

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Printing date: October 16, 2018

Revision: October 15, 2018

1 Identification

- **Product identifier**
- **Trade name:** Demethanized Mix (Y-Grade)
- **Other means of identification:** No other identifiers
- **Recommended use and restriction on use**
- **Recommended use:** Feedstock for fractionation / distillation
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Williams, Inc.
One Williams Center
Tulsa, OK 74172
USA
855-945-5762 (Toll-Free)
ehs@williams.com
- **Emergency telephone number:**
CHEMTREC
1-800-424-9300 (US/Canada)
+01 703-527-3887 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**

Flam. Gas 1	H220	Extremely flammable gas.
Press. Gas	H280	Contains gas under pressure; may explode if heated.
Skin Irrit. 2	H315	Causes skin irritation.
Muta. 1B	H340	May cause genetic defects.
Carc. 1A	H350	May cause cancer.
Repr. 2	H361	Suspected of damaging fertility or the unborn child.
STOT SE 3	H336	May cause drowsiness or dizziness.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.
Simple Asphyxiant		May displace oxygen and cause rapid suffocation.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms:**



GHS02 GHS04 GHS07 GHS08

- **Signal word:** Danger

- **Hazard statements:**

H220 Extremely flammable gas.
H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.

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H340 May cause genetic defects.
 H350 May cause cancer.
 H361 Suspected of damaging fertility or the unborn child.
 H336 May cause drowsiness or dizziness.
 H304 May be fatal if swallowed and enters airways.
 May displace oxygen and cause rapid suffocation.

Precautionary statements:

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P233 Keep container tightly closed.
 P261 Avoid breathing gas.
 P264 Wash thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P310 If swallowed: Immediately call a poison center/doctor.
 P331 Do NOT induce vomiting.
 P302+P352 If on skin: Wash with plenty of soap and water.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
 P381 Eliminate all ignition sources if safe to do so.
 P405 Store locked up.
 P410+P403 Protect from sunlight. Store in a well-ventilated place.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

• **Chemical characterization: Mixtures**• **Components:**

74-98-6	Propane ⚠ Flam. Gas 1, H220 ⚠ Press. Gas, H280 Simple Asphyxiant	<70%
74-84-0	Ethane ⚠ Flam. Gas 1, H220 ⚠ Press. Gas, H280 Simple Asphyxiant	<65%
106-97-8	butane ⚠ Flam. Gas 1, H220 ⚠ Press. Gas, H280 Simple Asphyxiant	<35%
75-28-5	isobutane ⚠ Flam. Gas 1, H220	<15%

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	<ul style="list-style-type: none"> ◊ Press. Gas, H280 Simple Asphyxiant 	
78-78-4	isopentane ----- ◊ Flam. Liq. 1, H224 ◊ Asp. Tox. 1, H304 ◊ STOT SE 3, H336	<10%
109-66-0	pentane ----- ◊ Flam. Liq. 2, H225 ◊ Asp. Tox. 1, H304 ◊ STOT SE 3, H336	<10%
108-87-2	methylcyclohexane ----- ◊ Flam. Liq. 2, H225 ◊ Asp. Tox. 1, H304 ◊ Skin Irrit. 2, H315; STOT SE 3, H336	<4.5%
110-54-3	n-hexane ----- ◊ Flam. Liq. 2, H225 ◊ Repr. 2, H361; STOT RE 2, H373; Asp. Tox. 1, H304 ◊ Skin Irrit. 2, H315; STOT SE 3, H336 Eye Irrit. 2B, H320	<3.5%
107-83-5	Isohexane ----- ◊ Flam. Liq. 2, H225 ◊ Asp. Tox. 1, H304 ◊ Skin Irrit. 2, H315; STOT SE 3, H336	<3%
142-82-5	heptane ----- ◊ Flam. Liq. 2, H225 ◊ Asp. Tox. 1, H304 ◊ Skin Irrit. 2, H315; STOT SE 3, H336 Eye Irrit. 2B, H320	<2.5%
110-82-7	cyclohexane ----- ◊ Flam. Liq. 2, H225 ◊ Asp. Tox. 1, H304 ◊ Skin Irrit. 2, H315; STOT SE 3, H336	<2%
96-37-7	methylcyclopentane ----- ◊ Flam. Liq. 2, H225	<2%
589-34-4	3-methylhexane ----- ◊ Flam. Liq. 2, H225 ◊ Asp. Tox. 1, H304 ◊ Skin Irrit. 2, H315; STOT SE 3, H336	<1.5%
96-14-0	3-methylpentane ----- ◊ Flam. Liq. 2, H225 ◊ Asp. Tox. 1, H304 ◊ Skin Irrit. 2, H315; STOT SE 3, H336	<1.5%
31394-54-4	2-Methylhexane ----- ◊ Flam. Liq. 2, H225 ◊ Asp. Tox. 1, H304 ◊ Skin Irrit. 2, H315; STOT SE 3, H336	<1.5%
71-43-2	benzene ----- ◊ Flam. Liq. 2, H225	<1%

