

Light Aromatic Concentrate

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Trade name	Light Aromatic Concentrate	
Synonyms	Pyrolysis Gasoline, Pentane Aromatics, Light Pygas	
Use	Fuel, Industrial use, Raw material for chemical processes	
Company	Sasol Chemicals (USA) LLC (an affiliate of Sasol Chemicals North America LLC)	
Address	12120 Wickchester Lane, Houston, TX 77079	
Telephone	CHEMTREC North America Transportation Emergency (24-hr)	(800) 424 9300
	CHEMTREC World Wide	(703) 527-3887
	Other Emergencies (24-hr)	(337) 494 5142
	SDS and Product Information (8:00am-4:30pm CST)	(281) 588 3491
	Health and Safety Information (7:30am-4:00pm CST)	(281) 588 3492
E-mail address	SasolElectronicSDS@us.sasol.com	

SECTION 2 HAZARDS IDENTIFICATION

OSHA/GHS Hazards	Flammable liquids	Category 2
	Carcinogenicity	Category 1A
	Germ cell mutagenicity	Category 1B
	Specific target organ toxicity - repeated exposure	Category 1
	Aspiration hazard	Category 1
	Eye irritation	Category 2A
	Skin irritation	Category 2
	Chronic aquatic toxicity	Category 2

LABEL ELEMENTS

Hazard symbols



Signal word Danger

Hazard statements	H225 Highly flammable liquid and vapour.
	H304 May be fatal if swallowed and enters airways.
	H315 Causes skin irritation.
	H319 Causes serious eye irritation.
	H340 May cause genetic defects.

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- H350 May cause cancer.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

- Prevention**
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 - P240 Ground/bond container and receiving equipment.
 - P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
 - P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 - P201 Obtain special instructions before use.
 - P202 Do not handle until all safety precautions have been read and understood.
 - P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
 - P264 Wash skin thoroughly after handling.
 - P270 Do not eat, drink or smoke when using this product.
 - P273 Avoid release to the environment.
- Response**
- P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.
 - P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 - P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 - P310 Immediately call a POISON CENTER or doctor/ physician.
 - P391 Collect spillage.
- Storage**
- P403 + P405 + P235 Store locked up in a well-ventilated place. Keep cool.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

<u>Components</u>	<u>CAS-No.</u>	<u>Weight percent</u>
Benzene	71-43-2	30 - 60
Dicyclopentadiene	77-73-6	<25
Cyclopentadiene	542-92-7	<20
Styrene	100-42-5	<10
Toluene	108-88-3	<10
Naphthalene	91-20-3	<5
Pentane	109-66-0	<3
Heptane	142-82-5	<2
Hexane	110-54-3	<2
Indene	95-13-6	<2
Octane	111-65-9	<2
Benzene, ethyl-	100-41-4	<2
Xylene	1330-20-7	<2
Cyclohexadiene	628-41-1	<2

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See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

SECTION 4 FIRST AID MEASURES

- Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
- Inhalation** Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. In case of shortness of breath, give oxygen. Call a physician immediately.
- Ingestion** If swallowed, call a poison control centre or doctor immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

SECTION 5 FIREFIGHTING MEASURES

FLAMMABLE PROPERTIES

Fire/explosion Vapours may form explosive mixture with air. Fire will produce dense black smoke containing hazardous combustion products (see section 10).
NFPA Class 1B flammable liquid.

Suitable extinguishing media Water spray. Foam. Dry chemical. Carbon dioxide (CO₂).

Protective equipment and precautions for firefighters Wear self-contained breathing apparatus and protective suit.

Further information Prevent further leakage or spillage if safe to do so. Evacuate personnel to safe areas.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up Evacuate the area and eliminate all sources of ignition. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7 HANDLING AND STORAGE

Safe handling advice Take measures to prevent the build up of electrostatic charge. Ensure all equipment is electrically grounded before beginning transfer operations.

