

Safety Data Sheet

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

| Section 1: Identification | | |
|---|---|--|
| 1.1. Product identifier | | |
| Product form | : Mixture | |
| Product Identifier(s) | : Natural Gasoline Gasoline (natural gas), natural Gasoline, natural | |
| CAS-No. | : 68425-31-0 or 8006-61-9 | |
| 1.2. Recommended use of the chemical and restrictions on use | | |
| Use of the substance/mixture | : Industrial use resulting in manufacture of another substance (use of intermediates) Fuel | |
| 1.3. Details of the supplier of the safety data sheet | | |
| Total Petrochemicals & Refining USA, Inc. P O Box 674411 Houston, TX 77267-4411 | | |
| For non-emergency product information: Phone: 713-483-5000 Email: product.stewardship@total.com | | |
| 1.4. Emergency telephone number | | |
| Emergency number | : CHEMTREC: 1-800-424-9300 (Toll Free USA & Canada) / 703-527-3887 (Multiple languages) Total Petrochemicals & Refining USA, Inc.: 1-800-322-3462 (Language: English only) | |

Section 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable liquids Category 1 Skin corrosion/irritation Category 2 Serious eye damage/eye irritation Category 2 Germ cell mutagenicity Category 1B Carcinogenicity Category 1A Reproductive toxicity Category 2 Specific target organ toxicity (single exposure) Category 3 - Narcotic effects Specific target organ toxicity (single exposure) Category 3 - Respiratory irritation Specific target organ toxicity (single exposure) Category 1 Specific target organ toxicity (single exposure) Category 1

Aspiration hazard Category 1

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



| | / Data Sheet | Causes damage to organs (lungs) |
|-----------------------------------|--|---|
| | | Causes damage to organs (blood, hematopoietic system [blood forming], immune system, peripheral nervous system, kidneys, brain (neurological), visual organ (color vision effects), hearing organ (loss of hearing), nervous system) through prolonged o repeated exposure |
| Precau | tionary statements (GHS-US) | : Obtain special instructions before use. |
| Precautionary statements (GHS-US) | | Dotain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, open flames, sparks No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, lighting, ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe vapors, mist, gas. 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 eye protection, face protection, flame retardant protective clothing, impermeable protective gloves. Specific treatment (see Section 4.1 of SDS or information on this label). If swallowed: Immediately call doctor, poison center. Do NOT induce vomiting. If on skin: Wash with plenty of water. 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 in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if preser and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. |
| | | Get medical advice/attention if you feel unwell. Take off contaminated clothing and wash it before reuse. In case of fire: Use water spray or fog, foam, dry chemical, carbon dioxide (CO2) to extingui Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| 2.3. | Hazards not otherwise classified | |
| Other h classific | azards not contributing to the cation | : Product can accumulate electrostatic charges that may cause fire by electrical discharges. |
| 2.4. | Unknown acute toxicity (GHS US) | |
| Not app | blicable | |
| 2.5. | Additional information | |
| Additio | nal strong cautions | This product may contain or release hydrogen sulfide, also called acid gas and H2S. Inhalation of small amounts of hydrogen sulfide is extremely hazardous and can caus DEATH. Hydrogen sulfide may exist in the vapor space of the storage vessel or container. The relative concentration of hydrogen sulfide in the vapor space may be higher than the concentration of hydrogen sulfide in the liquid or solid phase of the material. Heating the material may increase the release of hydrogen sulfide. Use engineering controls (ventilation, vapor scrubbing), administrative controls (work rule restricting access to possible vapor areas), and personal protective equipment (appropriate respiratory protection) to protect employees. Hydrogen sulfide fatigues sense of smell, so odor cannot be relied upon as a warning sign for the presence of |

toxic levels of hydrogen sulfide (see SDS Sections 4 - 11 for additional information).

