



SAFETY DATA SHEET

1. Identification

Product identifier	Light Straight Run Gasoline
Other means of identification	
SDS number	005-GHS
Synonyms	LSR; LSR Gasoline; Light Straight Run; Light Straight Run Gasoline; Gasoline - Straight-Run, Topping-Plant See section 16 for complete information.
Recommended use	Motor fuels.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer/Supplier	Valero Marketing & Supply Company and Affiliates One Valero Way San Antonio, TX 78269-6000 210-345-4593
General Assistance	CorpHSE@valero.com
E-Mail	Industrial Hygienist
Contact Person	24 Hour Emergency 866-565-5220
Emergency Telephone	1-800-424-9300 (CHEMTREC USA)

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Germ cell mutagenicity	Category 1B
	Carcinogenicity	Category 1B
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
	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. Causes skin irritation. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. May cause drowsiness or dizziness. May cause damage to organs (blood, liver, kidney) through prolonged or repeated exposure. May be fatal if swallowed and enters airways.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharges. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area.

Response	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. If swallowed: Immediately call a poison center/doctor. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. Take off contaminated clothing and wash before reuse.
Storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Pentane	109-66-0	0 - 35
Hexane (Other Isomers)	Mixture	0 - 25
Pentane Isomers	Mixture	0 - 25
n-Hexane	110-54-3	0 - 20
Benzene	71-43-2	0 - 5
Cyclohexane	110-82-7	0 - 5
Cyclopentane	287-92-3	0 - 5
Methylcyclohexane	108-87-2	0 - 5
n-Heptane	142-82-5	0 - 5
n-Butane	106-97-8	0 - 4
Hydrogen sulfide	7783-06-4	< 1

Composition comments Small amount of hydrogen sulfide, a highly toxic gas, may be present, especially in the headspace of containers.

4. First-aid measures

Inhalation Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if discomfort develops or persists.

Skin contact Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

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.

Ingestion Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately.

Most important symptoms/effects, acute and delayed Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. Unconsciousness. Corneal damage. Narcosis. Cyanosis (blue tissue condition, nails, lips, and/or skin). Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash.

Indication of immediate medical attention and special treatment needed In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

5. Fire-fighting measures

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

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical	Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge. Vapors may cause a flash fire or ignite explosively.
Special protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire-fighting equipment/instructions	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Vapors may form explosive air mixtures even at room temperature. Prevent buildup of vapors or gases to explosive concentrations. Some of these materials, if spilled, may evaporate leaving a flammable residue. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed.
Specific methods	Use water spray to cool unopened containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Local authorities should be advised if significant spills cannot be contained. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if possible without any risk. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas. Use non-sparking tools and explosion-proof equipment.

Small Spills: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. This material and its container must be disposed of as hazardous waste.

Large Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Do not allow material to contaminate ground water system. Should not be released into the environment. Clean up in accordance with all applicable regulations.

Environmental precautions	Gasoline may contain oxygenated blend products (Ethanol, etc.) that are soluble in water and therefore precautions should be taken to protect surface and groundwater sources from contamination. If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Extremely flammable. Review Firefighting Measures, Section 5, before proceeding with clean up. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g. by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Use compatible foam to minimize vapor generation as needed. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 1-800-424-8802.
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7. Handling and storage

Precautions for safe handling	Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid prolonged exposure. Use only with adequate ventilation. Wash thoroughly after handling. The product is extremely flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. When using, do not eat, drink or smoke. Avoid release to the environment.
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Conditions for safe storage, including any incompatibilities

Flammable liquid storage. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. The pressure in sealed containers can increase under the influence of heat. Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children.

