEXANE; HEXAHYDROBENZENE; BENZENE; BENZOL DILUENT; HEPTANE; N-HEPTANE; PSEUDOCUMENE; NONANE; ETHYL BENZENE

New York : The following components are listed: Hexane; Toluene; Cyclohexane; Benzene, hexahydro-; Benzene; Ethylbenzene

New Jersey : The following components are listed: NAPHTHA; BENZIN; n-HEXANE; HEXANE; TOLUENE; BENZENE, METHYL-; PENTANE; CYCLOHEXANE; BENZENE; n-HEPTANE; HEPTANE; PSEUDOCUMENE; 1,2,4-TRIMETHYL BENZENE; NONANE; ETHYL BENZENE; BENZENE, ETHYL-

Pennsylvania : The following components are listed: PETROLEUM DISTILLATES; NAPHTHA 49 DEGREE BE-COAL TAR TYPE; HEXANE; BENZENE, METHYL-; PENTANE; CYCLOHEXANE; BENZENE; BENZOL DILUENT; HEPTANE; PSEUDOCUMENE; NONANE; BENZENE, ETHYL-

California Prop. 65

⚠ **WARNING**: This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Ethylbenzene, which is known to the State of California to cause cancer, and n-hexane and Toluene, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
n-hexane	-	Yes.
Toluene	-	Yes.
Benzene	Yes.	Yes.
Ethylbenzene	Yes.	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.

Malaysia : Not determined

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

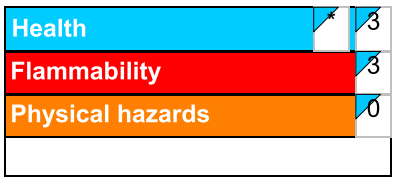
Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Turkey : Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 3	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
GERM CELL MUTAGENICITY - Category 1	Calculation method
CARCINOGENICITY - Category 1B	Expert judgment
TOXIC TO REPRODUCTION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
ASPIRATION HAZARD - Category 1	On basis of test data

Date of issue/Date of revision : 07/07/2020

Date of previous issue : 11/08/2017

Version : 3

Key to abbreviations : ATE = Acute Toxicity Estimate
AMP = Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named manufacturer, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.