Section 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Where concentrations in this product are displayed as ranges, it is due to batch-to-batch variability.

| Name | CAS-No. | % |
|---------------------------|-----------------|---------|
| Isopentane | 78-78-4 | 20 - 15 |
| n-pentane | 109-66-0 | 15 - 15 |
| Date of issue: 04/13/2018 | EN (English US) | |

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| Butane | 106-97-8 | 5 - 10 |
|------------------------------------|-----------|--------|
| Benzene | 71-43-2 | 0 - 10 |
| n-Hexane | 110-54-3 | 0 - 10 |
| Isobutane | 75-28-5 | 0 - 10 |
| Toluene | 108-88-3 | 0 - 10 |
| Xylene | 1330-20-7 | 0 - 10 |
| n-Heptane and Heptane Isomers | - | 0 - 10 |
| Ethylbenzene | 100-41-4 | 0 - 10 |
| Hexane isomers, excluding n-hexane | - | 0 - 10 |
| n-Octane and Octane Isomers | - | 0 - 10 |
| Cyclopentane | 287-92-3 | 0 - 5 |
| Cyclohexane | 110-82-7 | 0 - 5 |
| Hydrogen sulfide | 7783-06-4 | < 0.1 |

| Sect | ion 4: First aid measures | | |
|---------------------------------------|---|---|--|
| 4.1. | Description of first aid measures | | |
| First-a | id measures general | YER ATTEMPT A RESCUE in an area that may contain hydrogen sulfic opriate respiratory protection and without being trained to perform sucl anything by mouth to an unconscious person. If exposed or concerned ce/attention. | n a rescue. Never |
| First-a | id measures after inhalation | nove victim to fresh air and keep at rest in a position comfortable for breariencing respiratory symptoms: Call a poison center or doctor/physicia cult, give oxygen. It may be dangerous to the person providing aid to give citation because the material is highly toxic. If breathing stops, give art | n. If breathing is ve mouth-to-mouth |
| First-aid measures after skin contact | | e skin with water/shower. Remove/Take off immediately all contaminat plenty of soap and water. Wash contaminated clothing before reuse. If urs: Get medical advice/attention. | |
| First-a | id measures after eye contact | e immediately with plenty of water. Obtain medical attention if irritation | persists. |
| First-a | id measures after ingestion | e mouth. Do NOT induce vomiting. Immediately call a poison center or | doctor/physician. |
| 4.2. | Most important symptoms and effects, both acute and delayed | | |
| Sympt | oms/effects | cause genetic defects. | |
| Symptoms/effects after inhalation | | lation of small amounts of Hydrogen Sulfide is extremely hazardous ar TH. As concentrations approach 100 ppm, the "rotten egg" odor of hy- omes imperceptible because of olfactory (odor) fatigue. Inhalation of 50 utes produces headache, dizziness, excitement, staggering, and gastro wed in some cases by bronchitis or bronchial pneumonia. Concentratic can be fatal within 30 minutes through respiratory paralysis/failure. At centrations, death can be instantaneous. May cause cancer by inhalatio iratory irritation. | drogen sulfide 0 ppm for 30 enteric disorders ns above 600 to 800 higher |
| Sympt | oms/effects after ingestion | be fatal if swallowed and enters airways. | |

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

| Section 5: Firefighting measures | | | |
|---|--|--|--|
| 5.1. Extinguishing media | | | |
| Suitable extinguishing media | : Foam. Dry powder. Carbon dioxide. Water spray. Sand. | | |
| Unsuitable extinguishing media | : Do not use a heavy water stream. | | |
| 5.2. Special hazards arising from the chemical | | | |
| Fire hazard | : Extremely flammable liquid and vapour. | | |
| Explosion hazard | : May form flammable/explosive vapor-air mixture. | | |
| Hazardous decomposition products in case of fire | : Carbon oxides (CO, CO2). Sulfur oxides (SO2, SO3, etc.). | | |
| 5.3. Advice for firefighters | | | |
| Firefighting instructions | : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. | | |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus. | | |

| Section 6: Accidental release measures | | |
|--|-----------------------------------|--|
| 6.1. Personal precautions, protective equ | uipment and emergency procedures | |
| Emergency procedures for non-emergency personnel | : Evacuate unnecessary personnel. | |

