

**DAC / RPG**

Version 1.1

Revision Date 2011-10-27

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

Trade name : DAC / RPG
Material : 1015402, 1037604, 1037605, 1037606

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****Physical state:** Liquid **Color:** Amber

OSHA Hazards : Flammable Liquid, Moderate skin irritant, Moderate eye irritant, Carcinogen, Toxic by inhalation., Toxic by ingestion, Harmful by skin absorption., Reproductive hazard

GHS Classification

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

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Category 2, Auditory organs, Nervous system
 Aspiration hazard, Category 1
 Acute aquatic toxicity, Category 2
 Chronic aquatic toxicity, Category 2

GHS-Labeling

Symbol(s)



Signal Word

: Danger

Hazard Statements

: H224: Extremely flammable liquid and vapor.
 H301 + H331: Toxic if swallowed or if inhaled.
 H304: May be fatal if swallowed and enters airways.
 H315: Causes skin irritation.
 H319: Causes serious eye irritation.
 H340: May cause genetic defects.
 H350: May cause cancer.
 H372: Causes damage to organs (Blood) through prolonged or repeated exposure.
 H373: May cause damage to organs through prolonged or repeated exposure.
 H373: May cause damage to organs (Auditory organs) through prolonged or repeated exposure if inhaled.
 H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements

: **Prevention:**
 P210: Keep away from heat/sparks/open flames/hot surfaces.
 - No smoking.
 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.
 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.
 P331: Do NOT induce vomiting.
 P308 + P313: IF exposed or concerned: Get medical advice/ attention.
 P391: Collect spillage.
Storage:
 P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
Disposal:
 P501: Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity:**IARC**

Group 1: Carcinogenic to humans

Benzene 71-43-2

1,3-Butadiene 106-99-0

Group 2B: Possibly carcinogenic to humans

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NTP	Ethylbenzene	100-41-4
	Styrene	100-42-5
	Isoprene	78-79-5
	Naphthalene	91-20-3
	Known to be human carcinogen	
	Benzene	71-43-2
	1,3-Butadiene	106-99-0
	Phenanthrene	85-01-8
	Reasonably anticipated to be a human carcinogen	
	Styrene	100-42-5
ACGIH	Isoprene	78-79-5
	Naphthalene	91-20-3
	Phenanthrene	85-01-8
	Confirmed human carcinogen: The agent is carcinogenic to humans based on the weight of evidence from epidemiologic studies.	
	Benzene	71-43-2
	Suspected human carcinogen: Human data are accepted as adequate in quality but are conflicting or insufficient to classify the agent as a confirmed human carcinogenE OR, the agent is carcinogenic in experimental animals at dose(s), by route(s) of exposure, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. The A2 is used primarily when there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals with relevance to humans.	
	1,3-Butadiene	106-99-0
	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 : DISTILLATION, RESIDUES C5-C11
 Debutanized Aromatic Concentrate
 Aromatic Concentrate
 Aromatic Distillate
 Debutanizer Bottoms
 DAC
 Raw Pyrolysis Gasoline
 RPG
 Slop Oil
 Dripolene
 Pygas

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Molecular formula : UVCB

Component	CAS-No.	Weight %
Hydrocarbons, ethylene-manuf.-by-product distn. residues	68921-67-5	100
Benzene	71-43-2	0 - 80
Dicyclopentadiene	77-73-6	0 - 30
Toluene	108-88-3	0 - 30
Benzene, dimethyl-	1330-20-7	0 - 10
Ethylbenzene	100-41-4	0 - 10
Cyclopentadiene	542-92-7	0 - 10
Styrene	100-42-5	0 - 10
n-Heptane	142-82-5	0 - 5
Hexane	110-54-3	0 - 5
Isopentane	78-78-4	0 - 5
Isoprene	78-79-5	0 - 5
1,3-Butadiene	106-99-0	0 - 5
Naphthalene	91-20-3	0 - 1
n-Butane	106-97-8	0 - 1
Biphenyl	92-52-4	0 - 1
Phenanthrene	85-01-8	0 - 1
Cyclopentane	287-92-3	0 - 1
Cumene	98-82-8	0 - 1
1,2,4-Trimethylbenzene	95-63-6	0 - 1
Indene	95-13-6	0 - 1
2-Butene, 2-methyl-	513-35-9	0 - 1

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 : If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.
- 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 : Immediately flush eye(s) with plenty of water. 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 : > -11 °C (> 12 °F)
Method: Tag closed cup
- Autoignition temperature : 348 °C (658 °F)

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Suitable extinguishing media	: Alcohol-resistant foam. Carbon dioxide (CO ₂). 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 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). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
Hazardous decomposition products	: Carbon Dioxide. Carbon monoxide.

