

Mixed Liquefied Petroleum Gases, Raw Mix

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)
Issue date: 8/14/2024 Revision date: 4/22/2025 Supersedes: 8/14/2024 Version: 1.1

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : Mixed Liquefied Petroleum Gases, Raw Mix

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Fuel, Feedstock

1.4. Supplier's details

Goodway Refining LLC
4745 Ross Rd
Atmore, Alabama 36502-4211
T 1-251-867-5413

1.5. Emergency phone number

Emergency number : For Hazardous Materials or Dangerous Goods Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night: 1-800-424-9300 (Toll Free, USA) / 703-527-3887 (Virginia, USA)
CCN 9658
Back-up Emergency Number: +1 703-741-5970 (Washington, DC)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

| | | |
|--|------|--|
| Flammable gas, Category 1 | H220 | Extremely flammable gas. |
| Gas under pressure : Dissolved gas | H280 | Contains gas under pressure; may explode if heated. |
| Skin corrosion/irritation, Category 2 | H315 | Causes skin irritation. |
| Reproductive toxicity, Category 2 | H361 | Suspected of damaging fertility or the unborn child. |
| Specific target organ toxicity – Single exposure, Category 3, Narcosis | H336 | May cause drowsiness or dizziness. |
| Specific target organ toxicity — Repeated exposure, Category 1 | H372 | Causes damage to organs (nervous system) through prolonged or repeated exposure. |
| Simple asphyxiant | SIAS | May displace oxygen and cause rapid suffocation. |

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
Hazard statements (GHS US) : Extremely flammable gas
Contains gas under pressure; may explode if heated
Causes skin irritation
May cause drowsiness or dizziness
Suspected of damaging fertility or the unborn child

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Precautionary statements (GHS US)

Causes damage to organs (nervous system) through prolonged or repeated exposure
May displace oxygen and cause rapid suffocation
: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
Do not breathe mist, vapors.
Wash hands, forearms and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves.
If on skin: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice or attention.
Take off contaminated clothing and wash it before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a poison center or doctor if you feel unwell.
If exposed or concerned: Get medical advice/attention.
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
In case of leakage, eliminate all ignition sources.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight.
Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | GHS US classification |
|--------|--------------------|------------|---|
| Hexane | CAS-No.: 110-54-3 | 1 – 100 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411 |
| Butane | CAS-No.: 106-97-8 | 18 – 34.58 | Flam. Gas 1A, H220 Press. Gas (Comp.), H280 Simple Asphy. 1, SIAS |

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| Name | Product identifier | % | GHS US classification |
|--|--------------------|-------------|---|
| Propane | CAS-No.: 74-98-6 | 7.5 – 23.27 | Flam. Gas 1, H220 Press. Gas (Comp.), H280 Simple Asphy., SIAS |
| Isobutane (containing < 0,1 % butadiene) | CAS-No.: 75-28-5 | 5 – 16.27 | Flam. Gas 1A, H220 Press. Gas (Comp.), H280 |
| Pentane | CAS-No.: 109-66-0 | 8 – 15.93 | Flam. Liq. 2, H225 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 |
| Pentane (mixed isomers) | CAS-No.: 78-78-4 | 9 – 15.55 | Flam. Liq. 1, H224 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 |
| Heptane (mixed isomers) | CAS-No.: 142-82-5 | 1 – 12 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

| | |
|---------------------------------------|---|
| First-aid measures general | : Call a physician immediately. First aider: Pay attention to self-protection. Never give anything by mouth to an unconscious person. Give artificial respiration if necessary. Induce artificial respiration with mask fitted with one-way valve or other suitable device but not mouth-to-mouth. |
| First-aid measures after inhalation | : Call a physician immediately. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If the victim is unconscious : Lay in a stable manner on victim's side. Induce artificial respiration with mask fitted with one-way valve or other suitable device; not mouth-to-mouth. |
| First-aid measures after skin contact | : Remove affected clothing and wash all exposed skin areas with mild soap and water, followed by warm water rinse. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. |
| First-aid measures after eye contact | : 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. |
| First-aid measures after ingestion | : Call a physician immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. |