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| Emergency procedures for emergency responders | : NEVER ATTEMPT A RESCUE in an area that may contain hydrogen sulfide without using appropriate respiratory protection and without being trained to perform such a rescue. Eliminate all ignition sources if safe to do so. Stop leak if safe to do so. Ventilate area. | |
|--|---|--|
| 6.2. Methods and material for contain | nment and cleaning up | |
| For containment | : Do not contaminate ground and surface water. | |
| Methods for cleaning up | Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. | |
| 6.3. Reference to other sections | | |

See section 8. Exposure controls/personal protection.

| Section 7: Handling and storage | |
|--|--|
| 7.1. Precautions for safe handling | |
| Additional hazards when processed | : Handle empty containers with care because residual vapors are flammable. This product may contain or release hydrogen sulfide, also called acid gas and H2S. Inhalation of small amounts of hydrogen sulfide is extremely hazardous and can cause DEATH. Use engineering controls (ventilation, vapor scrubbing), administrative controls (work rules restricting access to possible vapor areas), and personal protective equipment (appropriate respiratory protection) to protect employees. Hydrogen sulfide fatigues the sense of smell, so odor cannot be relied upon as a warning sign for the presence of toxic levels of hydrogen sulfide (see SDS Sections 4 - 11 for additional information). |
| Precautions for safe handling | : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No bare lights. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do so. Avoid breathing vapors, mist, spray. Use only outdoors or in a well-ventilated area. Do not breathe vapors, mist, spray. |
| Hygiene measures | : Wash hands, forearms and face thoroughly after handling. |
| 7.2. Conditions for safe storage, includ | ing any incompatibilities |
| Technical measures : This product may contain or release hydrogen sulfide, also called acid gas and H2S. Inhalar of small amounts of hydrogen sulfide is extremely hazardous and can cause DEATH. Hydrogen sulfide may exist in the vapor space of the storage vessel or container. The relating concentration of hydrogen sulfide in the vapor space may be higher than the concentration of hydrogen sulfide in the vapor space may be higher than the concentration of hydrogen sulfide in the liquid or solid phase of the material. Heating the material may increat the release of hydrogen sulfide. Use engineering controls (ventilation, vapor scrubbing), administrative controls (work rules restricting access to possible vapor areas), and personal protective equipment (appropriate respiratory protection) to protect employees. Hydrogen sulfide fatigues the sense of smell, so odor cannot be relied upon as a warning sign for the presence of toxic levels of hydrogen sulfide. Ground/bond container and receiving equipment Use explosion-proof electrical, ventilating, lighting equipment. | |
| Storage conditions | : Keep only in the original container in a cool, well ventilated place away from : flames, heat sources, sparks. Keep in fireproof place. Keep container tightly closed. |
| Incompatible products | : Strong acids. Strong bases. Strong oxidizing agents. Strong reducing agents. |
| Incompatible materials | : Sources of ignition. Direct sunlight. Heat sources. |

Section 8: Exposure controls/personal protection

8.1. Occupational Exposure Limits

The following constituents are the only constituents of the product which have a PEL, TLV, or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

| n-pentane (109-66-0) | | |
|----------------------|-------------------------------------|---|
| USA ACGIĤ | ACGIH TWA (ppm) | 1000 ppm (Pentane, all isomers) |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 2950 mg/m ³ (Pentane, all isomers) |
| USA OSHA | OSHA PEL (TWA) (ppm) | 1000 ppm (Pentane, all isomers) |
| Isopentane (78-78-4) | | |
| USA ACGIH | ACGIH TWA (ppm) | 1000 ppm (Pentane, all isomers) |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 2950 mg/m ³ (Pentane, all isomers) |
| USA OSHA | OSHA PEL (TWA) (ppm) | 1000 ppm (Pentane, all isomers) |
| Hexane isomers, exc | luding n-hexane (-) | |
| USA ACGIH | ACGIH TWA (mg/m ³) | 1760 mg/m ³ |
| USA ACGIH | ACGIH TWA (ppm) | 500 ppm |