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Storage/Transport pressure Ambient

Load/Unload temperature Ambient

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES

Air contaminant levels should be controlled below the PEL or TLV for this product (see Exposure Guidelines).

PERSONAL PROTECTIVE EQUIPMENT

Eyes Wear as appropriate:
Goggles. Face-shield.

Skin Wear suitable protective clothing, gloves and eye/face protection.

Inhalation When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Use NIOSH approved respiratory protection.

EXPOSURE GUIDELINES

Components Exposure limit(s)

Benzene OSHA TWA 1 ppm
OSHA STEL (Short Term Exposure Limit) 5 ppm
ACGIH TLV (8-hour) 0.5 ppm
ACGIH STEL (Short Term Exposure Limit) 2.5 ppm

Dicyclopentadiene ACGIH TLV (8-hour) 5 ppm

Cyclopentadiene ACGIH TLV (8-hour) 75 ppm
OSHA PEL (Permissible Exposure Limit) 75 ppm 200 mg/m³

Styrene OSHA PEL (Permissible Exposure Limit) 100 ppm
ACGIH TLV (8-hour) 20 ppm 85 mg/m³
OSHA Ceiling 200 ppm
ACGIH STEL (Short Term Exposure Limit) 40 ppm 170 mg/m³

Toluene ACGIH TLV (8-hour) 20 ppm
OSHA TWA 200 ppm
OSHA Ceiling 300 ppm
OSHA STEL (Short Term Exposure Limit) 150 ppm

Naphthalene OSHA PEL (Permissible Exposure Limit) 10 ppm 50 mg/m³
ACGIH TLV (8-hour) 10 ppm 50 mg/m³
NIOSH Recommended Exposure Limit 10 ppm 50 mg/m³
NIOSH Short term exposure limit 15 ppm 75 mg/m³
NIOSH NIOSH IDLH (Immediately Dangerous to Life or Health Concentrations) 250 ppm

Pentane ACGIH TLV (8-hour) 1,000 ppm

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OSHA PEL (Permissible Exposure Limit) 1,000 ppm 2,950 mg/m³
 NIOSH Ceiling 610 ppm 1,800 mg/m³

Heptane OSHA PEL (Permissible Exposure Limit) 500 ppm 2,000 mg/m³
 ACGIH TLV (8-hour) 400 ppm 1,640 mg/m³
 ACGIH STEL (Short Term Exposure Limit) 500 ppm 2,050 mg/m³
 NIOSH Ceiling 440 ppm 1,800 mg/m³

Hexane ACGIH TLV (8-hour) 50 ppm
 OSHA PEL (Permissible Exposure Limit) 500 ppm 1,800 mg/m³
 *Skin Hazard: Skin exposure should be prevented or reduced to control skin absorption.

Indene ACGIH TLV (8-hour) 5 ppm

Octane ACGIH TLV (8-hour) 300 ppm
 OSHA PEL (Permissible Exposure Limit) 500 ppm 2,350 mg/m³

Benzene, ethyl- OSHA PEL (Permissible Exposure Limit) 100 ppm
 ACGIH TLV (8-hour) 20 ppm

Xylene OSHA PEL (Permissible Exposure Limit) 100 ppm 435 mg/m³
 ACGIH TLV (8-hour) 100 ppm
 ACGIH STEL (Short Term Exposure Limit) 150 ppm

PEL= Permissible Exposure Limits
 TLV= Threshold Limit Value
 EL= Excursion Limit

TWA= Time Weighted Average (8 hr.)
 STEL= Short Term Exposure Limit (15 min.)
 WEEL= Workplace Environmental Exposure Level

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance liquid

Colour clear
 yellowish

Form liquid

Odour strong aromatic

Odour Threshold No data available

Flash point < -11 °C, < 12 °F; D-56;

Flammability Upper explosion limit: 7.1 %(V)
 Lower explosion limit: 1.3 %(V)