4.2. Most important symptoms/effects, acute and delayed

| | |
|-------------------------------------|---|
| Symptoms/effects after inhalation | : May displace oxygen and cause rapid suffocation. May cause respiratory irritation. May cause drowsiness or dizziness. |
| Symptoms/effects after skin contact | : Contact with the liquefied gas may cause frostbite. Irritation. Redness. |
| Symptoms/effects after eye contact | : None under normal conditions. Contact with the liquefied gas may cause severe ocular lesions. |
| Symptoms/effects after ingestion | : During vomiting high danger of aspiration. |
| Most Important Symptoms/Effects | : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Risk of product entering the lungs on vomiting after ingestion. If necessary, supply oxygen. |
| Chronic symptoms | : Repeated or prolonged exposure to high levels may affect the liver and kidneys. Suspected of damaging fertility or the unborn child. |

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4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : IF exposed: Call a POISON CENTER or doctor/physician. Risk of product entering the lungs on vomiting after ingestion.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS THE LEAK CAN BE STOPPED. Dry chemical, CO₂, or water spray or regular foam.

Unsuitable extinguishing media : Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Specific hazards arising from the chemical

Fire hazard : Extremely flammable gas. The vapors are denser than air and may travel along the ground. Distance ignition possible.

Explosion hazard : Prolonged exposure to fire may cause containers to rupture/explode. Contains gas under pressure; may explode if heated. May form flammable/explosive vapor-air mixture. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors.

Hazardous decomposition products in case of fire : Thermal decomposition generates: Carbon dioxide, Carbon monoxide.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. Fight fire from a safe distance or use hoses with support or cannon engine. Do not enter fire area without proper protective equipment, including respiratory protection. Heating may cause an explosion. Cool affected containers with flooding quantities of water. Do not throw water directly on point of leakage or security devices; freezing may occur. ALWAYS stay away from tanks engulfed in fire. Withdraw immediately in case of rising sound from venting devices or discoloration from tank.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Use self-contained breathing apparatus and chemically protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Do not take actions involving personal risks. Avoid all personal contact including breathing in the gas, vapors. Stop leak if safe to do so. Absorb spillage to prevent material-damage. Notify authorities if product enters sewers or public waters.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Evacuate the danger area. If outdoors, move to an area upwind of the danger area. Prevent other non-emergency personnel from entering the danger area. If possible without taking personal risks, remove ignition sources, ventilate area. No open flames, no sparks, and no smoking. Do not breathe gas, vapors, fume.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Remove all sources of ignition. Stop leak if safe to do so. Prevent runoff from entering drains, sewers or waterways.

Environmental precautions : Do not let the product reach soil, drains, sewers, or surface and ground water.

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6.2. Methods and materials for containment and cleaning up

| | |
|-------------------------|---|
| For containment | : Stop leak, if possible without risk. Contain with non-combustible inert absorbent. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. |
| Methods for cleaning up | : Take up in non-combustible inert absorbent and place into container for disposal. Contaminated absorbent material may pose the same hazard as the spilt product. Decontaminate surfaces and equipment with water and detergent. Until a sufficient level of dilution is achieved, the decontamination water may pose the same hazards as the product. Notify authorities if product enters sewers or public waters. |
| Other information | : Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations. |

For further information refer to section 8: "Exposure controls/personal protection", For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

| | |
|-----------------------------------|--|
| Precautions for safe handling | : Use only outdoors or in a well-ventilated area. Wear personal protective equipment. Avoid breathing mist, spray, vapors, fume, gas. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Use only non-sparking tools. Use explosion-proof equipment. Flammable vapors may accumulate in the container. |
| Hygiene measures | : Always wash hands after handling the product. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. |
| Additional hazards when processed | : Proper grounding procedures to avoid static electricity should be followed. Vapor/air mixtures are explosive. |

7.2. Conditions for safe storage, including incompatibilities

| | |
|------------------------|---|
| Storage conditions | : Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Store in a cool, dry and well-ventilated area away from incompatible substances. Protect from sunlight. Keep container tightly closed. Use explosion-proof equipment. |
| Incompatible materials | : Strong acids, strong bases and strong oxidants. |
| Heat-ignition | : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| Packaging materials | : Store always product in container of same material as original container. |

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Propane (74-98-6)

USA - ACGIH - Occupational Exposure Limits

| | |
|----------------------|----------------------|
| Local name | Propane |
| Remark (ACGIH) | TLV® Basis: Asphyxia |
| Regulatory reference | ACGIH 2025 |

USA - OSHA - Occupational Exposure Limits

| | |
|--------------|------------------------|
| Local name | Propane |
| OSHA PEL TWA | 1800 mg/m ³ |
| | 1000 ppm |