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	<ul style="list-style-type: none"> Muta. 1B, H340; Carc. 1A, H350; STOT RE 1, H372; Asp. Tox. 1, H304 Skin Irrit. 2, H315; Eye Irrit. 2A, H319 	
287-92-3	cyclopentane <ul style="list-style-type: none"> Flam. Liq. 2, H225 	<1%
74-93-1	Methyl mercaptan <ul style="list-style-type: none"> Flam. Gas 1, H220 Press. Gas, H280 Acute Tox. 3, H331 	<1%
75-33-2	Isopropyl mercaptan <ul style="list-style-type: none"> Acute Tox. 3, H301 Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335 	<0.5%
75-83-2	Neohexane <ul style="list-style-type: none"> Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336 	<0.5%

Additional information:

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
 For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

Description of first aid measures**After inhalation:**

Supply fresh air.

Provide oxygen treatment if affected person has difficulty breathing.

If experiencing respiratory symptoms: Call a poison center/doctor.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

In cases of frostbite from liquefied gas or from high-pressure systems, rinse with plenty of water. Do not remove clothing.

Wash with soap and water.

If skin irritation continues, consult a doctor.

After eye contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Unlikely route of exposure.

Do not induce vomiting; immediately call for medical help.

Most important symptoms and effects, both acute and delayed:

Breathing difficulty

Dizziness

Coughing

Frostbite from liquefied gas or high-pressure systems.

Irritant to skin and mucous membranes.

Disorientation

Danger:

Danger of impaired breathing.

May be fatal if swallowed and enters airways.

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May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.
May cause cancer.
May cause genetic defects.

· Indication of any immediate medical attention and special treatment needed:

If necessary oxygen respiration treatment.
Later observation for pneumonia and pulmonary edema.

5 Fire-fighting measures

· Extinguishing media**· Suitable extinguishing agents:**

Gaseous extinguishing agents

Carbon dioxide

Foam

Water fog / haze

Fire-extinguishing powder

· For safety reasons unsuitable extinguishing agents: Water stream.**· Special hazards arising from the substance or mixture**

Danger of receptacles bursting because of high vapor pressure if heated.

Extremely flammable gas.

Hazardous gases may be released if heated above the decomposition point.

· Advice for firefighters**· Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

· Additional information:

Eliminate all ignition sources if safe to do so.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Isolate area and prevent access.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Keep away from ignition sources.

Take precautionary measures against static discharge.

Use respiratory protective device against the effects of fumes/dust/aerosol.

Protect from heat.

· Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system.

Inform authorities in case of gas release.

