

**Heavy Aromatic Distillate (HAD)**

Version 1.2

Revision Date 2011-08-22

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**Product information**

Trade name : Heavy Aromatic Distillate (HAD)
 Material : 1037387, 1059199, 1059200, 1037388, 1037386

Use : Fuel Blendstock, Solvent

Company : Chevron Phillips Chemical Company LP
 10001 Six Pines Drive
 The Woodlands, TX 77380

Emergency telephone:**Health:**

866.442.9628 (North America)
 1.832.813.4984 (International)

Transport:

North America: CHEMTREC 800.424.9300 or 703.527.3887
 Asia: +800 CHEMCALL (+800 2436 2255) China: 0532.8388.9090
 EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
 Chemcare Asia: Tel: +65 6848 9048 - Mob: +65 8382 9188 - Fax: +65 6848
 South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Responsible Department : Product Safety and Toxicology Group
 E-mail address : MSDS@CPChem.com
 Website : www.CPChem.com

2. HAZARDS IDENTIFICATION**Emergency Overview****Danger**

Physical state: Liquid **Color:** Colorless **Odor:** Aromatic

OSHA Hazards : Combustible Liquid, Carcinogen, Target Organ Effects,
 Reproductive hazard, Mild skin irritant, Mutagen, Aspiration
 hazard

GHS Classification

: Flammable liquids, Category 3
 Acute toxicity, Category 3, Inhalation
 Acute toxicity, Category 5, Dermal
 Skin irritation, Category 2
 Germ cell mutagenicity, Category 1B
 Carcinogenicity, Category 1A
 Reproductive toxicity, Category 2
 Specific target organ systemic toxicity - single exposure,
 Category 3
 Specific target organ systemic toxicity - repeated exposure,
 Category 1, Eyes, Blood
 Specific target organ systemic toxicity - repeated exposure,
 Category 2, Auditory organs

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

Aspiration hazard, Category 1
 Acute aquatic toxicity, Category 2
 Chronic aquatic toxicity, Category 2

GHS-Labeling

Symbol(s)



Signal Word

: Danger

Hazard Statements

: H226: Flammable liquid and vapor.
 H304: May be fatal if swallowed and enters airways.
 H313: May be harmful in contact with skin.
 H315: Causes skin irritation.
 H331: Toxic if inhaled.
 H335: May cause respiratory irritation.
 H340: May cause genetic defects.
 H350: May cause cancer.
 H361: Suspected of damaging fertility or the unborn child.
 H372: Causes damage to organs (Eyes, Blood, Auditory organs) through prolonged or repeated exposure.
 H401: Toxic to aquatic life.
 H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements

: **Prevention:**
 P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P233: Keep container tightly closed.
 P240: Ground/bond container and receiving equipment.
 P241: Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 P242: Use only non-sparking tools.
 P243: Take precautionary measures against static discharge.
 P260: Do not breathe dust/fume/gas/mist/vapor/spray.
 P264: Wash skin thoroughly after handling.
 P270: Do not eat, drink or smoke when using this product.
 P271: Use only outdoors or in a well-ventilated area.
 P273: Avoid release to the environment.
 P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
 P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
 P303 + P361 + P353: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P308 + P313: IF exposed or concerned: Get medical advice/ attention.
 P321: Specific treatment (see supplemental first aid instructions on this label).
 P331: Do NOT induce vomiting.
 P332 + P313: If skin irritation occurs: Get medical advice/ attention.
 P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

Storage:

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P403 + P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

Disposal:

P501: Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity:**IARC**

Group 1: Carcinogenic to humans

Benzene 71-43-2

Group 2B: Possibly carcinogenic to humans

Ethylbenzene 100-41-4

Naphthalene 91-20-3

NTP

Known to be human carcinogen

Benzene 71-43-2

Reasonably anticipated to be a human carcinogen

Naphthalene 91-20-3

ACGIH

Confirmed human carcinogen: The agent is carcinogenic to humans based on the weight of evidence from epidemiologic studies.