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| USA ACGIH | ACGIH STEL (mg/m ³) | 3500 mg/m ³ |
|--------------------------------------|-------------------------------------|--|
| USA ACGIH | ACGIH STEL (ppm) | 1000 ppm |
| n-Octane and Octane Iso USA ACGIH | | 000 |
| | ACGIH TWA (ppm) | 300 ppm |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 2350 mg/m ³ |
| USA OSHA | OSHA PEL (TWA) (ppm) | 500 ppm |
| n-Heptane and Heptane | | |
| USA ACGIH | ACGIH TWA (ppm) | 400 ppm |
| USA ACGIH | ACGIH STEL (ppm) | 500 ppm |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 2000 mg/m ³ |
| USA OSHA | OSHA PEL (TWA) (ppm) | 500 ppm |
| Ethylbenzene (100-41-4) | | |
| USA ACGIH | ACGIH TWA (ppm) | 20 ppm |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 435 mg/m ³ |
| USA OSHA | OSHA PEL (TWA) (ppm) | 100 ppm |
| Xylenes (o-, m-, p- isome | ers) (1330-20-7) | |
| USA ACGIH | ACGIH TWA (ppm) | 100 ppm |
| USA ACGIH | ACGIH STEL (ppm) | 150 ppm |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 435 mg/m ³ |
| USA OSHA | OSHA PEL (TWA) (ppm) | 100 ppm |
| Toluene (108-88-3) | | |
| USA ACGIH | ACGIH TWA (ppm) | 20 ppm |
| USA OSHA | OSHA PEL (TWA) (ppm) | 200 ppm |
| USA OSHA | OSHA PEL (Ceiling) (ppm) | 300 ppm |
| USA OSHA | Remark (OSHA) | See 29 CFR 1910.1000 TABLE Z-2. |
| Isobutane (75-28-5) | | |
| USA ACGIH | ACGIH STEL (ppm) | 1000 ppm |
| n-Hexane (110-54-3) | | |
| USA ACGIH | ACGIH TWA (ppm) | 50 ppm |
| USA OSHA | OSHA PEL (TWA) (ppm) | 500 ppm |
| Benzene (71-43-2) | | |
| USA ACGIH | ACGIH TWA (ppm) | 0.5 ppm |
| USA ACGIH | ACGIH STEL (ppm) | 2.5 ppm |
| USA OSHA | OSHA PEL (TWA) (ppm) | 1 ppm |
| USA OSHA | OSHA PEL (STEL) (ppm) | 5 ppm |
| USA OSHA | Remark (OSHA) | (see 29 CFR 1910.1028) |
| Butane (106-97-8) | | |
| USA ACGIH | ACGIH STEL (ppm) | 1000 ppm |
| Cyclohexane (110-82-7) | | |
| USA ACGIH | ACGIH TWA (ppm) | 100 ppm |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 1050 mg/m ³ |
| USA OSHA | OSHA PEL (TWA) (ppm) | 300 ppm |
| Cyclopentane (287-92-3) | | |
| USA ACGIH | ACGIH TWA (ppm) | 600 ppm |
| Hydrogen sulfide (7783- | 06-4) | 1 |
| USA ACGIH | ACGIH TWA (ppm) | 1 ppm |
| USA ACGIH | ACGIH STEL (ppm) | 5 ppm |
| USA OSHA | OSHA PEL (Ceiling) (ppm) | 20 ppm |
| USA OSHA | Remark (OSHA) | 50 ppm - 10 minute peak; once per 8-hour shift |
| 8.2. Exposure cont | n a la | |

8.2. Exposure controls

Appropriate engineering controls

: Ensure adequate ventilation.

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| Personal protective equipment | : Personnel must be protected from possible exposure to hydrogen sulfide, using engineering |
|-------------------------------|---|
| | controls (such as appropriate ventilation, scrubbing of vapors, etc.), administrative controls (such as rules restricting access of employees to possible vapor areas), and personal protective equipment (such as appropriate respiratory protection). Additionally, hydrogen sulfide |
| | vapors must be contained and treated to prevent entry into the atmosphere. |
| Hand protection | : Impermeable protective gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. |
| Eye protection | : Chemical goggles or safety glasses. |
| Skin and body protection | : Wear fire/flame resistant/retardant clothing. |
| Respiratory protection | : An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits. |
| Other information | : Do not eat, drink or smoke during use. |