· Methods and material for containment and cleaning up Allow to evaporate.**· Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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7 Handling and storage

- **Handling**
- **Precautions for safe handling:** Use enclosed means of conveyance.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Ground/bond container and receiving equipment.
Emergency cooling must be available in case of nearby fire.
Flammable gas-air mixtures may be formed in empty containers/receptacles.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizing agents.
- **Further information about storage conditions:**
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**

74-98-6 Propane

PEL (USA)	Long-term value: 1800 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 1800 mg/m ³ , 1000 ppm
TLV (USA)	refer to Appendix F in TLVs&BEIs book; D, EX
EL (Canada)	Simple asphyxiant; EX
EV (Canada)	Long-term value: 1,000 ppm revoked as of 01/01/18
LMPE (Mexico)	Long-term value: 1000 ppm

74-84-0 Ethane

TLV (USA)	Refer to Appendix F in TLVs & BEIs book; (D, EX)
EL (Canada)	simple asphyxiant; EX
EV (Canada)	Long-term value: 1,000 ppm revoked as of 01/01/18
LMPE (Mexico)	Long-term value: 1000 ppm

106-97-8 butane

REL (USA)	Long-term value: 1900 mg/m ³ , 800 ppm
TLV (USA)	Short-term value: 2370 mg/m ³ , 1000 ppm (EX)

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EL (Canada)	Short-term value: 1000 ppm EX
EV (Canada)	Long-term value: 800 ppm revoked as of 01/01/18
LMPE (Mexico)	Long-term value: 1000 ppm
75-28-5 isobutane	
TLV (USA)	Short-term value: 2370 mg/m ³ , 1000 ppm (EX)
EL (Canada)	Short-term value: 1000 ppm EX
EV (Canada)	Long-term value: 800 ppm revoked as of 01/01/18
LMPE (Mexico)	Long-term value: 1000 ppm
78-78-4 isopentane	
PEL (USA)	Long-term value: 2950 mg/m ³ , 1000 ppm
TLV (USA)	Long-term value: 2950 mg/m ³ , 1000 ppm
EL (Canada)	Long-term value: 1000 ppm
EV (Canada)	Short-term value: 2,210 mg/m ³ , 750 ppm Long-term value: 1,770 mg/m ³ , 600 ppm
LMPE (Mexico)	Long-term value: 600 ppm
109-66-0 pentane	
PEL (USA)	Long-term value: 2950 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 350 mg/m ³ , 120 ppm Ceiling limit value: 1800* mg/m ³ , 610* ppm *15-min
TLV (USA)	Long-term value: 2950 mg/m ³ , 1000 ppm
EL (Canada)	Long-term value: 1000 ppm
EV (Canada)	Short-term value: 2,210 mg/m ³ , 750 ppm Long-term value: 1,770 mg/m ³ , 600 ppm
LMPE (Mexico)	Long-term value: 600 ppm
108-87-2 methylcyclohexane	
PEL (USA)	Long-term value: 2000 mg/m ³ , 500 ppm
REL (USA)	Long-term value: 1600 mg/m ³ , 400 ppm
TLV (USA)	Long-term value: 1610 mg/m ³ , 400 ppm
EL (Canada)	Long-term value: 400 ppm
EV (Canada)	Long-term value: 1,600 mg/m ³ , 400 ppm
LMPE (Mexico)	Long-term value: 400 ppm
110-54-3 n-hexane	
PEL (USA)	Long-term value: 1800 mg/m ³ , 500 ppm
REL (USA)	Long-term value: 180 mg/m ³ , 50 ppm
TLV (USA)	Long-term value: 176 mg/m ³ , 50 ppm Skin; BEI
EL (Canada)	Long-term value: 20 ppm

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EV (Canada)	Skin
LMPE (Mexico)	Long-term value: 176 mg/m ³ , 50 ppm
	Long-term value: 50 ppm
	PIEL, IBE