Benzene 71-43-2

Confirmed animal carcinogen with unknown relevance to humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

Ethylbenzene 100-41-4

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : HAD
Steam Cracked Distillates (Petroleum)
Heavy Aromatic Distillate Gas Blend

Molecular formula : UVCB

Component	CAS-No.	Weight %
Distillates (petroleum), arom., hydrotreated, dicyclopentadiene-rich	68990-35-2	100.00
Ethylbenzene	100-41-4	0.00 - 30.00
2,3-Dihydro-1H-Indene	496-11-7	0.00 - 30.00
4,7-Methano-1H-indene, octahydro-, (3aR,4S,7R,7aS)-rel-	2825-82-3	0.00 - 30.00
Benzene, dimethyl-	1330-20-7	0.00 - 10.00
Benzene	71-43-2	0.00 - 5.00

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

Cumene	98-82-8	0.00 - 5.00
Benzene, ethylmethyl-	25550-14-5	0.00 - 5.00
Toluene	108-88-3	0.00 - 5.00
Naphthalene	91-20-3	0.00 - 1.00
1-Methylnaphthalene	90-12-0	0.00 - 1.00
2-Methylnaphthalene	91-57-6	0.00 - 1.00
1,2,4-Trimethylbenzene	95-63-6	0.00 - 1.00

4. FIRST AID MEASURES

- General advice : Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.
- If inhaled : Call a physician or poison control center immediately. If unconscious place in recovery position and seek medical advice.
- In case of skin contact : If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
- In case of eye contact : Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

5. FIRE-FIGHTING MEASURES

- Flash point : 40.6 - 57.2 °C (105.1 - 135.0 °F)
Method: ASTM D-6450 CCFP
- Autoignition temperature : 314.44 °C (597.99 °F)
- Suitable extinguishing media : Alcohol-resistant foam. Carbon dioxide (CO₂). Dry chemical.
- Unsuitable extinguishing media : High volume water jet.
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Special protective equipment for fire-fighters : Wear self contained breathing apparatus for fire fighting if necessary.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

- containments. Use a water spray to cool fully closed containers.
- Fire and explosion protection : Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.
- Hazardous decomposition products : Carbon oxides.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
- Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods for cleaning up : 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).

7. HANDLING AND STORAGE**Handling**

- Advice on safe handling : Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
- Advice on protection against fire and explosion : Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.

Storage

- Requirements for storage areas and containers : Prevent unauthorized access. No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Chevron Phillips Chemical Company LP

Ingredients	Basis	Value	Control parameters	Note
Benzene	Manufacturer	STEL	2.5 ppm,	
	Manufacturer	TWA	0.5 ppm,	

US

Ingredients	Basis	Value	Control parameters	Note
Ethylbenzene	ACGIH	TWA	100 ppm,	(i), BEI, A3,
	ACGIH	STEL	125 ppm,	(i), BEI, A3,
	OSHA Z-1	TWA	100 ppm, 435 mg/m3	(b),
	OSHA Z-1-A	TWA	100 ppm, 435 mg/m3	
	OSHA Z-1-A	STEL	125 ppm, 545 mg/m3	
Benzene, dimethyl-	NIOSH REL	TWA	100 ppm, 435 mg/m3	
	NIOSH REL	ST	125 ppm, 545 mg/m3	
	ACGIH	TWA	100 ppm,	BEI, A4,
	ACGIH	STEL	150 ppm,	BEI, A4,
	OSHA Z-1	TWA	100 ppm, 435 mg/m3	(b),
Benzene	OSHA Z-1-A	TWA	100 ppm, 435 mg/m3	
	OSHA Z-1-A	STEL	150 ppm, 655 mg/m3	
	ACGIH	TWA	0.5 ppm,	BEI, A1, Skin,
	ACGIH	STEL	2.5 ppm,	BEI, A1, Skin,
	NIOSH REL	TWA	0.1 ppm,	Ca,
Cumene	NIOSH REL	ST	1 ppm,	Ca,
	OSHA Z2	TWA	1 ppm,	
	OSHA Z2	CEIL	5 ppm,	
	ACGIH	TWA	50 ppm,	
	OSHA Z-1	TWA	50 ppm, 245 mg/m3	X, (b),
Toluene	OSHA Z-1-A	TWA	50 ppm, 245 mg/m3	X,
	NIOSH REL	TWA	50 ppm, 245 mg/m3	skin,
	ACGIH	TWA	20 ppm,	* BEI, A4,
	OSHA Z2	TWA	200 ppm,	
	OSHA Z2	CEIL	300 ppm,	
Naphthalene	OSHA Z2	Peak	500 ppm,	
	OSHA Z-1-A	TWA	100 ppm, 375 mg/m3	
	OSHA Z-1-A	STEL	150 ppm, 560 mg/m3	
	NIOSH REL	TWA	100 ppm, 375 mg/m3	
	NIOSH REL	ST	150 ppm, 560 mg/m3	
1,2,4-Trimethylbenzene	ACGIH	TWA	10 ppm,	A4, Skin,
	ACGIH	STEL	15 ppm,	A4, Skin,
	OSHA Z-1	TWA	10 ppm, 50 mg/m3	(b),
	OSHA Z-1-A	TWA	10 ppm, 50 mg/m3	
	OSHA Z-1-A	STEL	15 ppm, 75 mg/m3	

