

1. Identification

Product identifier **Crude Oil (Sour)**

Other means of identification

SDS number 007

Recommended use Industrial use.

Recommended restrictions None known.

Manufacturer / Importer / Supplier / Distributor information

Company Name WPX Energy Inc.
 Address P.O. Box 3102
 Tulsa, OK 74101
 Telephone 1-888-615-4561
 Email Not Available
 Emergency phone number 3E Hotline 855-393-9881

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 1
Health hazards	Acute toxicity, inhalation	Category 3
	Serious eye damage/eye irritation	Category 2A
	Germ cell mutagenicity	Category 1B
	Carcinogenicity	Category 1A
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 1 (Haematological system)
	Specific target organ toxicity, repeated exposure	Category 2 (liver, spleen, thymus)
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement Extremely flammable liquid and vapor. Toxic if inhaled. May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. Causes damage to organs (Haematological system) through prolonged or repeated exposure. May cause damage to organs (liver, spleen, thymus) through prolonged or repeated exposure.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only outdoors or in a well-ventilated area. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Get medical advice/attention if you feel unwell. If exposed or concerned: Get medical advice/attention. In case of fire: Use appropriate media to extinguish. Collect spillage.

Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment.
Supplemental information	Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Petroleum	8002-05-9	100
Benzene	71-43-2	<5
Polycyclic Aromatic Compounds	N/A	<=4
Hydrogen sulfide	7783-06-4	<=1

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Aspiration may cause pulmonary edema and pneumonitis. May cause respiratory irritation. May cause drowsiness or dizziness. Headaches, nausea and vomiting. Hydrogen sulfide, a highly toxic gas, may be present. Signs and symptoms of overexposure to hydrogen sulfide include respiratory and eye irritation, dizziness, nausea, coughing, a sensation of dryness and pain in the nose, and loss of consciousness. Odor does not provide a reliable indicator of the presence of hazardous levels in the atmosphere. In high concentrations (500-1000 ppm), H ₂ S acts as a systemic poison causing unconsciousness and death.
Indication of immediate medical attention and special treatment needed	Treat symptomatically. Symptoms may be delayed. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. May contain poisonous and flammable hydrogen sulfide vapor in container headspace.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
General fire hazards	Extremely flammable liquid and vapor

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, hydrogen sulfide (H₂S) and flammability. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. For waste disposal, see Section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Environmental manager must be informed of all major releases.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Vapors may form explosive mixtures with air. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Explosion-proof general and local exhaust ventilation is recommended. Provide adequate ventilation. May contain poisonous and flammable hydrogen sulfide vapor in container headspace. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content, hydrogen sulfide (H₂S) and flammability. Avoid contact with eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep container tightly closed. Store in a well-ventilated place. Store in a cool, dry place out of direct sunlight. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Store away from incompatible materials, see Section 10 of the SDS.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Benzene (CAS 71-43-2)	Ceiling	25 ppm
	TWA	10 ppm
Hydrogen sulfide (CAS 7783-06-4)	Ceiling	20 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	2.5 ppm
	TWA	0.5 ppm
Hydrogen sulfide (CAS 7783-06-4)	STEL	5 ppm
	TWA	1 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	1 ppm
	TWA	0.1 ppm
Hydrogen sulfide (CAS 7783-06-4)	Ceiling	15 mg/m ³
		10 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Petroleum (CAS 8002-05-9)	Ceiling	1800 mg/m3
	TWA	350 mg/m3

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Benzene (CAS 71-43-2)	25 µg/g	S-Phenylmercapturic acid	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Benzene (CAS 71-43-2) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Benzene (CAS 71-43-2) Can be absorbed through the skin.

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear suitable gloves.

Other Wear suitable protective clothing.

Respiratory protection Hydrogen sulfide impairs olfactory nerve function above 20 ppm, odor warning property (rotten egg smell) lost at higher concentrations. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.
Form Liquid.
Color Dark yellow to brown or greenish black.

Odor Hydrocarbon. Rotten egg. Sulfurous.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 77 - 1000.4 °F (25 - 538 °C)

Flash point < 30.0 °F (< -1.1 °C) (Reid Method)

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 1

Flammability limit - upper (%) 7

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 0.6 - 15 psi

Vapor density > 1

Relative density	2.3 - 2.7
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	310
Decomposition temperature	Not available.
Viscosity	1.5 - 15 cSt
Other information	
VOC (Weight %)	> 50 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, sparks and open flame. Prevent buildup of vapors or gases to explosive concentrations. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. Ingestion may cause irritation and malaise.
Inhalation	Toxic if inhaled. Vapors may cause drowsiness and dizziness. Headaches, nausea and vomiting.
Skin contact	Prolonged or repeated contact may dry skin and cause irritation.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors may cause drowsiness and dizziness. Headaches, nausea and vomiting. Signs and symptoms of overexposure to hydrogen sulfide include respiratory and eye irritation, dizziness, nausea, coughing, a sensation of dryness and pain in the nose, and loss of consciousness. Exposure to high concentrations of hydrogen sulfide may result in respiratory paralysis and death.