Section 9: Physical and chemical properties

| 9.1. Information on basic physical and chemical properties | | | |
|--|--------------------------------------|--|--|
| Physical state | : Liquid | | |
| Appearance | : Clear, colorless, volatile liquid. | | |
| Color | : Colorless. | | |
| Odor | : gasoline-like. | | |
| Odor threshold | : No data available | | |
| pH | : Not applicable | | |
| Relative evaporation rate (butyl acetate=1) | : No data available | | |
| Melting point | : No data available | | |
| Freezing point | : No data available | | |
| Boiling point | : -20 (-20 - 140) °C | | |
| Flash point | : < -20 °C Closed cup | | |
| Auto-ignition temperature | : No data available | | |
| Decomposition temperature | : No data available | | |
| Flammability (solid, gas) | : No data available | | |
| Vapor pressure | : 500 - 700 mm Hg @21°C | | |
| Relative vapor density at 20 °C | : No data available | | |
| Relative density | : 0.75 | | |
| Solubility | : No data available | | |
| Log Kow | : No data available | | |
| Viscosity, kinematic | : < 20 cSt @ 40°C | | |
| Viscosity, dynamic | : No data available | | |
| Explosion limits | : 0.7 - 7.8 vol % | | |
| 9.2. Other information | | | |
| VOC content | : 100 % | | |

Section 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Sparks. Heat. Overheating. Open flame.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Strong reducing agents.

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10.6. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions: carbon monoxide, carbon dioxide, toxic fumes. Sulfur oxides (SO2, SO3, etc.).

| · · · | rmed under fire conditions: carbon monoxide, carbon dioxide, toxic fumes. Sulfur oxides (SO2, SO3, etc.). |
|---|--|
| Section 11: Toxicological inf | |
| 11.1. Information on toxicologic | al effects |
| Likely routes of exposure | : Eye contact. Skin contact. Ingestion. Inhalation. |
| Acute toxicity | : Not classified |
| | Combustion of hydrocarbon substances, like this product, produces potentially toxic gases which include carbon monoxide, carbon dioxide, oxides of nitrogen and/or sulfur. Exposure to carbon monoxide gas decreases the ability of the blood to carry oxygen to the body and may be potentially fatal. NIOSH lists the Immediately Dangerous to Life or Health Concentration (IDLH) for carbon monoxide gas as1200 ppm. |
| Natural Gasoline (68425-31-0 or 800 | |
| LD50 oral rat | > 5000 mg/kg |
| LD50 dermal rat | > 5000 mg/kg |
| LC50 inhalation rat | > 5.6 mg/l/4h |
| n-pentane (109-66-0) | |
| LD50 oral rat LD50 dermal rabbit | > 2000 mg/kg 3000 mg/kg |
| LC50 inhalation rat | 3000 mg/kg 364 mg/l/4h |
| | |
| Isopentane (78-78-4) | |
| LD50 oral rat | > 2000 mg/kg Based on n-pentane |
| LD50 dermal rabbit | 3000 mg/kg |
| LC50 inhalation rat | 280 mg/l/4h |
| LC50 inhalation rat (ppm) | > 4094 ppmV/4h |
| Hexane isomers, excluding n-hexar | |
| LD50 oral rat | 15840 mg/kg based on n-hexane |
| LD50 dermal rabbit | 3000 mg/kg based on n-hexane |
| LC50 inhalation rat | 259 mg/l/4h based on n-hexane |
| LC50 inhalation rat (ppm) | 48000 ppm/4h |
| | |
| n-Octane and Octane Isomers (-) | |
| LD50 oral rat | > 5000 mg/kg Based on Isooctane |
| LD50 dermal rabbit LC50 inhalation rat | > 2000 mg/kg Based on Isooctane > 24 mg/l/4h Based on n-Octane |
| | > 24 mg///411 Dased on n-Octane |
| n-Heptane and Heptane Isomers (-) | |
| LD50 oral rat | > 5000 mg/kg Based on iso-octane |
| LD50 dermal rabbit | 3000 mg/kg Based on n-heptane |
| LC50 inhalation rat | 103 g/m ³ Based on n-heptane |
| Ethylbenzene (100-41-4) | |
| LD50 oral rat | 3500 mg/kg |
| LD50 dermal rabbit | 15354 mg/kg |
| LC50 inhalation rat | 17.2 mg/l/4h |
| | |
| Xylenes (o-, m-, p- isomers) (1330-2 | |
| LD50 oral rat | 4300 mg/kg |
| LD50 dermal rabbit | > 4200 mg/kg |
| LC50 inhalation rat | 21.7 mg/l/4h |
| Toluene (108-88-3) | |
| LD50 oral rat | > 5000 mg/kg |
| LD50 dermal rabbit | > 5000 mg/kg |
| LC50 inhalation rat | 28.1 (28.1 - 49) mg/l/4h |
| LC50 inhalation rat (ppm) | > 26700 ppm/1h |
| | |
| Isobutane (75-28-5) | |
| LD50 oral rat | Not expected to be relevant route of exposure. |
| LD50 dermal rabbit | 3000 mg/kg based on n-pentane |