(i) Adopted values or notations enclosed are those for which changes are proposed in the NIC

(b) The value in mg/m3 is approximate.
2010Adoption

- A1 Confirmed human carcinogen: The agent is carcinogenic to humans based on the weight of evidence from epidemiologic studies.
- A3 Confirmed animal carcinogen with unknown relevance to humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.
- A4 Not classifiable as a human carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.

BEI Substances for which there is a Biological Exposure Index or Indices (see BEI® section)

Ca Potential Occupational Carcinogen

skin Potential for dermal absorption

Skin Danger of cutaneous absorption

X Skin notation

Engineering measures

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits.

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

- Respiratory protection** : Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.
- Hand protection** : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Eye protection** : Eye wash bottle with pure water. Tightly fitting safety goggles.
- Skin and body protection** : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Personal protection through wearing a tightly closed chemical protection suit and a self-contained breathing apparatus. Flame retardant antistatic protective clothing. Workers should wear antistatic footwear.
- Hygiene measures** : Avoid contact with skin, eyes and clothing. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties****Appearance**

- Physical state** : Liquid
Color : Colorless
Odor : Aromatic

Safety data

- Flash point** : 40.6 - 57.2 °C (105.1 - 135.0 °F)
 Method: ASTM D-6450 CCFP
- Lower explosion limit** : 1 %(V)
- Upper explosion limit** : 7.2 %(V)

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

Oxidizing properties	: No
Autoignition temperature	: 314.44 °C (597.99 °F)
Molecular formula	: UVCB
Molecular Weight	: Not applicable
pH	: Not applicable
Freezing point	: -56.6 °C (-69.9 °F)
Boiling point/boiling range	: 132 °C (270 °F)
Vapor pressure	: 0.20 - 0.95 PSI Method: Reid
Relative density	: 0.92, 15.6 °C(60.1 °F)
Density	: 922.7 G/L
Water solubility	: Soluble in hydrocarbon solvents; insoluble in water.
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: < 1 cSt at 37.8 °C (100.0 °F)
Relative vapor density	: 5.1 (Air = 1.0)
Evaporation rate	: 5.4
Percent volatile	: 50.2 % Method: ASTM D-1754

10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: No decomposition if stored and applied as directed.
Possibility of hazardous reactions	
Conditions to avoid	: No data available. Heat, flames and sparks.
Materials to avoid	: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

Other data : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION**Heavy Aromatic Distillate (HAD)**

Acute oral toxicity : LD50: > 6,000 mg/kg
Species: rat
Test substance: yes

Heavy Aromatic Distillate (HAD)

Acute inhalation toxicity : LC50: 8.5 mg/l
Exposure time: 4 HR
Species: rat
Test substance: yes

Heavy Aromatic Distillate (HAD)

Acute dermal toxicity : LD50: > 2,000 mg/kg
Species: rabbit
Test substance: yes

Heavy Aromatic Distillate (HAD)

Skin irritation : irritating

May cause skin irritation in susceptible persons.

Heavy Aromatic Distillate (HAD)

Eye irritation : No eye irritation

Heavy Aromatic Distillate (HAD)

Sensitization : Did not cause sensitization on laboratory animals.

