

Chemtane Energy LLC

10902 Interstate -10 East, Suite 3
Baytown, Texas 77523

CHEMTANE 2 CONCENTRATE
MSDS (MATERIAL SAFETY DATA SHEET)

1. Chemical Product & Company Information

Phone numbers: Voice (281) 573-1100 Spill Chemtrec (800) 424-9300 Chemtrec Account # 11781
Fax (281) 573-1102 Emergency (703) 527-3887 24 hr.

Call emergency numbers 24 hours a day only for spills, leaks, fire, exposure, or accidents involving this product.

Product name: Chemtane 2 Concentrate

Person responsible for placing product on market: Raymond Davis 800-776-1485; Cell 281-382-1062

P.O. Box 2210

Website: <http://www.chemtane2.com>

Baytown, Texas 77522

Contact in EU: inmasegarra@gdaparatos.com

USA

MSDS preparation: James Boucher

2. Composition/Information on Ingredients

Ingredients	CAS Number	EINECS Number	OSHA PEL	ACGIH TLV
Soltrol 10	68551-16-6	70024-92-9	NE	NE
Cyclopentane	287-92-3	206-016-6	600 ppm	600 ppm
n-Pentane	109-66-0	203-692-4	600 ppm	600 ppm
2-Methylpentane	107-83-5	203-523-4	500 ppm	500 ppm
Isopentane	78-78-4	201-142-8	NE	NE
2,3-Dimethylbutane	79-29-8	201-193-6	500 ppm	500 ppm
Isohexanes	8030-30-6	232-443-2	NE	NE
2-Propanol	67-63-0	200-661-7	500 ppm	500 ppm

3. Hazards Identification

NFPA hazard ratings:

Fire Hazard – 3

Health Hazard – 1

Reactivity – 0

EMERGENCY OVERVIEW

DANGER! Flammable liquid.

Can form explosive mixtures with air.

Vapors may cause dizziness and drowsiness.

Self-contained breathing apparatus may be required by rescue workers.

**Under ambient conditions, this produces a colorless gas
with a faintly disagreeable odor.**

RECOMMENDED EXPOSURE LIMITS: See Section 2.

ACUTE EFFECTS OF OVEREXPOSURE:

Eye: Liquid or vapors may be mildly irritating.

Skin: Prolonged or repeated contact with the liquid may cause defatting of the skin resulting in drying, redness, and possibly blistering.

Inhalation: Vapors may be mildly irritating to lungs and mucous membranes of the nose and throat. Overexposure may cause dizziness, headache, excitation, drowsiness, loss of coordination, anesthesia, unconsciousness, and respiratory arrest. Exposure to Chemtane 2 in concentrations of 5000 ppm for ten minutes was found not to be irritating to the mucous membranes or to produce local or systematic effects in humans.

Ingestion: May cause effects similar to those of inhalation and gastrointestinal irritation. If swallowed, may be aspirated resulting in inflammation and possible fluid accumulation in the lungs.

SUBCHRONIC AND CHRONIC EFFECTS OF OVEREXPOSURE: No known applicable effects.

OTHER HEALTH EFFECTS: No known applicable information.

HEALTH HAZARD CATEGORIES:

	Animal	Human		Animal	Human
Known Carcinogen	_____	_____	Toxic	_____	
Suspect Carcinogen	_____	_____	Corrosive	_____	
Mutagen	_____	_____	Irritant	_____	
Teratogen	_____	_____	Target Organ Lung*	<u> x </u>	<u> x </u>
Allergic Sensitizer	_____	_____	*Specifically – Lung - Aspiration Hazard		

4. First Aid Measures

FIRST AID AND EMERGENCY PROCEDURES:

Eye: Flush eyes with running water for at least fifteen minutes. If irritation or adverse symptoms develop, seek medical attention.

Skin: Wash skin with soap and water. If irritation or adverse symptoms develop, seek medical attention.

Inhalation: Remove from exposure. If breathing is difficult, give oxygen. If breathing ceases, administer artificial respiration followed by oxygen. Seek immediate medical attention.