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| Propane (74-98-6) | |
|--|--|
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |
| Isobutane (containing < 0,1 % butadiene) (75-28-5) | |
| USA - ACGIH - Occupational Exposure Limits | |
| Local name | Isobutane |
| ACGIH OEL STEL | 2370 mg/m ³ (EX - Explosion hazard) 1000 ppm (EX - Explosion hazard) |
| Remark (ACGIH) | TLV® Basis: CNS impair |
| Regulatory reference | ACGIH 2025 |
| Butane (106-97-8) | |
| USA - ACGIH - Occupational Exposure Limits | |
| Local name | Butane |
| ACGIH OEL STEL | 2370 mg/m ³ (EX - Explosion hazard) 1000 ppm (EX - Explosion hazard) |
| Remark (ACGIH) | TLV® Basis: CNS impair |
| Regulatory reference | ACGIH 2025 |
| Pentane (mixed isomers) (78-78-4) | |
| USA - ACGIH - Occupational Exposure Limits | |
| Local name | Isopentane |
| ACGIH OEL TWA | 2950 mg/m ³ 1000 ppm OEL (8 hours ref) (ppm) |
| Remark (ACGIH) | TLV® Basis: Narcosis; resp tract irr |
| Regulatory reference | ACGIH 2025 |
| Pentane (109-66-0) | |
| USA - ACGIH - Occupational Exposure Limits | |
| Local name | Pentane |
| ACGIH OEL TWA | 2950 mg/m ³ 1000 ppm |
| Remark (ACGIH) | TLV® Basis: Narcosis; resp tract irr |
| Regulatory reference | ACGIH 2025 |
| USA - OSHA - Occupational Exposure Limits | |
| Local name | Pentane |
| OSHA PEL TWA | 2950 mg/m ³ 1000 ppm |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |

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Hexane (110-54-3)

USA - ACGIH - Occupational Exposure Limits

| | |
|---------------|---|
| ACGIH OEL TWA | 50 ppm Skin - potential significant contribution to overall exposure by the cutaneous route |
|---------------|---|

USA - OSHA - Occupational Exposure Limits

| | |
|--------------|------------------------|
| OSHA PEL TWA | 1800 mg/m ³ |
| | 500 ppm |

Heptane (mixed isomers) (142-82-5)

USA - ACGIH - Occupational Exposure Limits

| | |
|---------------|---------|
| ACGIH OEL TWA | 400 ppm |
|---------------|---------|

| | |
|----------------|---------|
| ACGIH OEL STEL | 500 ppm |
|----------------|---------|

USA - OSHA - Occupational Exposure Limits

| | |
|--------------|------------------------|
| OSHA PEL TWA | 2400 mg/m ³ |
| | 500 ppm |

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station. Use general ventilation, local exhaust ventilation, or process enclosure to keep the airborne concentrations below the permissible exposure limits. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Environmental exposure controls : Avoid release to the environment. Take measures to reduce or limit air emissions and releases to soil and the aquatic environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Personal protective equipment should be chosen according to national standards and in discussion with the supplier of the protective equipment. Wear recommended personal protective equipment.

Materials for protective clothing:

Wear suitable protective clothing. Flame retardant antistatic protective clothing

Hand protection:

Wear protective gloves. Wear suitable gloves resistant to chemical penetration

Eye protection:

Safety glasses. Wear safety glasses which protect from splashes

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection. Self-contained breathing apparatus

Personal protective equipment symbol(s):



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SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

| | |
|---|--|
| Physical state | : Gas |
| Appearance | : Colorless gas or liquefied gas. |
| Color | : No data available |
| Odor | : Hydrocarbon Faint odor |
| Odor threshold | : No data available |
| pH | : No data available |
| Melting point | : No data available |
| Freezing point | : -138.3 °C /-217° F |
| Boiling point | : No data available |
| Flash point | : No data available |
| Flammability (solid, gas) | : Extremely flammable gas. |
| Vapor pressure | : 25 – 50 psi @ 15.6° C/60° F |
| Relative vapor density at 20°C | : No data available |
| Relative density | : 0.6 @ 15.6° C/60° F |
| Solubility | : Insoluble in water. |
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Auto-ignition temperature | : 405 °C /761° F Butane |
| Decomposition temperature | : No data available |
| Viscosity, kinematic | : No data available |
| Explosion limits | : Lower explosion limit: 1.6 vol % Butane Upper explosion limit: 8.4 vol % Butane |
| Particle characteristics | : No data available |

Propane

| | |
|--------------------------|-------------------|
| Particle characteristics | No data available |
|--------------------------|-------------------|