107-83-5 Isohexane

REL (USA)	Long-term value: 350 mg/m ³ , 100 ppm
	Ceiling limit value: 1800* mg/m ³ , 510* ppm
	*15-min
TLV (USA)	Short-term value: 3500 mg/m ³ , 1000 ppm
	Long-term value: 1760 mg/m ³ , 500 ppm
EL (Canada)	Long-term value: 200 ppm
LMPE (Mexico)	Short-term value: 1000 ppm
	Long-term value: 500 ppm

142-82-5 heptane

PEL (USA)	Long-term value: 2000 mg/m ³ , 500 ppm
REL (USA)	Long-term value: 350 mg/m ³ , 85 ppm
	Ceiling limit value: 1800* mg/m ³ , 440* ppm
	*15-min
TLV (USA)	Short-term value: 2050 mg/m ³ , 500 ppm
	Long-term value: 1640 mg/m ³ , 400 ppm
EL (Canada)	Short-term value: 500 ppm
	Long-term value: 400 ppm
EV (Canada)	Short-term value: 2045 mg/m ³ , 500 ppm
	Long-term value: 1635 mg/m ³ , 400 ppm
LMPE (Mexico)	Short-term value: 500 ppm
	Long-term value: 400 ppm

110-82-7 cyclohexane

PEL (USA)	Long-term value: 1050 mg/m ³ , 300 ppm
REL (USA)	Long-term value: 1050 mg/m ³ , 300 ppm
TLV (USA)	Long-term value: 344 mg/m ³ , 100 ppm
EL (Canada)	Long-term value: 100 ppm
EV (Canada)	Long-term value: 100 ppm
LMPE (Mexico)	Long-term value: 100 ppm

96-37-7 methylcyclopentane

REL (USA)	Long-term value: 350 mg/m ³ , 100 ppm
	Ceiling limit value: 1800* mg/m ³ , 510* ppm
	*15-min
TLV (USA)	Short-term value: 3500 mg/m ³ , 1000 ppm
	Long-term value: 1760 mg/m ³ , 500 ppm

589-34-4 3-methylhexane

TLV (USA)	Short-term value: 2050 mg/m ³ , 500 ppm
	Long-term value: 1640 mg/m ³ , 400 ppm
LMPE (Mexico)	Short-term value: 500 ppm
	Long-term value: 400 ppm

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96-14-0 3-methylpentane

REL (USA)	Long-term value: 350 mg/m ³ , 100 ppm Ceiling limit value: 1800* mg/m ³ , 510* ppm *15-min
TLV (USA)	Short-term value: 3500 mg/m ³ , 1000 ppm Long-term value: 1760 mg/m ³ , 500 ppm
EL (Canada)	Long-term value: 200 ppm
LMPE (Mexico)	Short-term value: 1000 ppm Long-term value: 500 ppm

71-43-2 benzene

REL (USA)	Short-term value: 15* mg/m ³ , 5* ppm Long-term value: 3* mg/m ³ , 1* ppm *table Z-2 for exclusions in 29CFR1910.1028(d)
REL (USA)	Short-term value: 1 ppm Long-term value: 0.1 ppm See Pocket Guide App. A
TLV (USA)	Short-term value: 8 mg/m ³ , 2.5 ppm Long-term value: 1.6 mg/m ³ , 0.5 ppm Skin; BEI
EL (Canada)	Short-term value: 2.5 ppm Long-term value: 0.5 ppm Skin; ACGIH A1; IARC 1
EV (Canada)	Short-term value: 2.5 ppm Long-term value: 0.5 ppm Skin
LMPE (Mexico)	Short-term value: 2.5 ppm Long-term value: 0.5 ppm A1, PIEL, IBE

287-92-3 cyclopentane

REL (USA)	Long-term value: 1720 mg/m ³ , 600 ppm
TLV (USA)	Long-term value: 1720 mg/m ³ , 600 ppm
EL (Canada)	Long-term value: 600 ppm
EV (Canada)	Long-term value: 1,720 mg/m ³ , 600 ppm
LMPE (Mexico)	Long-term value: 600 ppm