Heavy Aromatic Distillate (HAD)

Repeated dose toxicity : Method: Based on product or component testing, long term repeated exposure may cause damage to the following organs:
Target Organs: Auditory organs, Eyes, Blood
Estimated based on individual component values.

Heavy Aromatic Distillate (HAD)

Carcinogenicity : Method: Estimated based on individual component values.
Remarks: Suspect cancer hazard

Reproductive toxicity

Toluene : Species: rat
Application Route: Inhalation
Dose: 0, 100, 500, 2000 ppm
Test period: 95 d
NOAEL Parent: 2000 ppm

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

Teratogenicity

Benzene, dimethyl-

: Species: rat
 Application Route: Inhalation
 Dose: 0, 805, 1610 ppm
 Number of exposures: 6 h/d
 Test period: GD 7-16
 NOAEL Maternal: 1610 ppm

Species: mouse
 Application Route: oral gavage
 Dose: 0, 780, 1960, 2619 mg/kg
 Number of exposures: 3 times/d
 Test period: GD 6-15
 NOAEL Teratogenicity: 780 mg/kg
 NOAEL Maternal: 780 mg/kg

Cumene

Species: rat
 Application Route: Inhalation
 Dose: 0, 100, 500, 1200 ppm
 Number of exposures: 6 h/d
 Test period: GD 6-15
 NOAEL Teratogenicity: > 1200 ppm
 NOAEL Maternal: 100 ppm

Species: rabbit
 Application Route: Inhalation
 Dose: 0, 500, 1200, 2300 ppm
 Number of exposures: 6 h/d
 Test period: GD 6-18
 NOAEL Teratogenicity: > 2300 ppm

Toluene

Species: rat
 Application Route: Inhalation
 Dose: 0, 100, 500, 2000 ppm
 Test period: 95 d
 NOAEL Teratogenicity: 400-750 ppm

Naphthalene

Species: rabbit
 Application Route: oral gavage
 Dose: 40, 200, 400 mg/kg
 Test period: 29 d, GD 6-18
 NOAEL Teratogenicity: 400 mg/kg

Heavy Aromatic Distillate (HAD)**Aspiration toxicity**

: May be fatal if swallowed and enters airways.
 Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.

CMR effects

Ethylbenzene

: Carcinogenicity: Carcinogenicity classification not possible from current data.
 Mutagenicity: In vivo tests did not show mutagenic effects
 Teratogenicity: Did not show teratogenic effects in animal experiments.
 Reproductive toxicity: No toxicity to reproduction

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

	Species: <i>Mysidopsis bahia</i> (mysid shrimp)
	EC50: 2.2 mg/l Exposure time: 48 HR Species: <i>Daphnia magna</i> (Water flea) Method: OECD Test Guideline 202
Benzene	EC50: 10 mg/l Exposure time: 48 HR Species: <i>Daphnia magna</i> (Water flea) static test Test substance: yes Method: OECD Test Guideline 202
Cumene	EC50: 2.14 mg/l Exposure time: 48 HR Species: <i>Daphnia magna</i> (Water flea) static test Analytical monitoring: yes Test substance: yes Method: OECD Test Guideline 202
Toluene	EC50: 3.78 mg/l Exposure time: 48 HR Species: <i>Daphnia magna</i> (Water flea)
Naphthalene	LC50: 2.16 mg/l Exposure time: 48 HR Species: <i>Daphnia magna</i> (Water flea)
Toxicity to algae	
Ethylbenzene	: ErC50: 5.0 mg/l Exposure time: 96 HR Species: <i>Selenastrum capricornutum</i> (algae)
	ErC50: 7.7 mg/l Exposure time: 72 HR Species: <i>Skeletonema costatum</i> (Marine Algae)
Benzene	ErC50: 100 mg/l Exposure time: 72 HR Species: <i>Pseudokirchneriella subcapitata</i> (green algae) Test substance: yes Method: OECD Test Guideline 201
Cumene	ErC50: 2.01 mg/l Exposure time: 72 HR Species: <i>Desmodesmus subspicatus</i> (green algae) static test Analytical monitoring: yes Test substance: yes Method: OECD Test Guideline 201
Toluene	EC50: 134 mg/l Exposure time: 72 HR Species: <i>Chlamydomonas angulosa</i> (Green algae)
Naphthalene	EC50: 2.96 mg/l Exposure time: 48 HR Species: <i>Selenastrum capricornutum</i> (algae)

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

Elimination information (persistence and degradability)

Bioaccumulation : This material is not expected to bioaccumulate.