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
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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). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage areas and containers : 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.

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,	
Isoprene	Manufacturer	TWA	2 ppm,	
1,3-Butadiene	Manufacturer	TWA	1 ppm,	
	Manufacturer	STEL	5 ppm,	

US

Ingredients	Basis	Value	Control parameters	Note
Benzene	ACGIH	TWA	0.5 ppm,	BEI, A1, Skin,
	ACGIH	STEL	2.5 ppm,	BEI, A1, Skin,
	OSHA Z2	TWA	10 ppm,	
	OSHA Z2	CEIL	25 ppm,	
	NIOSH REL	TWA	0.1 ppm,	Ca,
	NIOSH REL	ST	1 ppm,	Ca,
	OSHA Z-1-A	TWA	1 ppm,	
	OSHA Z-1-A	CEIL	5 ppm,	
	OSHA Z2	Peak	50 ppm,	
Dicyclopentadiene	ACGIH	TWA	5 ppm,	
	OSHA Z-1-A	TWA	5 ppm, 30 mg/m3	
	NIOSH REL	TWA	5 ppm, 30 mg/m3	
Toluene	ACGIH	TWA	20 ppm,	BEI, A4,
	OSHA Z2	TWA	200 ppm,	
	OSHA Z2	CEIL	300 ppm,	
	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	
Benzene, dimethyl-	ACGIH	TWA	100 ppm,	BEI, A4,
	ACGIH	STEL	150 ppm,	BEI, A4,
	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	150 ppm, 655 mg/m3	
Ethylbenzene	ACGIH	TWA	100 ppm,	(), BEI, A3,
	ACGIH	STEL	125 ppm,	(), 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	
	NIOSH REL	TWA	100 ppm, 435 mg/m3	
	NIOSH REL	ST	125 ppm, 545 mg/m3	
Cyclopentadiene	ACGIH	TWA	75 ppm,	
	OSHA Z-1	TWA	75 ppm, 200 mg/m3	(b),
	OSHA Z-1-A	TWA	75 ppm, 200 mg/m3	
	NIOSH REL	TWA	75 ppm, 200 mg/m3	
Styrene	OSHA Z2	TWA	100 ppm,	
	OSHA Z2	CEIL	200 ppm,	

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	OSHA Z2	Peak	600 ppm,	
	OSHA Z-1-A	TWA	50 ppm, 215 mg/m3	
	OSHA Z-1-A	STEL	100 ppm, 425 mg/m3	
	ACGIH	TWA	20 ppm,	BEI, A4,
	ACGIH	STEL	40 ppm,	BEI, A4,
	NIOSH REL	TWA	50 ppm, 215 mg/m3	
	NIOSH REL	ST	100 ppm, 425 mg/m3	
1,3-Butadiene	ACGIH	TWA	2 ppm,	A2,
	OSHA Z-1	TWA	1 ppm,	
	OSHA Z-1	STEL	5 ppm,	
Isoprene	US WEEL	TWA	2 ppm,	
Isopentane	ACGIH	TWA	600 ppm,	
Hexane	ACGIH	TWA	50 ppm,	BEI, Skin,
	OSHA Z-1	TWA	500 ppm, 1,800 mg/m3	(b),
	OSHA Z-1-A	TWA	50 ppm, 180 mg/m3	
	NIOSH REL	TWA	50 ppm, 180 mg/m3	
n-Heptane	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	(b),
	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m3	
	OSHA Z-1-A	STEL	500 ppm, 2,000 mg/m3	
	ACGIH	TWA	400 ppm,	
	ACGIH	STEL	500 ppm,	
Naphthalene	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	
n-Butane	OSHA Z-1-A	TWA	800 ppm, 1,900 mg/m3	
	ACGIH	TWA	1,000 ppm,	
	NIOSH REL	TWA	800 ppm, 1,900 mg/m3	
Biphenyl	ACGIH	TWA	0.2 ppm,	
	OSHA Z-1	TWA	0.2 ppm, 1 mg/m3	(b),
	OSHA Z-1-A	TWA	0.2 ppm, 1 mg/m3	
	NIOSH REL	TWA	0.2 ppm, 1 mg/m3	
Phenanthrene	OSHA Z-1	TWA	0.2 mg/m3	
	OSHA Z-1-A	TWA	0.2 mg/m3	
Cyclopentane	ACGIH	TWA	600 ppm,	
	OSHA Z-1-A	TWA	600 ppm, 1,720 mg/m3	
	NIOSH REL	TWA	600 ppm, 1,720 mg/m3	
Cumene	ACGIH	TWA	50 ppm,	
	OSHA Z-1	TWA	50 ppm, 245 mg/m3	X, (b),
	OSHA Z-1-A	TWA	50 ppm, 245 mg/m3	X,
	NIOSH REL	TWA	50 ppm, 245 mg/m3	skin,
1,2,4-Trimethylbenzene	NIOSH REL	TWA	25 ppm, 125 mg/m3	
Indene	ACGIH	TWA	5 ppm,	
	NIOSH REL	TWA	10 ppm, 45 mg/m3	
	OSHA Z-1-A	TWA	10 ppm, 45 mg/m3	