Isobutane (containing < 0,1 % butadiene)

| | |
|--------------------------|-------------------|
| Particle characteristics | No data available |
|--------------------------|-------------------|

Butane

| | |
|--------------------------|-------------------|
| Particle characteristics | No data available |
|--------------------------|-------------------|

Pentane (mixed isomers)

| | |
|--------------------------|-------------------|
| Particle characteristics | No data available |
|--------------------------|-------------------|

Pentane

| | |
|--------------------------|-------------------|
| Particle characteristics | No data available |
|--------------------------|-------------------|

Hexane

| | |
|--------------------------|-------------------|
| Particle characteristics | No data available |
|--------------------------|-------------------|

Heptane (mixed isomers)

| | |
|--------------------------|-------------------|
| Particle characteristics | No data available |
|--------------------------|-------------------|

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

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SECTION 10 Stability and reactivity

10.1. Reactivity

Extremely flammable chemical under pressure: May explode if heated.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

Vapors may form flammable and explosive mixture with air.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Incompatible materials.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates: Carbon dioxide. Carbon monoxide.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Butane

| | |
|-----------------------|-------------|
| LC50 Inhalation - Rat | 658 mg/l/4h |
|-----------------------|-------------|

Pentane (mixed isomers)

| | |
|-----------------------|--------------------------|
| LD50 oral rat | > 2000 mg/kg body weight |
| LD50 oral | > 2000 mg/kg body weight |
| LD50 dermal rat | > 2000 mg/kg |
| LC50 Inhalation - Rat | > 25.3 mg/l air |

Pentane

| | |
|-----------------------|--------------------------|
| LD50 oral rat | > 2000 mg/kg body weight |
| LC50 Inhalation - Rat | > 25.3 mg/l air |

Hexane

| | |
|--------------------------------|--------------|
| LD50 oral rat | 24 ml/kg |
| LD50 oral | 15800 mg/kg |
| LD50 dermal rabbit | > 3350 mg/kg |
| LC50 Inhalation - Rat (Vapors) | 259.354 mg/l |

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| Heptane (mixed isomers) | |
|---|--|
| LD50 oral rat | > 5000 mg/kg |
| LD50 oral | 5000 mg/kg |
| LD50 dermal rabbit | > 2000 mg/kg |
| LD50 dermal | 3000 mg/kg |
| LC50 Inhalation - Rat | 103 mg/m ³ |
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Suspected of damaging fertility or the unborn child. |
| Pentane | |
| NOAEL (animal/male, F0/P) | 300 mg/kg body weight |
| NOAEL (animal/female, F0/P) | ≥ 1000 mg/kg body weight |
| STOT-single exposure | : May cause drowsiness or dizziness. |
| Pentane (mixed isomers) | |
| STOT-single exposure | May cause drowsiness or dizziness. |
| Pentane | |
| STOT-single exposure | May cause drowsiness or dizziness. |
| Hexane | |
| STOT-single exposure | May cause drowsiness or dizziness. |
| Heptane (mixed isomers) | |
| STOT-single exposure | May cause drowsiness or dizziness. |
| STOT-repeated exposure | : Causes damage to organs (nervous system) through prolonged or repeated exposure. |
| Pentane (mixed isomers) | |
| NOAEC (inhalation, rat, vapor, 90 days) | 30 mg/l air |
| Pentane | |
| NOAEC (inhalation, rat, vapor, 90 days) | 30 mg/l air |
| Hexane | |
| STOT-repeated exposure | STOT RE 1 C ≥ 5 % |
| Heptane (mixed isomers) | |
| LOAEC (inhalation, rat, vapor, 90 days) | 16.6 mg/l air |
| NOAEC (inhalation, rat, vapor, 90 days) | 3.3 mg/l air |
| Aspiration hazard | : Not applicable |