LC50 inhalation rat (ppm)

258000 ppmV/4h

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| Salety Data Sheet | |
|--|---|
| n-Hexane (110-54-3) | |
| LD50 oral rat | 15840 mg/kg |
| LD50 dermal rabbit | 3000 mg/kg |
| LC50 inhalation rat | 259 mg/l/4h |
| | 200 mg// m |
| Benzene (71-43-2) | |
| LD50 oral rat | 930 (930 - 6400) mg/kg |
| LD50 dermal rabbit | > 8272 mg/kg |
| LC50 inhalation rat | 34.4 mg/l/4h |
| | |
| Butane (106-97-8) | |
| LD50 oral rat | Oral exposure is not an expected route of exposure. |
| LD50 dermal rabbit | 3000 mg/kg based on n-pentane |
| LC50 inhalation rat (ppm) | 258000 ppmV/4h |
| | |
| Cyclohexane (110-82-7) | |
| LD50 oral rat | > 5000 mg/kg |
| LD50 dermal rabbit | > 2000 mg/kg |
| LC50 inhalation rat | 13.9 mg/l/4h |
| | |
| Cyclopentane (287-92-3) | |
| LD50 oral rat | > 5000 g/kg |
| LD50 dermal rabbit | 3000 mg/kg Based on n-pentane |
| LC50 inhalation rat | > 25.3 mg/l/4h |
| LC50 inhalation rat (ppm) | 21000 ppm/4h |
| | pp |
| Hydrogen sulfide (7783-06-4) | |
| LD50 oral rat | No studies were located indicating death in humans or animals after oral exposure to |
| | hydrogen sulfide. Inhalation is expected to be the primary route of acute toxic exposure. |
| LD50 dermal rabbit | Acute dermal exposure of animals has resulted in death, but inhalation is expected to be the |
| | primary route of acute toxic exposure. |
| LC50 inhalation rat | 0.99 mg/l/1h (Exposure time: 1 h) |
| LC50 inhalation rat (ppm) | 444 ppmV/4h |
| | |
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Causes serious eye irritation. |
| Senous eye damage/initation | . Causes serious eye initiation. |
| Respiratory or skin sensitization | : Not classified |
| | |
| Germ cell mutagenicity | : May cause genetic defects. |
| Carcinogenicity | : May cause cancer. |
| n = nontono (100, 66, 0) | |
| n-pentane (109-66-0) IARC group | Not listed |
| National Toxicology Program (NTP) Status | Not listed |
| | |
| Isopentane (78-78-4) | |
| IARC group | Not listed |
| National Toxicology Program (NTP) Status | Not listed |
| Ethylbenzene (100-41-4) | |
| IARC group | 2B - Possibly carcinogenic to humans |
| National Toxicology Program (NTP) Status | Not listed |
| Xylenes (o-, m-, p- isomers) (1330-20-7) | |
| IARC group | 3 - Not classifiable |
| | |
| Toluene (108-88-3) | 2 Not classifiable |
| IARC group | 3 - Not classifiable |
| National Toxicology Program (NTP) Status | Not listed |
| Isobutane (75-28-5) | |
| IARC group | Not listed |
| National Toxicology Program (NTP) Status | Not listed |
| Benzene (71-43-2) | |
| IARC group | 1 - Carcinogenic to humans |
| National Toxicology Program (NTP) Status | Known Human Carcinogens |
| OSHA Carcinogen Status | In OSHA Specifically Regulated Carcinogen list |
| Additional information | Benzene is a known human carcinogen and is known to cause acute myeloid leukemia |
| | & myelodysplastic syndrome (disease that affects the bone marrow and blood) in humans who have been repeatedly exposed to benzene. |
| | |