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-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Cyclohexane (CAS 110-82-7)	PEL	1050 mg/m3
		300 ppm
Methylcyclohexane (CAS 108-87-2)	PEL	2000 mg/m3
		500 ppm
n-Heptane (CAS 142-82-5)	PEL	2000 mg/m3
		500 ppm
n-Hexane (CAS 110-54-3)	PEL	1800 mg/m3
		500 ppm
Pentane (CAS 109-66-0)	PEL	2950 mg/m3
		1000 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
Cyclohexane (CAS 110-82-7)	TWA	100 ppm
Cyclopentane (CAS 287-92-3)	TWA	600 ppm
Hexane (Other Isomers) (CAS Mixture)	STEL	1000 ppm
	TWA	500 ppm
Hydrogen sulfide (CAS 7783-06-4)	STEL	5 ppm
	TWA	1 ppm
Methylcyclohexane (CAS 108-87-2)	STEL	500 ppm
	TWA	400 ppm
n-Butane (CAS 106-97-8)	STEL	1000 ppm
n-Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
n-Hexane (CAS 110-54-3)	TWA	50 ppm
Pentane (CAS 109-66-0)	TWA	600 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

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

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Cyclohexane (CAS 110-82-7)	TWA	0.1 ppm
	TWA	1050 mg/m3
Cyclopentane (CAS 287-92-3)	TWA	300 ppm
	TWA	1720 mg/m3
Hexane (Other Isomers) (CAS Mixture)	Ceiling	600 ppm
	Ceiling	1800 mg/m3
	TWA	510 ppm
	TWA	350 mg/m3
Hydrogen sulfide (CAS 7783-06-4)	TWA	100 ppm
	Ceiling	15 mg/m3
Methylcyclohexane (CAS 108-87-2)	TWA	10 ppm
	TWA	1600 mg/m3
n-Butane (CAS 106-97-8)	TWA	400 ppm
	TWA	1900 mg/m3
n-Heptane (CAS 142-82-5)	TWA	800 ppm
	Ceiling	1800 mg/m3
	Ceiling	440 ppm
	TWA	350 mg/m3
n-Hexane (CAS 110-54-3)	TWA	85 ppm
	TWA	180 mg/m3
Pentane (CAS 109-66-0)	TWA	50 ppm
	Ceiling	1800 mg/m3
	Ceiling	610 ppm
	TWA	350 mg/m3
	TWA	120 ppm

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	*
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedion, without hydrolysis	Urine	*
	0.4 mg/l	2,5-Hexanedion, without hydrolysis		*

* - 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.

n-Hexane (CAS 110-54-3)

Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Benzene (CAS 71-43-2)

Can be absorbed through the skin.

n-Hexane (CAS 110-54-3)

Can be absorbed through the skin.

Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.

Skin protection

Hand protection

Avoid exposure - obtain special instructions before use. Wear protective gloves. Protective gloves.

Other	Wear chemical-resistant, impervious gloves. Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended.
Respiratory protection	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	Colorless to light yellow liquid.
Physical state	Liquid.
Form	Liquid.
Color	Light yellow.
Odor	Characteristic Gasoline Odor (Strong).
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	44 °F (6.67 °C) Estimated
Initial boiling point and boiling range	> 82 °F (> 27.78 °C) Estimated
Flash point	> -70.9 °F (> -57.2 °C) Closed Cup Estimated
Evaporation rate	< 12.4 Estimated
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1
Flammability limit - upper (%)	8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	< 3.5 Estimated
Relative density	0.64 - 0.7 (water=1)
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	> 260 °F (> 126.67 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Percent volatile	100 % v/v Essentialy

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

Conditions to avoid	Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May be fatal if swallowed and enters airways.
Inhalation	In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea.
Skin contact	Causes skin irritation. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Eye contact	May cause eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. Unconsciousness. Corneal damage. Narcosis. Cyanosis (blue tissue condition, nails, lips, and/or skin). Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash.

Information on toxicological effects

Acute toxicity Harmful: may cause lung damage if swallowed.

Components	Species	Test Results
Cyclohexane (CAS 110-82-7)		
Acute		
<i>Inhalation</i>		
NOEL	Monkey	1243 mg/l, 6 Hours
<i>Oral</i>		
LD50	Mouse	1300 mg/kg
	Rat	29820 mg/kg
Hydrogen sulfide (CAS 7783-06-4)		
Acute		
<i>Inhalation</i>		
LC50	Rat	> 0.38 mg/l, 960 Minutes
Methylcyclohexane (CAS 108-87-2)		
Acute		
<i>Inhalation</i>		
LC25	Rabbit	7300 mg/l
n-Butane (CAS 106-97-8)		
Acute		
<i>Inhalation</i>		
LC50	Rat	658 mg/l, 4 Hours
n-Heptane (CAS 142-82-5)		
Acute		
<i>Inhalation</i>		
LC50	Rat	103 mg/l, 4 Hours
n-Hexane (CAS 110-54-3)		
Acute		
<i>Oral</i>		
LD50	Rat	28710 mg/kg
Pentane (CAS 109-66-0)		
Acute		
<i>Inhalation</i>		
LC50	Rat	364 mg/l, 4 Hours
Skin corrosion/irritation	Causes skin irritation.	