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|--|---|
| Viscosity, kinematic | No data available |
| Propane | |
| Viscosity, kinematic | No data available |
| Isobutane (containing < 0,1 % butadiene) | |
| Viscosity, kinematic | No data available |
| Butane | |
| Viscosity, kinematic | No data available |
| Pentane (mixed isomers) | |
| Viscosity, kinematic | No data available |
| Pentane | |
| Viscosity, kinematic | No data available |
| Hexane | |
| Viscosity, kinematic | No data available |
| Heptane (mixed isomers) | |
| Viscosity, kinematic | No data available |
| Symptoms/effects after inhalation | : May displace oxygen and cause rapid suffocation. May cause respiratory irritation. May cause drowsiness or dizziness. |
| Symptoms/effects after skin contact | : Contact with the liquefied gas may cause frostbite. Irritation. Redness. |
| Symptoms/effects after eye contact | : None under normal conditions. Contact with the liquefied gas may cause severe ocular lesions. |
| Symptoms/effects after ingestion | : During vomiting high danger of aspiration. |
| Most Important Symptoms/Effects | : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Risk of product entering the lungs on vomiting after ingestion. If necessary, supply oxygen. |
| Chronic symptoms | : Repeated or prolonged exposure to high levels may affect the liver and kidneys. Suspected of damaging fertility or the unborn child. |

SECTION 12 Ecological information

12.1. Ecotoxicity

| | |
|---|---|
| Ecology - general | : Very toxic to aquatic life with long lasting effects. |
| Hazardous to the aquatic environment, short-term (acute) | : Very toxic to aquatic life |
| Hazardous to the aquatic environment, long-term (chronic) | : Very toxic to aquatic life with long lasting effects |

| Pentane (mixed isomers) | |
|-------------------------|-------------------------------------|
| EC50 - Crustacea [1] | 2.3 mg/l Daphnia magna (Water flea) |
| NOEC chronic algae | 2.04 mg/l |
| Hexane | |
| LC50 - Fish [1] | > 1 mg/l |
| EC50 - Crustacea [1] | 3.9 mg/l |

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| Heptane (mixed isomers) | |
|--------------------------------|------------|
| LC50 - Fish [1] | 5.738 mg/l |
| EC50 - Crustacea [1] | 0.1 mg/l |
| LOEC (chronic) | 0.32 mg/l |
| NOEC (chronic) | 0.17 mg/l |

12.2. Persistence and degradability

| Mixed Liquefied Petroleum Gases, Raw Mix | |
|--|------------------------|
| Persistence and degradability | Not rapidly degradable |
| Propane | |
| Persistence and degradability | Not rapidly degradable |
| Isobutane (containing < 0,1 % butadiene) | |
| Persistence and degradability | Not rapidly degradable |
| Butane | |
| Persistence and degradability | Not rapidly degradable |
| Pentane (mixed isomers) | |
| Persistence and degradability | Rapidly degradable |
| Pentane | |
| Persistence and degradability | Not rapidly degradable |
| Hexane | |
| Persistence and degradability | Rapidly degradable |
| Heptane (mixed isomers) | |
| Persistence and degradability | Rapidly degradable |

12.3. Bioaccumulative potential

| Hexane | |
|---|------|
| Partition coefficient n-octanol/water (Log Pow) | 3.9 |
| Heptane (mixed isomers) | |
| Partition coefficient n-octanol/water (Log Pow) | 4.66 |

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified
Effect on global warming : No known effects from this product.
Fluorinated greenhouse gases : No

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SECTION 13 Disposal considerations

| | |
|--|--|
| Regional waste regulation | : Disposal must be done according to official regulations. |
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| Sewage disposal recommendations | : Disposal must be done according to official regulations. |
| Product/Packaging disposal recommendations | : Disposal must be done according to official regulations. Dispose of this material and its container at hazardous or special waste collection point. Refer to all applicable national, international and local regulations or provisions. |
| Additional information | : Do not re-use empty containers. |
| Ecological waste information | : Avoid release to the environment. |

SECTION 14 Transport information

In accordance with DOT / IMDG / IATA

| DOT | IMDG | IATA |
|---|----------------------------|----------------------------|
| 14.1. UN number | | |
| UN1075 | 1075 | 1075 |
| 14.2. Proper Shipping Name | | |
| Petroleum gases, liquefied | PETROLEUM GASES, LIQUEFIED | Petroleum gases, liquefied |
| 14.3. Transport hazard class(es) | | |
| 2.1 | 2.1 | 2.1 |
| 14.4. Packing group | | |
| Not applicable | Not applicable | Not applicable |
| 14.5. Environmental hazards | | |
| | Marine pollutant: Yes | |
| No supplementary information available | | |

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

| | |
|--|---|
| DOT | |
| UN-No. (DOT) | : UN1075 |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : 306 |
| DOT Packaging Non Bulk (49 CFR 173.xxx) | : 304 |
| DOT Packaging Bulk (49 CFR 173.xxx) | : 314, 315 |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : Forbidden |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) | : 150 kg |
| DOT Vessel Stowage Location | : E - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded. |
| DOT Vessel Stowage Other | : 40 - Stow "clear of living quarters" |
| IMDG | |
| Special provision (IMDG) | : 392 |
| Limited quantities (IMDG) | : 0 |