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| Butane (106-97-8) | |
| IARC group | Not listed |
| National Toxicology Program (NTP) Status | Not listed |
| Reproductive toxicity | : Suspected of damaging fertility or the unborn child. |
| Specific target organ toxicity – single exposure | : May cause drowsiness or dizziness. May cause respiratory irritation. Causes damage to organs (lungs). |
| Specific target organ toxicity – repeated exposure | : Causes damage to organs (blood, hematopoietic system [blood forming], immune system, peripheral nervous system, kidneys, brain (neurological), visual organ (color vision effects), hearing organ (loss of hearing), nervous system) through prolonged or repeated exposure. |
| Aspiration hazard | : May be fatal if swallowed and enters airways. |
| Section 12: Ecological information | |
| 12.1. Toxicity | |
| No additional information available | |
| 12.2. Persistence and degradability | |
| Natural Gasoline (68425-31-0 or 8006-61-9) | |
| Persistence and degradability | Not established. |
| 12.3. Bioaccumulative potential | |
| Natural Gasoline (68425-31-0 or 8006-61-9) | |
| Bioaccumulative potential | Not established. |
| 12.4. Mobility in soil | |
| No additional information available | |
| 12.5. Other adverse effects | |
| Other information | : Avoid release to the environment. |
| Section 13: Disposal considerations | |
| 13.1. Waste treatment methods | |
| Waste treatment methods | : Recycle the material as far as possible. |
| Product/Packaging disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Additional information | : Handle empty containers with care because residual vapors are flammable. |
| | : Avoid release to the environment. Hazardous waste due to toxicity. |
| Ecology - waste materials | . Avoid release to the environment. Mazardous waste due to toxicity. |
| Section 14: Transport information | |
| US Transport (DOT) for Bulk Shipments (Non | |
| Transport document description | : UN1268, Petroleum products, n.o.s, 3, PGI |
| UN or NA Number | : UN1268 |
| Proper Shipping Name | : Petroleum products, n.o.s |
| Primary Hazard Class | : 3 - Flammable liquid |
| Packing Group | : PGI |
| Hazard labels | - FLAMMABLE LIQUID 3 |
| Emergency Response Guide (ERG) Number | : 128 |

In accordance with the definition in 49 CFR § 171.8, a hazardous substance does not include petroleum, including crude oil or any fraction thereof which is not other specifically listed or designated as such in Appendix A to 49 CFR § 172.101. Therefore, this product does not require a RQ designation.

Transport by sea (IMDG)

Not evaluated.

Cargo name listed in 46 CFR 30.25, Table : Gasolines: Casinghead (natural) 30.25-1

Air transport (IATA)

Not evaluated.

Safety Data Sheet

Section 15: Regulatory information

15.1. US Federal regulations

EPA TSCA Status

This product is a substance under TSCA (CAS No. 68425-31-0; Gasoline (natural gas), natural or CAS No. 8006-61-9; Gasoline, natural).

SARA Section 313 Supplier Notification

This product contains the following toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:

| CAS number | Chemical name | Concentration | |
|------------|------------------------------|---------------|--|
| 100-41-4 | Ethylbenzene | 0 - 10% | |
| 1330-20-7 | Xylenes (o-, m-, p- isomers) | 0 - 10% | |
| 108-88-3 | Toluene | 0 - 10% | |
| 110-54-3 | n-Hexane | 0 - 10% | |
| 71-43-2 | Benzene | 0 - 10% | |
| 110-82-7 | Cyclohexane | 0 - 5% | |

This information must be included in all Safety Data Sheets that are copied and distributed for this product. For additional information, see 40 CFR §372.45 Notification About Toxic Chemicals.