74-93-1 Methyl mercaptan

REL (USA)	Ceiling limit value: 20 mg/m ³ , 10 ppm
REL (USA)	Ceiling limit value: 1* mg/m ³ , 0.5* ppm *15-min
TLV (USA)	Long-term value: 0.98 mg/m ³ , 0.5 ppm
EL (Canada)	Long-term value: 0.5 ppm
EV (Canada)	Long-term value: 1 mg/m ³ , 0.5 ppm
LMPE (Mexico)	Long-term value: 0.5 ppm

· Ingredients with biological limit values:**110-54-3 n-hexane**

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BEI (USA)	0.4 mg/L Medium: urine Time: end of shift at end of workweek Parameter: 2.5-Hexanedione without hydrolysis
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71-43-2 benzene

BEI (USA)	25 µg/g creatinine Medium: urine Time: end of shift Parameter: S-Phenylmercapturic acid (background)
	500 µg/g creatinine Medium: urine Time: end of shift Parameter: t,t-Muconic acid (background)

• **Exposure controls**

• **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.

• **Engineering controls:** Provide adequate ventilation.

• **Breathing equipment:**



Self-contained respiratory protective device should be used in case of large spills or leaks.

• **Protection of hands:**

Wear gloves for protection against thermal and mechanical hazards according to OSHA and NIOSH rules.

• **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

• **Body protection:**

Protective work clothing
Wear appropriate protective clothing.

• **Limitation and supervision of exposure into the environment**

No relevant information available.

• **Risk management measures** No relevant information available.

9 Physical and chemical properties

• **Information on basic physical and chemical properties**

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· Appearance:	
Form:	Gas (may contain up to 10% liquids due to heavier hydrocarbons)
Color:	Colorless
· Odor:	Normally odorless. Pungent odor observed if mercaptans are present.
· Odor threshold:	Not determined.
· pH-value:	Not determined.
· Melting point/Melting range:	Not determined.
· Boiling point/Boiling range:	-153.9 °C (-245 °F)
· Flash point:	-51.1 °C (-60 °F)
· Flammability (solid, gaseous):	Extremely flammable liquefied gas.
· Auto-ignition temperature:	215.6 °C (420.1 °F)
· Decomposition temperature:	Not determined.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits	
Lower:	1.8 Vol %
Upper:	9.2 Vol %
· Oxidizing properties:	Not determined.
· Vapor pressure at 37.8 °C (100 °F):	7173 mmHg (138.7 psia)
· Density:	
Relative density at 15.6 °C (60.1 °F):	0.54
Vapor density:	Not determined.
Relative vapor density at 20 °C (68 °F):	1.754 (air = 1)
Evaporation rate:	Not applicable.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No relevant information available.

10 Stability and reactivity

- **Reactivity:** No data available for self-reactivity.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
Danger of receptacles bursting because of high vapor pressure if heated.
- **Possibility of hazardous reactions**
Extremely flammable gas.

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Reacts with halogenated compounds.
 Develops readily flammable gases / fumes.
 Reacts with oxidizing agents.
 Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
 Hazardous gases may be released if heated above the decomposition point.

• Conditions to avoid

Excessive heat.
 Keep ignition sources away - Do not smoke.

• Incompatible materials

Oxidizers
 Halogenated compounds.

• Hazardous decomposition products

Under fire conditions only:
 Carbon monoxide and carbon dioxide

11 Toxicological information

• Information on toxicological effects

• Acute toxicity: Based on available data, the classification criteria are not met.

• LD/LC50 values that are relevant for classification:**108-87-2 methylcyclohexane**

Oral	LD50	2,250 mg/kg (mouse)
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142-82-5 heptane

Oral	LD50	>5,000 mg/kg (rat) (Estimate)
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110-82-7 cyclohexane

Oral	LD50	12,705 mg/kg (rat)
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71-43-2 benzene

Oral	LD50	4,894 mg/kg (rat)
Inhalative	LC50/4h	9,980 mg/l (mouse)

• Primary irritant effect:

- On the skin:** Irritant to skin and mucous membranes.
- On the eye:** Based on available data, the classification criteria are not met.
- Sensitization:** Based on available data, the classification criteria are not met.