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| | |
|------------------------------------|--|
| Excepted quantities (IMDG) | : E0 |
| Packing instructions (IMDG) | : P200 |
| Tank instructions (IMDG) | : T50 |
| EmS-No. (Fire) | : F-D - FIRE SCHEDULE Delta - FLAMMABLE GASES |
| EmS-No. (Spillage) | : S-U - SPILLAGE SCHEDULE Uniform - GASES (FLAMMABLE, TOXIC OR CORROSIVE) |
| Stowage category (IMDG) | : E |
| Stowage and handling (IMDG) | : SW2 |
| Properties and observations (IMDG) | : Flammable hydrocarbon gases or mixtures obtained from natural gas or by distillation of mineral oils or coal, etc. May contain propane, cyclopropane, propylene, butane, butylene, etc., in varying proportions. Heavier than air. |

IATA

| | |
|--|-------------|
| PCA Excepted quantities (IATA) | : E0 |
| PCA Limited quantities (IATA) | : Forbidden |
| PCA limited quantity max net quantity (IATA) | : Forbidden |
| PCA packing instructions (IATA) | : Forbidden |
| PCA max net quantity (IATA) | : Forbidden |
| CAO packing instructions (IATA) | : 200 |
| CAO max net quantity (IATA) | : 150kg |
| ERG code (IATA) | : 10L |

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

| | | |
|--------|------------------|----------|
| Hexane | CAS-No. 110-54-3 | 1 – 100% |
|--------|------------------|----------|

Hexane (110-54-3)

Listed on EPA Hazardous Air Pollutant (HAPS)

| | |
|-----------|---------|
| CERCLA RQ | 5000 lb |
|-----------|---------|

15.2. International regulations

CANADA

Propane (74-98-6)

Listed on the Canadian DSL (Domestic Substances List)

Isobutane (containing < 0,1 % butadiene) (75-28-5)

Listed on the Canadian DSL (Domestic Substances List)

Butane (106-97-8)

Listed on the Canadian DSL (Domestic Substances List)

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Pentane (mixed isomers) (78-78-4)

Listed on the Canadian DSL (Domestic Substances List)

Pentane (109-66-0)

Listed on the Canadian DSL (Domestic Substances List)

Hexane (110-54-3)

Listed on the Canadian DSL (Domestic Substances List)

Heptane (mixed isomers) (142-82-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Propane (74-98-6)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Isobutane (containing < 0,1 % butadiene) (75-28-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Butane (106-97-8)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Pentane (mixed isomers) (78-78-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Pentane (109-66-0)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Hexane (110-54-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Heptane (mixed isomers) (142-82-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations



WARNING:

This product can expose you to n-Hexane, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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| Component | State or local regulations |
|---|--|
| Propane(74-98-6) | U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities |
| Isobutane (containing < 0,1 % butadiene)(75-28-5) | U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities |
| Butane(106-97-8) | U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities |
| Pentane (mixed isomers)(78-78-4) | U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities |
| Pentane(109-66-0) | U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities |
| Hexane(110-54-3) | U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities |

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Revision date : 4/22/2025

Issue date : 8/14/2024

| Full text of hazard classes and H-statements | |
|--|--|
| H220 | Extremely flammable gas |
| H224 | Extremely flammable liquid and vapor |
| H225 | Highly flammable liquid and vapor |
| H280 | Contains gas under pressure; may explode if heated |
| H304 | May be fatal if swallowed and enters airways |
| H315 | Causes skin irritation |
| H336 | May cause drowsiness or dizziness |
| H361 | Suspected of damaging fertility or the unborn child |
| H372 | Causes damage to organs through prolonged or repeated exposure |
| H400 | Very toxic to aquatic life |
| H401 | Toxic to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |
| H411 | Toxic to aquatic life with long lasting effects |
| SIAS | May displace oxygen and cause rapid suffocation |

Indication of changes:

| Section | Changed item | Comments |
|---------|-----------------------------------|-----------------|
| | Precautionary statements (GHS US) | Modified |
| | Hazard statements (GHS US) | Modified |

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| | | |
|-----|----------------------------|---|
| | Hazard pictograms (GHS US) | Modified |
| | | Modified Updated to HazCom 2024 |
| 2.1 | GHS-US classification | Modified |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.