SARA Section 311/312 Hazard Classes

Acute health hazard Chronic health hazard Fire hazard

15.2. International regulations

CANADA

No additional information available

National inventories

Gasoline (natural gas), natural or Gasoline, natural (68425-31-0 or 8006-61-9)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Canadian DSL (Domestic Substances List)

Listed on the China Inventory of Existing Chemical Substances (IECSC) Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on the Korean ECL (Existing Chemicals List)

15.3. US State regulations

| Yes |
|------------------------|
| No |
| No |
| No |
| 54 µg/day (inhalation) |
| |
| No |
| Yes |
| Yes |
| No |
| |
| Yes |
| Yes |
| No |
| Yes |
| |

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| No significant risk level (NSRL) | | 6.4 µg/day (oral) | | |
|----------------------------------|-------------|-------------------|--|--|
| Section 16: Other information | tion | | | |
| Other information | : None. | | | |
| NFPA (National Fire Protection A | ssociation) | | | |
| NFPA health hazard | : 1 | | | |
| NFPA fire hazard | : 2 | 2 | | |
| NFPA reactivity | : 1 | | | |
| · | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Hazard Rating | | | | |
| Health | : 1* | | | |
| - | | | | |

| : | 1* |
|---|----------------------|
| : | 4 |
| : | 1 |
| : | See section 8 of SDS |
| | : |

Safety Data Sheet

US OSHA LABEL as specified under 29 CFR §1910.1200 (f)

Natural Gasoline

Total Petrochemicals & Refining USA, Inc. PO Box 674411 Houston, TX 77267-4411 USA Tel. 713-483-5000



Danger

Extremely flammable liquid and vapour May be fatal if swallowed and enters airways **Causes skin irritation** Causes serious eye irritation May cause respiratory irritation May cause drowsiness or dizziness May cause genetic defects May cause cancer Suspected of damaging fertility or the unborn child Causes damage to organs (lungs) Causes damage to organs (blood, hematopoietic system [blood forming], immune system, peripheral nervous system, kidneys, brain (neurological), visual organ (color vision effects), hearing organ (loss of hearing), nervous system) through prolonged or repeated exposure Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, open flames, sparks. - No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, lighting, ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe vapors, mist, gas. 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 eye protection, face protection, flame retardant protective clothing, impermeable protective gloves. Specific treatment (see Section 4.1 of SDS or information on this label). If swallowed: Immediately call doctor, poison center. Do NOT induce vomiting. If on skin: Wash with plenty of water. 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 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. If exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell. Take off contaminated clothing and wash it before reuse. In case of fire: Use water spray or fog, foam, dry chemical, carbon dioxide (CO2) to extinguish. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations. Supplemental Information Product can accumulate electrostatic charges that may cause fire by electrical discharges. Supplemental Information: Additional strong cautions This product may contain or release hydrogen sulfide, also called acid gas and H2S. Inhalation of small amounts of hydrogen sulfide is extremely hazardous and can cause DEATH. Hydrogen sulfide may exist in the vapor space of the storage vessel or container. The relative concentration of

hazardous and can cause DEATH. Hydrogen sulfide may exist in the vapor space of the storage vessel or container. The relative concentration of hydrogen sulfide in the vapor space may be higher than the concentration of hydrogen sulfide in the liquid or solid phase of the material. Heating the material may increase the release of hydrogen sulfide. Use engineering controls (ventilation, vapor scrubbing), administrative controls (work rules restricting access to possible vapor areas), and personal protective equipment (appropriate respiratory protection) to protect employees. Hydrogen sulfide fatigues the sense of smell, so odor cannot be relied upon as a warning sign for the presence of toxic levels of hydrogen sulfide (see SDS Sections 4 - 11 for additional information).

Version : 2.0 Date of issue : April 13, 2018

MSDS ID: NAT_GASOLINE SDS REFERENCE NUMBER: RF0061

Safety Data Sheet

SDS Template - TOTAL SDS US (GHS HazCom 2012) TPRI Version 5.02

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