Light Straight Run Gasoline

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Prepared by 3E Company

Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitization	
Respiratory sensitization	Based on available data, the classification criteria are not met.
Skin sensitization	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	May cause genetic defects. In in-vitro experiments benzene did not change the number of sister-chromatid exchanges (SCEs) or the number of chromosomal aberrations in human lymphocytes.
Carcinogenicity	May cause cancer.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Benzene (CAS 71-43-2)	1 Carcinogenic 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	Suspected of damaging fertility or the unborn child. Animal studies of benzene have shown testicular effects, alterations in reproductive cycles, chromosomal aberrations and embryo/fetotoxicity. May damage fertility or the unborn child. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. Avoid exposure to women during early pregnancy. Avoid contact during pregnancy/while nursing.
Specific target organ toxicity - single exposure	May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure	May cause damage to the following organs through prolonged or repeated exposure: Blood. Liver. Kidney.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged and repeated exposure to benzene may cause serious injury to blood forming organs and is associated with anemia and to the later development of acute myelogenous leukemia (AML). Danger of serious damage to health by prolonged exposure. Prolonged or repeated overexposure may cause central nervous system, kidney, liver, and lung damage.
Further information	Symptoms may be delayed.

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 (<i>Daphnia magna</i>) 8.76 - 15.6 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (<i>Oncorhynchus mykiss</i>) 7.2 - 11.7 mg/l, 96 hours
Cyclohexane (CAS 110-82-7)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 23.03 - 42.07 mg/l, 96 hours
Cyclopentane (CAS 287-92-3)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	<i>Daphnia magna</i> 10.5 mg/l, 48 hours
Hydrogen sulfide (CAS 7783-06-4)		
Aquatic		
Fish	LC50	Lake whitefish (<i>Coregonus clupeaformis</i>) 0.002 mg/l, 96 hours
Methylcyclohexane (CAS 108-87-2)		
Aquatic		
Fish	LC50	Striped bass (<i>Morone saxatilis</i>) 5.8 mg/l, 96 hours
n-Heptane (CAS 142-82-5)		
Aquatic		
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>) 4924 mg/l, 96 hours

Components	Species	Test Results
n-Hexane (CAS 110-54-3)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 2.101 - 2.981 mg/l, 96 hours
Pentane Isomers (CAS Mixture)		
Aquatic		
Crustacea	EC50	Daphnia 2.3 mg/l, 48 Hours
Fish	LC50	Fish 3.1 mg/l, 96 Hours
Persistence and degradability	None known.	
Bioaccumulative potential	Not available.	
Partition coefficient n-octanol / water (log Kow)		
Benzene (CAS 71-43-2)		2.13
Cyclohexane (CAS 110-82-7)		3.44
Cyclopentane (CAS 287-92-3)		3
Hexane (Other Isomers) (CAS Mixture)		3.6
Methylcyclohexane (CAS 108-87-2)		3.61
Pentane (CAS 109-66-0)		3.39
n-Butane (CAS 106-97-8)		2.89
n-Heptane (CAS 142-82-5)		4.66
n-Hexane (CAS 110-54-3)		3.9
Mobility in soil	Not available.	
Other adverse effects	Not available.	
13. Disposal considerations		
Disposal instructions	Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.	
Hazardous waste code	D001: Waste Flammable material with a flash point <140 °F D018: Waste Benzene	
US RCRA Hazardous Waste U List: Reference		
Benzene (CAS 71-43-2)		U019
Cyclohexane (CAS 110-82-7)		U056
Hydrogen sulfide (CAS 7783-06-4)		U135
Waste from residues / unused products	Dispose of in accordance with local regulations.	
Contaminated packaging	Offer rinsed packaging material to local recycling facilities.	
14. Transport information		
DOT		
UN number	UN1265	
UN proper shipping name	Pentanes	
Transport hazard class(es)		
Class	3	
Subsidiary risk	-	
Packing group	I	
Environmental hazards		
Marine pollutant	Yes	
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.	
Special provisions	T11, TP2	
Packaging exceptions	150	
Packaging non bulk	201	
Packaging bulk	243	
IATA		
UN number	UN1265	
UN proper shipping name	Pentanes liquid	

