

## Heavy Aromatic Distillate

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

<b>Trade name</b>	Heavy Aromatic Distillate		
<b>Synonyms</b>	Hydrocarbon mixture containing cyclic and unsaturated compounds, Heavy Pygas		
<b>Use</b>	Industrial use, Solvent		
<b>Company</b>	Sasol Chemicals (USA) LLC (an affiliate of Sasol Chemicals North America LLC)		
<b>Address</b>	12120 Wickchester Lane, Houston, TX 77079		
<b>Telephone</b>	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
<b>E-mail address</b>	SasolElectronicSDS@us.sasol.com		

### SECTION 2 HAZARDS IDENTIFICATION

<b>OSHA/GHS Hazards</b>	Flammable liquids	Category 2
	Eye irritation	Category 2A
	Skin irritation	Category 2
	Carcinogenicity	Category 1A
	Germ cell mutagenicity	Category 1B
	Specific target organ toxicity - repeated exposure	Category 1
	Specific target organ toxicity - single exposure	Category 1
	Aspiration hazard	Category 1
	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.

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- H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H340 May cause genetic defects.  
 H350 May cause cancer.  
 H370 Causes damage to organs.  
 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.
- Disposal**
- P501 Dispose of contents/ container to an approved waste disposal plant.

## SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

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<u>Components</u>	<u>CAS-No.</u>	<u>Weight percent</u>
Raffinates (Petroleum), Sorption Process	64741-85-1	45 - 55
Benzene	71-43-2	14 - 20
Toluene	108-88-3	<10
Styrene	100-42-5	<10
Naphthalene	91-20-3	<6
Aromatic hydrocarbons (C10) not including naphthalene	-	1 - 5
Dicyclopentadiene	77-73-6	<5

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Cyclopentadiene	542-92-7	<5
Indene	95-13-6	<3
Benzene, ethyl-	100-41-4	<2
Hexane	110-54-3	<2
Xylene	1330-20-7	<2
Pentane	109-66-0	<1
Octane	111-65-9	<1
Cyclohexadiene	628-41-1	<1
Heptane	142-82-5	<1

\*Non-Hazardous Air Pollutant - Toxic Air Pollutant Volatile Organic Compound  
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 (CO<sub>2</sub>).

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

**Further information** Keep containers and surroundings cool with water spray. Prevent further leakage or spillage if safe to do so. Evacuate personnel to safe areas.

### SECTION 6 ACCIDENTAL RELEASE MEASURES

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**Methods and materials for containment and cleaning up** Evacuate the area and eliminate all sources of ignition. Use personal protective equipment. 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). If the product contaminates rivers and lakes or drains inform respective authorities.

### SECTION 7 HANDLING AND STORAGE

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**Safe handling advice** Ensure all equipment is electrically grounded before beginning transfer operations.

**Storage/Transport pressure** Ambient

**Load/Unload temperature** Ambient

### SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

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#### 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

<u>Components</u>	<u>Exposure limit(s)</u>
<b>Benzene</b>	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
<b>Toluene</b>	ACGIH TLV (8-hour) 20 ppm OSHA TWA 200 ppm OSHA Ceiling 300 ppm OSHA STEL (Short Term Exposure Limit) 150 ppm
<b>Styrene</b>	OSHA PEL (Permissible Exposure Limit) 100 ppm ACGIH TLV (8-hour) 20 ppm 85 mg/m <sup>3</sup> OSHA Ceiling 200 ppm ACGIH STEL (Short Term Exposure Limit) 40 ppm 170 mg/m <sup>3</sup>
<b>Naphthalene</b>	OSHA PEL (Permissible Exposure Limit) 10 ppm 50 mg/m <sup>3</sup>

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ACGIH TLV (8-hour) 10 ppm 50 mg/m<sup>3</sup>  
 NIOSH Recommended Exposure Limit 10 ppm 50 mg/m<sup>3</sup>  
 NIOSH Short term exposure limit 15 ppm 75 mg/m<sup>3</sup>  
 NIOSH NIOSH IDLH (Immediately Dangerous to Life or Health Concentrations) 250 ppm

**Dicyclopentadiene** ACGIH TLV (8-hour) 5 ppm

**Cyclopentadiene** ACGIH TLV (8-hour) 75 ppm  
 OSHA PEL (Permissible Exposure Limit) 75 ppm 200 mg/m<sup>3</sup>

**Indene** ACGIH TLV (8-hour) 5 ppm

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

**Hexane** ACGIH TLV (8-hour) 50 ppm  
 OSHA PEL (Permissible Exposure Limit) 500 ppm 1,800 mg/m<sup>3</sup>  
 \*Skin Hazard: Skin exposure should be prevented or reduced to control skin absorption.