Ingestion: Do not induce vomiting. Seek immediate medical attention.

NOTE TO PHYSICIAN: Gastric lavage using a cuffed endotracheal tube may be performed at your discretion.

5. Fire Fighting Measures; Explosion Limits

FLASH POINT (Method Used): <-40°F (-40°C) (TCC, ASTM, D56)

EXPLOSIVE LIMITS: (% by volume in Air) : **LEL - 1.4% UEL - 8.3%**

FIRE EXTINGUISHING MEDIA: Dry chemical, foam or carbon dioxide (CO₂)

SPECIAL FIRE FIGHTING PROCEDURES: Evacuate area of all unnecessary personnel. Use NIOSH/MSHA approved self-contained breathing apparatus and other protective equipment and/or garments described in Section 8 if exposure conditions warrant. Shut off source. Water, fog or spray to cool exposed containers and equipment. Do not spray water directly on fire. Product will float and could be reignited on surface of water.

FIRE AND EXPLOSION HAZARDS: Carbon oxides formed when burned. Highly flammable vapors which are heavier than air may accumulate in low areas and/or spread along ground away from handling site. Flash back along vapor trail is possible.

6. Accidental Release Measures

Precautions Required if Material is Released or Spilled:

Evacuate area of all unnecessary personnel. Wear Protective equipment and/or garments described in Section 8 if exposure conditions warrant. Shut off source if possible and contain spill. Protect from ignition. Keep out of water sources and sewers. Absorb in dry, inert material (sand, clay, etc.). Transfer to disposal drums using non-sparking equipment.

Waste Disposal (Insure Conformity with all Applicable Disposal Regulations): Incinerate or otherwise manage at a RCRA permitted waste management facility.

7. Handling and Storage

Avoid contact with eyes, skin or clothing. Avoid breathing vapors, mist, fume or dust. Do not swallow. May be aspirated into lungs. Wear protective equipment and/or garments described in Section 8 if exposure conditions warrant. Wash thoroughly after handling. Launder contaminated clothing before reuse. Use with adequate ventilation. Keep away from heat, sparks and flame. Store in Well-ventilated area. Store in tightly closed container. Bond and ground during liquid transfer.

8. Exposure Controls / Personal Protection

Ventilation: Use adequate ventilation to control exposure below recommended levels.

Respiratory Protection: Not generally required. For concentrations exceeding the recommended exposure level, use NIOSH/MSHA approved air purifying respirator.

Eye Protection: Safety glasses with side shields. Splash protection: Face shield and chemical goggles.

Skin Protection: Avoid unnecessary skin contamination with material. Use gloves of Neoprene or Viton construction if liquid contact could occur.

Note: Personal protection information shown in Section 3 is based upon general information as to normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the expert assistance of an industrial hygienist or other qualified professional be sought.

9. Physical and Chemical Properties

Appearance: colorless liquid

Odor: Mild, gasoline or kerosene type odor

Boiling Point: 98°F (37°C)

Vapor Pressure: 15.9 psi at 100°F (37.8°C)

Vapor Density: (Air = 1): 2.48

Solubility in Water: Negligible

Specific Gravity (H₂O = 1): 0.63 at 60/60°F (15.6/15.6°C)

Percent Volatile by Volume: 100

Evaporation rate (Butyl Acetate = 1): >1

Viscosity: 0.234 cp at 68°F (20°C)

10. Stability and Reactivity

Stability: Stable

Conditions to Avoid: Not applicable

Incompatibility (Materials to Avoid): oxygen and strong oxidizing agents

Hazardous Polymerization: Will Not Occur

Conditions to Avoid: Not Applicable

Hazardous Decomposition Products: Carbon oxides formed when burned.