Biodegradability : Expected to be ultimately biodegradable

Further information on ecology**Results of PBT assessment**

Ethylbenzene : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Benzene : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Additional ecological information : Information given is based on data on the ingredients and the ecotoxicology of similar products.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

The information in this MSDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product : The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the MSDS and the bill of lading.

US DOT (United States Department of Transportation)

UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III

IMO / IMDG (International Maritime Dangerous Goods)

UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III, MARINE POLLUTANT, (Naphthalene), (40.6 - 57.2 °C)

IATA (International Air Transport Association)

UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III

ADR (Agreement on Dangerous Goods by Road (Europe))

UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III, (D/E)

RID (Regulations concerning the International Transport of Dangerous Goods (Europe))

UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III

ADN (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

UN1268, PETROLEUM DISTILLATES, N.O.S., 3, III

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

15. REGULATORY INFORMATION**National legislation**

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

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO - KNOW

CERCLA Reportable Quantity : 200 lbs
Benzene

SARA 302 Reportable Quantity : This material does not contain any components with a SARA 302 RQ.

SARA 302 Threshold : SARA 302: No chemicals in this material are subject to the

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

Planning Quantity reporting requirements of SARA Title III, Section 302.

SARA 304 Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

SARA 313 Ingredients : The following components are subject to reporting levels established by SARA Title III, Section 313:

: Ethylbenzene	100-41-4
: Benzene, dimethyl-	1330-20-7
: Naphthalene	91-20-3
: Benzene	71-43-2
: Cumene	98-82-8

Clean Air Act

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

- Ethylbenzene
- Benzene
- Cumene
- Toluene

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489):

- Ethylbenzene
- Benzene, dimethyl-
- Benzene
- Cumene
- Toluene

US State Regulations

Pennsylvania Right To Know

- : Distillates (petroleum), arom., hydrotreated, dicyclopentadiene-rich 68990-35-2
- : Ethylbenzene 100-41-4
- : Benzene, dimethyl- 1330-20-7
- : Benzene 71-43-2
- : Cumene 98-82-8
- : Toluene 108-88-3
- : Naphthalene 91-20-3
- : 1,2,4-Trimethylbenzene 95-63-6

New Jersey Right To Know

- : Ethylbenzene 100-41-4
- : Benzene, dimethyl- 1330-20-7
- : Benzene 71-43-2
- : Cumene 98-82-8
- : Toluene 108-88-3

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

: Naphthalene 91-20-3
 : 1,2,4-Trimethylbenzene 95-63-6

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

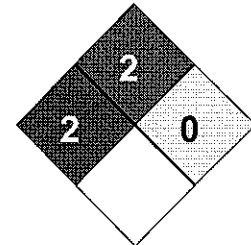
WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Notification status

Europe REACH : Not in compliance with the inventory
 United States of America US.TSCA : On the inventory, or in compliance with the inventory
 Canada DSL : On the inventory, or in compliance with the inventory
 Australia AICS : On the inventory, or in compliance with the inventory
 New Zealand NZIoC : On the inventory, or in compliance with the inventory
 Japan ENCS : Not in compliance with the inventory
 Korea KECI : On the inventory, or in compliance with the inventory
 Philippines PICCS : Not in compliance with the inventory
 China IECSC : On the inventory, or in compliance with the inventory

16. OTHER INFORMATION

NFPA Classification : Health Hazard: 2
 Fire Hazard: 2
 Reactivity Hazard: 0



Further information

Legacy MSDS Number : PE0047

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this MSDS pertains only to the product as shipped.

The information provided in this Material 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 a 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.

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances	NFPA	National Fire Protection Agency

Heavy Aromatic Distillate (HAD)

Version 1.2

Revision Date 2011-08-22

	List		
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		