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Boiling point/boiling range	48 - 179 °C, 120 - 355 °F; ASTM D-86;
Melting point/range	Pour point: -45 °C, -50 °F; ASTM D-97;
Auto-ignition temperature	Not available
Decomposition temperature	No data available
Flammability (solid, gas)	No data available
Vapour pressure	5.4 psia @ 38 °C, 100 °F;
Vapour density	2 - 3
Density	7.09 lb/gal
Relative density	0.85
Water solubility	negligible
Viscosity	No data available
pH	No data available
Evaporation rate	No data available
Partition coefficient: n-octanol/water	No data available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	No decomposition if stored and applied as directed.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Keep away from heat and sources of ignition.
Hazardous decomposition products	Carbon oxides
Materials to avoid	Oxidizing agents.
Hazardous polymerisation	None.

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SECTION 11 TOXICOLOGICAL INFORMATION

Additional Remarks	This product contains polynuclear hydrocarbons. Some polynuclear aromatic hydrocarbons have been shown to cause skin tumors in laboratory test animals.
Acute dermal toxicity	No data available
Acute inhalation toxicity	No data available
Acute oral toxicity	No data available
Skin corrosion/irritation	Test substance: Benzene and other aromatic hydrocarbons. Irritant Possibly toxic through skin absorption.
Serious eye damage/eye irritation	Test substance: Benzene and other aromatic hydrocarbons. Irritant
Respiratory or skin sensitisation	No data available
Germ cell mutagenicity	Genotoxicity in vitro: No data available Genotoxicity in vivo: No data available Assessment Mutagenicity: May cause genetic defects.
Reproductive toxicity	Reproductive toxicity: No data available Assessment Reproductive toxicity: No data available Teratogenicity: No data available Assessment teratogenicity: No data available
STOT - single exposure	No data available
STOT - repeated	Causes damage to organs through prolonged or repeated exposure.

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exposure

Aspiration toxicity May be fatal if swallowed and enters airways.

Carcinogenicity **Assessment carcinogenicity:**
May cause cancer.

Carcinogenicity ratings

Benzene

NTP Known to be a human carcinogen.
OSHA Carcinogen
IARC Carcinogenic to humans.

Styrene

IARC Possible human carcinogen

Naphthalene

NTP Reasonably anticipated to be a human carcinogen.
IARC Possible human carcinogen

Benzene, ethyl-

IARC Group 2B: Possibly carcinogenic to humans

SECTION 12 ECOLOGICAL INFORMATION

Aquatic toxicity Toxic to aquatic life with long lasting effects.

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) 96 hours: 5.3 mg/l
Test substance: Benzene

Toxicity to aquatic invertebrates EC50 (Daphnia magna (Water flea)) 48 hours: 10 mg/l
Test substance: Benzene

Toxicity to algae ErC50 (Pseudokirchneriella subcapitata (green algae)) 72 hours: 100 mg/l
Test substance: Benzene

Chronic toxicity to fish NOEC (Pimephales promelas (fathead minnow)) 32 d: 0.8 mg/l
Test substance: Benzene

Chronic toxicity to aquatic invertebrates NOEC (Ceriodaphnia dubia (water flea)) 7 d: 3 mg/l
Test substance: Benzene

Biodegradation Readily biodegradable.
OECD Test Guideline 301F (28 d): 96 %
Test substance: Benzene

Bioaccumulative potential No data available

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Mobility in soil No data available

Other adverse effects No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Code D001 - Ignitability (RQ 100 LB). This product has the RCRA characteristic of ignitability. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification.

Disposal methods Dispose of only in accordance with local, state, and federal regulations. Land disposal of this product is restricted. Do not contaminate any lakes, streams, ponds, groundwater or soil.

