January 28, 2009

Chemtane Energy LLC
1905 N Battlebell
Highlands, TX 77562

CHEMTANE V CONCENTRATE
MSDS (MATERIAL SAFETY DATA SHEET)

Phone numbers: Voice (281) 424-8787
Fax (281) 424-9349
Toll Free 800-776-1485
Spill Chemtrec (800) 424-9300
(202) 483-7616 24 hr.
International: 703-527-3887 (collect)

1. *Identification of the substance/preparation and of the company/undertaking*

Chemtane V Engine Fuel Propane Treatment / Formulated by Chemtane Energy LLC (See contact info above)

Person responsible for placing product on market: Raymond Davis 800-776-1485; Cell 281 382-1062
P.O. Box 2210
Baytown, Texas 77522
USA

Contact in EU: inmasegarra@gdaparatos.com

MSDS preparation: James Boucher jboucher@chemtane2.com

Health Emergency Toll Free 800-776-1485 (During office hours.) See numbers above for Spill.
Emergency phone: National Institute of Toxicology: 0034915628469

2. *Hazards Identification*

Flammable Liquid and Vapor
Hazardous in case of ingestion; Aspiration hazard if swallowed
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 irritating to lungs and mucous membranes of the nose and throat. Overexposure may cause dizziness, headache, excitation, drowsiness, loss of coordination, anesthesia, unconsciousness, and reparatory arrest. Exposure to Chemtane V in concentrations of 500 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.
Chronic: Prolonged or repeated skin contact may cause dermatitis.
Target Organs: Central nervous system, liver, lungs.

3. *Composition/Information on Ingredients*

Ingredients Name	EINECS Number	CAS Number	OSHA PEL	ACGIH TLV
Stoddard Solvent	232-489-3	8052-41-3	100 ppm	
Additives				75 ppm

Proprietary surfactant, upper lubricant, and non-metallic combustion modifiers.

4. *First-Aid Measures*

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*

Fire-Fighting Measures: CO_2, Dry Powder, Sand, Halogens, DO Not Use Water to fight fire
Cylinders may be cooled with water.

FLASH POINT (Pensky-Martens): (49 °C (120 °F) ASTM, D56)
EXPLOSIVE LIMITS: (% by volume in Air): **LEL 1.0%** **UEL 6.0%**
FIRE EXTINGUISHING MEDIA: Dry chemical, foam or carbon dioxide (CO_2)
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 C 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 C if exposure conditions warrant. Shut off source if possible and contain spill. Protect from ignition. Keep out of water sources and sewers.
Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a release, clear the affected area and protect people.

Adequate fire protection must be provided. Minimum Personal Protective Equipment should be Level B: fire-retardant protective clothing, mechanically-resistant gloves and Self-Contained Breathing Apparatus. Use only non-sparking tools and equipment. Locate and seal the source of the leaking gas. Protect personnel attempting the shut-off with water-spray. Allow the gas to dissipate. Monitor the surrounding area for combustible gas levels, and oxygen. Combustible gas concentration must be below 10% of the LEL of Propane (see Section 5, Fire-Fighting Measures) prior to entry of response personnel. The atmosphere must contain components below levels listed in Section 2 (Composition and Information on Ingredients) and have at least 19.5 percent oxygen before personnel can be allowed in the area without Self-Contained Breathing Apparatus. Attempt to close the main source valve prior to entering the area. If this does not stop the release (or if it is not possible to reach the valve), allow the gas to release in-place or remove it to a safe area and allow the gas to be released there.

7. *Handling and Storage*

Avoid contact with eyes, skin or clothing. Avoid breathing vapors, mist, and fume. Do not swallow. May be aspirated into lungs. Wear protective equipment and/or garments described in Section C 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 and engineering controls: Use with adequate ventilation to ensure compliance with exposure limits described in Section 3 (Composition /Information on Ingredients). Local exhaust ventilation is preferred, because it prevents dispersion of this gas mixture into the work place by eliminating it at its source. If appropriate, install automatic monitoring equipment to detect the levels of flammable gas, and oxygen.
Respiratory protection: Maintain Oxygen levels above 19.5% in the workplace. If respiratory protection is needed, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required
Eye protection: Splash goggles, face-shields or safety glasses.
Hand protection: Wear mechanically-resistant gloves when handling cylinders of this product. If use of this gas mixture involves the use of other chemicals, wear gloves appropriate for those materials.
Body protection: Use body protection appropriate for task. Cotton clothing is recommended to prevent static electric build up. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection.

9. *Physical and Chemical Properties*

Appearance: Light Amber liquid
Odor: Mild, oily kerosene type of odor
Boiling Point: 159 – 236 □°C (318 – 456 °F)
Freezing Point – 40 °C
Vapor Pressure: 2.0 psi at 37.8□°C (100□°F)
Vapor Density: (Air = 1): 4.9
Solubility in Water: Negligible
Specific Gravity (H_2O = 1): 0.777 at 15.6/15.6□°C (60/60□°F)
Percent Volatile by Volume: 100
Evaporation rate (Butyl Acetate = 1): 0.1
Viscosity: 0.234 cp at 20□°C (68□°F)

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 dioxide and Carbon monoxide formed when burned.

11. Toxicological Information

The oral toxicity of this product is estimated to be greater than 5,000 mg/kg.
This product is not classified as toxic by established criteria.

Human health effects from chronic exposure to low environmental levels of Stoddard solvent are not known.

This product is an aspiration hazard.

None of the components of this product is listed as a carcinogen or suspected carcinogen or is considered a reproductive hazard.

12. Ecological Information

Ecotoxicity information not available.
Do not empty into drains.
Floats on top of water.
Specific Gravity (H_2O = 1): 0.777 at 15.6/15.6°C (60/60°F)
does and not readily contaminate groundwater.

13. Disposal Considerations

Disposal by incineration is acceptable.

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

14. Transport Information

UN IDENTIFICATION NUMBER UN1268
Packing group III

15. Regulatory Information

Lacks some of the data needed for Chemical Safety Assessment.

Risk Assessment Values	Value
Inhalation cancer risk value (potency)	Not a suspected carcinogen
Inhalation non-cancer risk	No Data
Ingestion cancer risk value.	Not a suspected carcinogen

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