• IARC (International Agency for Research on Cancer):

71-43-2	benzene	1
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• NTP (National Toxicology Program):

71-43-2	benzene	K
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• OSHA-Ca (Occupational Safety & Health Administration):

71-43-2	benzene
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• Probable route(s) of exposure:

Inhalation.
 Eye contact.
 Skin contact.

- Germ cell mutagenicity:** May cause genetic defects.
- Carcinogenicity:** May cause cancer.

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- **Reproductive toxicity:** Suspected of damaging fertility or the unborn child.
- **STOT-single exposure:** May cause drowsiness or dizziness.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** May be fatal if swallowed and enters airways.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity** Toxic to aquatic life with long lasting effects.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information**
- **General notes:** Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1075
- **UN proper shipping name**
- **DOT, IATA** Petroleum gases, liquefied
- **ADR, IMDG** PETROLEUM GASES, LIQUEFIED
- **Transport hazard class(es)**

(Cont'd. on page 14)

Safety Data Sheet

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· DOT



· Class 2.1
· Label 2.1

· ADR



· Class 2.1 2F
· Label 2.1

· IMDG, IATA



· Class 2.1
· Label 2.1

· **Packing group** This UN-number is not assigned a packing group.

· **Environmental hazards** Product contains environmentally hazardous substances: heptane, cyclohexane

· **Marine pollutant:**



Yes

· **Special precautions for user** Not applicable.
· **Danger code (Kemler):** 21
· **EMS Number:** F-D,S-U

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· IATA



Cargo Aircraft Only.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture** (Cont'd. on page 15)



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- **United States (USA)**
- **SARA**

· Section 302 (extremely hazardous substances):
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None of the ingredients are listed.

· Section 355 (extremely hazardous substances):
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74-93-1	methanethiol
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· Section 313 (Specific toxic chemical listings):
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110-54-3	n-hexane
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110-82-7	cyclohexane
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71-43-2	benzene
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74-93-1	Methyl mercaptan
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· TSCA (Toxic Substances Control Act)
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All ingredients are listed.

· Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
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74-98-6	Propane	10000
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74-84-0	Ethane	10000
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106-97-8	butane	10000
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75-28-5	isobutane	10000
---------	-----------	-------

78-78-4	isopentane	10000
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109-66-0	pentane	10000
----------	---------	-------

74-93-1	Methyl mercaptan	10000
---------	------------------	-------

· Proposition 65 (California)

· Chemicals known to cause cancer:

71-43-2	benzene
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· Chemicals known to cause developmental toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity for males:

110-54-3	n-hexane
----------	----------

71-43-2	benzene
---------	---------

· Chemicals known to cause developmental toxicity:

71-43-2	benzene
---------	---------

· EPA (Environmental Protection Agency):

110-54-3	n-hexane	II
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142-82-5	heptane	D
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110-82-7	cyclohexane	I
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71-43-2	benzene	A, K/L
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· IARC (International Agency for Research on Cancer):
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71-43-2	benzene	1
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· Canadian Domestic Substances List (DSL) (Substances not listed.):
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(Cont'd. on page 16)



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All ingredients listed on DSL or NDSL.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bio-accumulable, Toxic
vPvB: very Persistent and very Bioaccumulative
OSHA: Occupational Safety & Health Administration
Flam. Gas 1: Flammable gases – Category 1
Press. Gas: Gases under pressure – Compressed gas
Flam. Liq. 1: Flammable liquids – Category 1
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B
Muta. 1B: Germ cell mutagenicity – Category 1B
Carc. 1A: Carcinogenicity – Category 1A
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1

Sources

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

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