Empty containers. Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

SECTION 14 TRANSPORT INFORMATION

DOT UN 3295, Hydrocarbons, liquid, n.o.s., 3, II
RQ (Benzene, Naphthalene)

IATA UN 3295, Hydrocarbons, liquid, n.o.s., 3, II
RQ (Benzene, Naphthalene)

IMDG UN 3295, Hydrocarbons, liquid, n.o.s., 3, II
RQ (Benzene, Naphthalene)

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

Remarks No data available

SECTION 15 REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

**TSCA Inventory Listing
Components**

CAS-No.

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Gasoline, Pyrolysis, Debutanizer Bottoms

68606-10-0

All chemical substances in this product are either on the TSCA Active Inventory, or in compliance with the inventory.

SARA 302 Status

Components

CAS-No.

Weight percent

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

SARA 311/312 Classification

Should this product meet EPCRA 311/312 Tier reporting criteria of 40 CFR 370, refer to Section 2 of this SDS for appropriate classification and Section 3 for components that meet the hazardous classification.

SARA 313 Chemical

Components

CAS-No.

Weight percent

Benzene	71-43-2	30 - 60 %
Dicyclopentadiene	77-73-6	< 25 %
Benzene, ethenyl-	100-42-5	< 10 %
Toluene	108-88-3	< 10 %
Naphthalene	91-20-3	< 5 %
Hexane	110-54-3	< 2 %
Benzene, ethyl-	100-41-4	< 2 %
Benzene, dimethyl-	1330-20-7	< 2 %

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Components

Reportable Quantity

Weight percent

Benzene	10 LB	30 - 60 %
Benzene, ethenyl-	1,000 LB	< 10 %
Toluene	1,000 LB	< 10 %
Naphthalene	100 LB	< 5 %
Hexane	5,000 LB	< 2 %
Benzene, ethyl-	1,000 LB	< 2 %
Benzene, dimethyl-	100 LB	< 2 %

INTERNATIONAL REGULATIONS

WHMIS Classification

Flammable liquids	Category 2
Carcinogenicity	Category 1A
Germ cell mutagenicity	Category 1B
Specific target organ toxicity - repeated exposure	Category 1
Aspiration hazard	Category 1
Eye irritation	Category 2A
Skin irritation	Category 2
Chronic aquatic toxicity	Category 2

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European Union

Classification according to Regulation (EU) 1272/2008.

Flammable liquids, Category 2
 Aspiration hazard, Category 1
 Carcinogenicity, Category 1A
 Eye irritation, Category 2
 Germ cell mutagenicity, Category 1B
 Skin irritation, Category 2
 Specific target organ toxicity - repeated exposure, Category 1
 Chronic aquatic toxicity, Category 2

Australia. Inventory of Chemical Substances (AICS)	Listed
Japan. Inventory of Existing and New Chemical Substances (ENCS)	Not listed
Japan. ISHL - Inventory of Chemical Substances	Not listed
Canada. Domestic Substances List (DSL) Inventory	Not listed
Canada. Non-Domestic Substance Listing (NDSL)	Not listed
Philippines. Inventory of Chemicals / Chemical Substances (PICCS)	Not listed
Korea. Existing Chemicals Inventory (KECI)	Listed
China. Inventory of Existing Chemical Substances (IECSC)	Not listed
Mexico. National Inventory of Chemical Substances (INSQ)	Not listed
New Zealand. Inventory of Chemical Substances (NZIoC)	Not listed
Switzerland. Inventory of Notified New Substances (CHINV)	Listed
Taiwan. National Existing Chemical Inventory (NECI)	Listed

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in Section 3.

STATE REGULATIONS

California Prop. 65

<u>Components</u>	<u>CAS-No.</u>
Benzene	71-43-2
Benzene, ethenyl-	100-42-5
Toluene	108-88-3
Naphthalene	91-20-3
Hexane	110-54-3
Benzene, ethyl-	100-41-4



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SECTION 16 OTHER INFORMATION

HAZARD RATINGS

	<u>Health</u>	<u>Flammability</u>	<u>Physical Hazard/ Instability</u>
HMIS®	2*	3	1
NFPA	2	3	1

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