Transport hazard class(es)

Class 3
Subsidiary risk -
Label(s) 3

Packing group I
Environmental hazards Yes
ERG Code 3H

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN1265
UN proper shipping name PENTANES, liquid
Transport hazard class(es)

Class 3
Subsidiary risk -
Label(s) 4

Packing group I
Environmental hazards
Marine pollutant Yes

EmS F-E, S-D

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable. However, this product is a liquid and if transported in bulk covered under MARPOL 73/78, Annex I.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

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
Cyclohexane (CAS 110-82-7)	LISTED
Cyclopentane (CAS 287-92-3)	LISTED
Hexane (Other Isomers) (CAS Mixture)	LISTED
Hydrogen sulfide (CAS 7783-06-4)	LISTED
Methylcyclohexane (CAS 108-87-2)	LISTED
n-Butane (CAS 106-97-8)	LISTED
n-Heptane (CAS 142-82-5)	LISTED
n-Hexane (CAS 110-54-3)	LISTED
Pentane (CAS 109-66-0)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
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.
n-Hexane	110-54-3	0 - 20
Benzene	71-43-2	0 - 5
Cyclohexane	110-82-7	0 - 5

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

Benzene (CAS 71-43-2)
n-Hexane (CAS 110-54-3)

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

Hydrogen sulfide (CAS 7783-06-4)
n-Butane (CAS 106-97-8)
Pentane (CAS 109-66-0)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

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

US. Massachusetts RTK - Substance List

Benzene (CAS 71-43-2)
Cyclohexane (CAS 110-82-7)
Cyclopentane (CAS 287-92-3)
Hexane (Other Isomers) (CAS Mixture)
Hydrogen sulfide (CAS 7783-06-4)
Methylcyclohexane (CAS 108-87-2)
n-Butane (CAS 106-97-8)
n-Heptane (CAS 142-82-5)
n-Hexane (CAS 110-54-3)
Pentane (CAS 109-66-0)

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

Benzene (CAS 71-43-2)
Cyclohexane (CAS 110-82-7)
Cyclopentane (CAS 287-92-3)
Hydrogen sulfide (CAS 7783-06-4)
Methylcyclohexane (CAS 108-87-2)
n-Butane (CAS 106-97-8)
n-Heptane (CAS 142-82-5)
n-Hexane (CAS 110-54-3)
Pentane (CAS 109-66-0)

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

Benzene (CAS 71-43-2)
Cyclohexane (CAS 110-82-7)
Cyclopentane (CAS 287-92-3)
Hexane (Other Isomers) (CAS Mixture)
Hydrogen sulfide (CAS 7783-06-4)
Methylcyclohexane (CAS 108-87-2)
n-Butane (CAS 106-97-8)
n-Heptane (CAS 142-82-5)
n-Hexane (CAS 110-54-3)
Pentane (CAS 109-66-0)

US. Rhode Island RTK

Benzene (CAS 71-43-2)
Cyclohexane (CAS 110-82-7)
Hydrogen sulfide (CAS 7783-06-4)
n-Butane (CAS 106-97-8)

n-Hexane (CAS 110-54-3)
Pentane (CAS 109-66-0)

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)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	No
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)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
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).

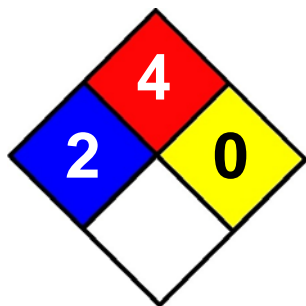
16. Other information, including date of preparation or last revision

Issue date 27-June-2013

Revision date 23-May-2014

Version # 02

NFPA Ratings



References

ACGIH
EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Disclaimer

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