11. Toxicological Information

This product meets the following hazard definition(s) as defined by the Occupational Safety and Health Hazard Communication Standard:

<input type="checkbox"/> Combustible Liquid	<input type="checkbox"/> Flammable Aerosol	<input type="checkbox"/> Oxidizer
<input type="checkbox"/> Compressed Gas	<input type="checkbox"/> Explosive	<input type="checkbox"/> Pyrophoric
<input type="checkbox"/> Flammable Gas	<input checked="" type="checkbox"/> Health Hazard (Sec. 3)	<input type="checkbox"/> Unstable
<input checked="" type="checkbox"/> Flammable Liquid	<input type="checkbox"/> Organic Peroxide	<input type="checkbox"/> Water Reactive
<input type="checkbox"/> Flammable Solid		

Based on information presently available, this product Does not meet any of the Toxicity Definitions of 29 CFR Section 1910, 1200, Appendix A.

12. Ecological Information

Chemtrec Emergency Phone (800) 424-9300 / (202) 483-7616 (24 hr)

Spill / Leak Precautions: see 6. Accidental Release Measures; Spill, Leak

13. Disposal Considerations

Ignitable (D001)

Prior to disposal, consult your Environmental contact to determine if TCLP (Toxicity Characteristic Leaching Procedure, EPA Test method 1311) is required. Reference 40 CFR Part 261.

Precautions Required if Material is Released or Spilled:

Evacuate area of all unnecessary personnel. Wear Protective equipment and/or garments described in Section 8 if exposure conditions warrant. Shut off source if possible and contain spill. Protect from ignition. Keep out of water sources and sewers. Absorb in dry, inert material (sand, clay, etc.). Transfer to disposal drums using non-sparking equipment.

Waste Disposal (Insure Conformity with all Applicable Disposal Regulations): Incinerate or otherwise manage at a RCRA permitted waste management facility.

14. Transport Information

DOT IDENTIFICATION NUMBER UN1993
 DOT Shipping Name: 2-Methylpentane, 2,3-Dimethylbutane
 DOT Hazard Class 3 (Flammable Liquid)
 Hazardous Substance/RQ: Not Applicable
 Packing Group 2

15. Regulatory Information

Product and/or Components Entered on EPA's TSCA Inventory: Yes
 This product is in U.S. Commerce, and is listed in the Toxic Substances Control Act (TSCA) Inventory of Chemicals.
 Hence, it may be subject to applicable TSCA provisions and restrictions.

01 = SARA 313	02 = MASS RTK	03 = NTP Carcinogen
04 = CA Prop. 65	05 = MI 406	06 = IARC Group 1
07 = IARC Group 2A	08 = IARC Group 2B	09 = SARA 302/304
10 = PA RTK	11 = NJ RTK	12 = CERCLA 302.4
13 = MN RTK	14 = ACGIH TLV	15 = ACGIH STEL
16 = ACGIH Calculated TLV	17 = OSHA TWA	18 = OSHA STEL
19 = Chevron TLV	20 = EPA Carcinogen	21 = TSCA Sect 4(e)
22 = TSCA Sect 5(a)(e)(f)	23 = TSCA Sect 6	24 = TSCA Sect 12(b)
25 = TSCA Sect 8(a),(b)	26 = TSCA Sect 8(d)	28 = Canadian WHMIS
29 = OSHA CEILING		

The following components of this material are found on the regulatory lists indicated.

Ethane	02, 10, 11, 13, 14
Propane	02, 10, 11, 13, 14, 17
n- Butane	02, 10, 11, 13, 14, 17, 25, 28
I-Butane	02, 10, 11, 13, 14, 17, 25, 28
n-Pentane	02, 10, 11, 13, 14, 17, 25, 28
Cyclopentane	02, 10, 11, 13, 14, 17, 25, 28
2-Methylpentane	02, 10, 11, 13, 14, 17, 25, 28

16. Other Information

SARA 311 CATEGORIES:

1. Immediate (Acute) Health Effects :	Yes
2. Delayed (Chronic) Health Effects :	No
3. Fire Hazard :	Yes
4. Sudden Release of Pressure Hazard :	Yes
5. Reactivity Hazard :	No

As of the preparation date, this product was not subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Chemtane Energy LLC assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Chemtane Energy LLC, assumes no responsibility for injury to the vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.