Information on toxicological effects

Acute toxicity Toxic if inhaled.

Components	Species	Test Results
Benzene (CAS 71-43-2)		
Acute		
<i>Oral</i>		
LD50	Rat	930 mg/kg
Hydrogen sulfide (CAS 7783-06-4)		
Acute		
<i>Inhalation</i>		
LC50	Rat	> 0.38 mg/l, 960 Minutes
Petroleum (CAS 8002-05-9)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization No data available.

Skin sensitization No data available.
Germ cell mutagenicity May cause genetic defects.
Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Benzene (CAS 71-43-2) 1 Carcinogenic to humans.
 Petroleum (CAS 8002-05-9) 3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Benzene (CAS 71-43-2) Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Benzene (CAS 71-43-2) Cancer

Reproductive toxicity No data available.
Specific target organ toxicity - single exposure Vapors may cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure Causes damage to organs (Haematological system) through prolonged or repeated exposure. May cause damage to organs (liver, spleen, thymus) through prolonged or repeated exposure by ingestion.
Aspiration hazard May be fatal if swallowed and enters airways.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components	Species	Test Results
Benzene (CAS 71-43-2)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna) 8.76 - 15.6 mg/l, 48 Hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss) 5.9 mg/l, 96 hours
Hydrogen sulfide (CAS 7783-06-4)		
Aquatic		
Fish	LC50	Lake whitefish (Coregonus clupeaformis) 0.002 mg/l, 96 hours
Petroleum (CAS 8002-05-9)		
Aquatic		
Fish	LC50	Cutthroat trout (Oncorhynchus clarki) 2.1 - 4.3 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available for this product.

Partition coefficient n-octanol / water (log Kow)

Benzene (CAS 71-43-2) 2.13

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

US RCRA Hazardous Waste U List: Reference

Benzene (CAS 71-43-2) U019
 Hydrogen sulfide (CAS 7783-06-4) U135

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number UN1267
UN proper shipping name Petroleum crude oil
Transport hazard class(es)
Class 3

Subsidiary risk -
Packing group I
Environmental hazards
Marine pollutant Yes
Special precautions for user Not available.
Special provisions 144, 357, T11, TP1, TP8
Packaging exceptions 150
Packaging non bulk 201
Packaging bulk 243

IATA

UN number UN1267
UN proper shipping name Petroleum crude oil
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group I
Environmental hazards Yes
ERG Code 3L
Special precautions for user Not available.

IMDG

UN number UN1267
UN proper shipping name PETROLEUM CRUDE OIL
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group I
Environmental hazards
Marine pollutant Yes
EmS F-E, S-E
Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Benzene (CAS 71-43-2) Cancer
 Central nervous system
 Blood
 Aspiration
 Skin
 Eye
 Respiratory tract irritation
 Flammability

CERCLA Hazardous Substance List (40 CFR 302.4)

Benzene (CAS 71-43-2) LISTED
 Hydrogen sulfide (CAS 7783-06-4) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
 Delayed Hazard - Yes
 Fire Hazard - Yes
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Hydrogen sulfide	7783-06-4	100	500 lbs		
SARA 311/312 Hazardous chemical	Yes				

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Petroleum	8002-05-9	100
Benzene	71-43-2	<5

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Benzene (CAS 71-43-2)
 Petroleum (CAS 8002-05-9)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Hydrogen sulfide (CAS 7783-06-4)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations**US. Massachusetts RTK - Substance List**

Benzene (CAS 71-43-2)
 Hydrogen sulfide (CAS 7783-06-4)
 Petroleum (CAS 8002-05-9)

US. New Jersey Worker and Community Right-to-Know Act

Benzene (CAS 71-43-2)
 Hydrogen sulfide (CAS 7783-06-4)
 Petroleum (CAS 8002-05-9)

US. Pennsylvania Worker and Community Right-to-Know Law

Benzene (CAS 71-43-2)
 Hydrogen sulfide (CAS 7783-06-4)
 Petroleum (CAS 8002-05-9)

US. Rhode Island RTK

Benzene (CAS 71-43-2)
 Hydrogen sulfide (CAS 7783-06-4)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
 Benzene (CAS 71-43-2)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

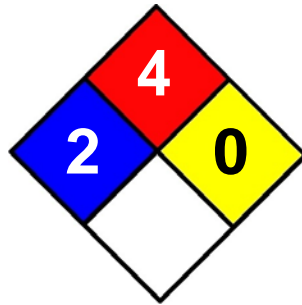
*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	27-September-2017
Revision date	27-February-2014
Version #	03

NFPA Ratings



References

ACGIH
EPA: Acquire database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents

Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.