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

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

A1 Confirmed human carcinogen: The agent is carcinogenic to humans based on the weight of evidence from epidemiologic studies.

A2 Suspected human carcinogen: Human data are accepted as adequate in quality but are conflicting or insufficient to classify the agent as a confirmed human carcinogen OR, the agent is carcinogenic in experimental animals at dose(s), by route(s) of exposure, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. The A2 is used primarily when there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals with relevance to humans.

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

Immediately Dangerous to Life or Health Concentrations (IDLH)

Substance name	CAS-No.	Control parameters	Update
Benzene	71-43-2	Immediately Dangerous to Life or Health Concentration Value 500 parts per million	1995-03-01
Toluene	108-88-3	Immediately Dangerous to Life or Health Concentration Value 500 parts per million	1995-03-01

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Benzene, dimethyl-	1330-20-7	Immediately Dangerous to Life or Health Concentration Value 900 parts per million	1995-03-01
Ethylbenzene	100-41-4	Immediately Dangerous to Life or Health Concentration Value 800 parts per million	1995-03-01
Cyclopentadiene	542-92-7	Immediately Dangerous to Life or Health Concentration Value 750 parts per million	1995-03-01
Styrene	100-42-5	Immediately Dangerous to Life or Health Concentration Value 700 parts per million	1995-03-01
1,3-Butadiene	106-99-0	Immediately Dangerous to Life or Health Concentration Value 2000 parts per million	1995-03-01
Hexane	110-54-3	Immediately Dangerous to Life or Health Concentration Value 1100 parts per million	1995-03-01
n-Heptane	142-82-5	Immediately Dangerous to Life or Health Concentration Value 750 parts per million	1995-03-01
Cumene	98-82-8	Immediately Dangerous to Life or Health Concentration Value 900 parts per million	1995-03-01
Phenanthrene	85-01-8	Immediately Dangerous to Life or Health Concentration Value 80 milligram per cubic meter	1995-03-01
Biphenyl	92-52-4	Immediately Dangerous to Life or Health Concentration Value 100 milligram per cubic meter	1995-03-01
Naphthalene	91-20-3	Immediately Dangerous to Life or Health Concentration Value 250 parts per million	1995-03-01

Engineering measures

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. 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: Full-Face Supplied-Air Respirator. 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.

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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:. Flame retardant antistatic protective clothing. Personal protection through wearing a tightly closed chemical protection suit and a self-contained breathing apparatus. 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	: Amber

Safety data

Flash point	: > -11 °C (> 12 °F) Method: Tag closed cup
Lower explosion limit	: 1.3 %(V)
Upper explosion limit	: 7.5 %(V)

Oxidizing properties	: no
Autoignition temperature	: 348 °C (658 °F)
Molecular formula	: UVCB
Molecular Weight	: Not applicable
pH	: Not applicable
Pour point	: No data available
Freezing point	: -62 °C (-80 °F)
Boiling point/boiling range	: 32 - 204 °C (90 - 399 °F) Overpoint-Endpoint
Vapor pressure	: 11.00 PSI at 38 °C (100 °F)
Relative density	: 0.825
Water solubility	: Soluble in hydrocarbon solvents; insoluble in water.
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: 0.9 cSt at 40 °C (104 °F)

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Relative vapor density : 2.8
(Air = 1.0)

Evaporation rate : 3.9

Percent volatile : 99 %

10. STABILITY AND REACTIVITY

Chemical stability : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of hazardous reactions

Conditions to avoid : heat, light, catalysts, halogens or any other chemicals.
Heat, flames and sparks.

Materials to avoid : May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Other data : No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

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Acute oral toxicity : No data available

DAC / RPG
Acute inhalation toxicity : No data available

DAC / RPG
Acute dermal toxicity : No data available

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Skin irritation : Irritating to skin.

May cause skin irritation in susceptible persons.

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Eye irritation : Eye irritation

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Sensitization : Did not cause sensitization on laboratory animals.
Information refers to the main ingredient.