**Xylene** OSHA PEL (Permissible Exposure Limit) 100 ppm 435 mg/m<sup>3</sup>  
 ACGIH TLV (8-hour) 100 ppm  
 ACGIH STEL (Short Term Exposure Limit) 150 ppm

**Pentane** ACGIH TLV (8-hour) 1,000 ppm  
 OSHA PEL (Permissible Exposure Limit) 1,000 ppm 2,950 mg/m<sup>3</sup>  
 NIOSH Ceiling 610 ppm 1,800 mg/m<sup>3</sup>

**Octane** ACGIH TLV (8-hour) 300 ppm  
 OSHA PEL (Permissible Exposure Limit) 500 ppm 2,350 mg/m<sup>3</sup>

**Heptane** OSHA PEL (Permissible Exposure Limit) 500 ppm 2,000 mg/m<sup>3</sup>  
 ACGIH TLV (8-hour) 400 ppm 1,640 mg/m<sup>3</sup>  
 ACGIH STEL (Short Term Exposure Limit) 500 ppm 2,050 mg/m<sup>3</sup>  
 NIOSH Ceiling 440 ppm 1,800 mg/m<sup>3</sup>

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

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**Appearance** liquid

**Colour** brown  
 oily

**Form** liquid

**Odour** strong aromatic

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<b>Odour Threshold</b>	No data available
<b>Flash point</b>	21 °C, 70 °F; PM;
<b>Flammability</b>	Upper explosion limit: No data available Lower explosion limit: No data available
<b>Boiling point/boiling range</b>	73 °C, 164 °F;
<b>Melting point/range</b>	No data available
<b>Auto-ignition temperature</b>	Not available
<b>Decomposition temperature</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Vapour pressure</b>	3.0 hPa Reid (D-323);
<b>Vapour density</b>	None.
<b>Density</b>	No data available
<b>Relative density</b>	0.921 @25 °C, 77 °F;
<b>Water solubility</b>	negligible
<b>Viscosity</b>	1.017 cSt @ 40 °C, 104 °F;
<b>pH</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available

## SECTION 10 STABILITY AND REACTIVITY

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<b>Reactivity</b>	Stable at normal ambient temperature and pressure.
<b>Chemical stability</b>	No decomposition if stored and applied as directed.
<b>Conditions to avoid</b>	Keep away from heat and sources of ignition.

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**Hazardous decomposition products** Carbon dioxide (CO<sub>2</sub>). Carbon monoxide

**Materials to avoid** Oxidizing agents.

**Hazardous polymerisation** None.

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### SECTION 11 TOXICOLOGICAL INFORMATION

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**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

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**Assessment teratogenicity:**

No data available

**STOT - single exposure** Target Organs: Narcotic effects  
The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.

**STOT - repeated exposure** Causes damage to organs through prolonged or repeated 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

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**SECTION 12 ECOLOGICAL INFORMATION**


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**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

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<b>Chronic toxicity to aquatic invertebrates</b>	NOEC (Ceriodaphnia dubia (water flea)) 7 d: 3 mg/l Test substance: Benzene
<b>Biodegradation</b>	Readily biodegradable. OECD Test Guideline 301F (28 d): 96 % Test substance: Benzene
<b>Bioaccumulative potential</b>	No data available
<b>Mobility in soil</b>	No data available
<b>Other adverse effects</b>	No data available

### SECTION 13 DISPOSAL CONSIDERATIONS

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<b>Waste Code</b>	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.
<b>Disposal methods</b>	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.
<b>Empty containers.</b>	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

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<b>DOT</b>	UN 3295, Hydrocarbons, liquid, n.o.s., 3, II RQ (Benzene, Naphthalene)
<b>IATA</b>	UN 3295, Hydrocarbons, liquid, n.o.s., 3, II RQ (Benzene, Naphthalene)
<b>IMDG</b>	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

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### SECTION 15 REGULATORY INFORMATION

#### U.S. FEDERAL REGULATIONS

##### TSCA Inventory Listing

###### Components

Fuel Oil, Pyrolysis

Solvent naphtha (petroleum), heavy arom.

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

###### CAS-No.

69013-21-4

64742-94-5

##### SARA 302 Status

###### Components

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

###### CAS-No.

###### Weight percent

##### 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

Benzene

###### CAS-No.

71-43-2

###### Weight percent

14 - 20 %

Toluene

108-88-3

< 10 %

Benzene, ethenyl-

100-42-5

< 10 %

Naphthalene

91-20-3

< 6 %

Dicyclopentadiene

77-73-6

< 5 %

Benzene, ethyl-

100-41-4

< 2 %

Hexane

110-54-3

< 2 %

Benzene, dimethyl-

1330-20-7

< 2 %

##### US. EPA CERCLA Hazardous Substances (40 CFR 302)

###### Components

Benzene

###### Reportable Quantity

10 LB

###### Weight percent

14 - 20 %

Toluene

1,000 LB

< 10 %

Benzene, ethenyl-

1,000 LB

< 10 %

Naphthalene

100 LB

< 6 %

Benzene, ethyl-

1,000 LB

< 2 %

Hexane

5,000 LB

< 2 %

Benzene, dimethyl-

100 LB

< 2 %

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### INTERNATIONAL REGULATIONS

#### WHMIS Classification

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

#### European Union

Classification according to Regulation (EU) 1272/2008.

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

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

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Taiwan. National Existing Chemical Inventory (NECI)

Not 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

##### Components

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

## **SECTION 16**      **OTHER INFORMATION**

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### HAZARD RATINGS

	<u>Health</u>	<u>Flammability</u>	<u>Physical Hazard/ Instability</u>
<b>HMIS®</b>	2*	3	0
<b>NFPA</b>	2	3	0

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