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Repeated dose toxicity : This information is not available.

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DAC / RPG**Carcinogenicity** : Remarks: Suspect cancer hazard**DAC / RPG****Reproductive toxicity** : This information is not available.**DAC / RPG****Teratogenicity** : This information is not available.**DAC / RPG****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.**Toxicology Assessment****DAC / RPG****CMR effects** : Carcinogenicity:
Not available
Teratogenicity:
Not available
Reproductive toxicity:
Not available**DAC / RPG****Further information** : Solvents may degrease the skin.**12. ECOLOGICAL INFORMATION****Ecotoxicity effects****Toxicity to fish** : No data available**Toxicity to daphnia and
other aquatic
invertebrates.** : No data available**Toxicity to algae** : No data available

Elimination information (persistence and degradability)

Bioaccumulation : This material is not expected to bioaccumulate.**Biodegradability** : This material is volatile and is expected to partition to air.**Ecotoxicology Assessment****Acute aquatic toxicity** : Toxic to aquatic organisms.**Chronic aquatic toxicity** : May cause long-term adverse effects in the aquatic
environment.

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Results of PBT assessment

Non-classified PBT substance

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
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 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, I

IMO / IMDG (International Maritime Dangerous Goods)

UN1268, PETROLEUM DISTILLATES, N.O.S., 3, I, (> -11 °C)

IATA (International Air Transport Association)

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

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

UN1268, PETROLEUM PRODUCTS, N.O.S., 3, I, (D/E)

RID (Regulations concerning the International Transport of Dangerous Goods)

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(Europe))

UN1268, PETROLEUM PRODUCTS, N.O.S., 3, I

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

UN1268, PETROLEUM PRODUCTS, N.O.S., 3, I

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
Acute Health Hazard
Chronic Health Hazard

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO - KNOW

CERCLA Reportable : 13 lbs
Quantity
Benzene

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

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

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

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

: Benzene	71-43-2
Dicyclopentadiene	77-73-6
Benzene, dimethyl-	1330-20-7
Ethylbenzene	100-41-4
Toluene	108-88-3
Styrene	100-42-5
1,3-Butadiene	106-99-0
Hexane	110-54-3

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).

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US State Regulations

Pennsylvania Right To Know

: Indene	95-13-6
: 1,2,4-Trimethylbenzene	95-63-6
: Cumene	98-82-8
: Cyclopentane	287-92-3
: Phenanthrene	85-01-8
: Biphenyl	92-52-4
: n-Butane	106-97-8
: Naphthalene	91-20-3
: 1,3-Butadiene	106-99-0
: Isoprene	78-79-5
: Isopentane	78-78-4
: Hexane	110-54-3
: n-Heptane	142-82-5
: Styrene	100-42-5
: Cyclopentadiene	542-92-7
: Ethylbenzene	100-41-4
: Benzene, dimethyl-	1330-20-7
: Toluene	108-88-3
: Dicyclopentadiene	77-73-6
: Benzene	71-43-2

New Jersey Right To Know

: Indene	95-13-6
: 1,2,4-Trimethylbenzene	95-63-6
: Cumene	98-82-8
: Cyclopentane	287-92-3
: Biphenyl	92-52-4
: n-Butane	106-97-8
: Naphthalene	91-20-3
: 1,3-Butadiene	106-99-0
: Isoprene	78-79-5
: Isopentane	78-78-4
: Hexane	110-54-3
: n-Heptane	142-82-5
: Styrene	100-42-5
: Cyclopentadiene	542-92-7
: Ethylbenzene	100-41-4
: Benzene, dimethyl-	1330-20-7
: Toluene	108-88-3
: Dicyclopentadiene	77-73-6
: Benzene	71-43-2

California Prop. 65
Ingredients

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

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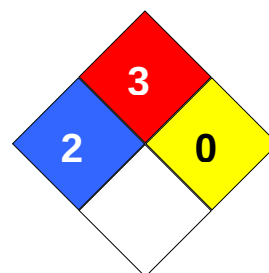
WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Notification status

Europe REACH	:	On the inventory, or 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	:	Not in compliance with the inventory
Japan ENCS	:	Not in compliance with the inventory
Korea KECI	:	Not in compliance with the inventory
Philippines PICCS	:	Not in compliance with the inventory
China IECSC	:	Not in compliance with the inventory

16. OTHER INFORMATION

NFPA Classification : Health Hazard: 2
Fire Hazard: 3
Reactivity Hazard: 0

**Further information**

Legacy MSDS Number : PE0097

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 List	NFPA	National Fire Protection Agency
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

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			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%		