

Material Safety Data Sheet

Terraclean Fuel & Post Combustion Cleaner

Emergency Telephone #: CHEMTREC (24 hours) 1-800-424-9300 (US only) or (703) 527-3877 outside US

1. Chemical Product and Company Identification

Product Name: Terraclean Fuel & Post Combustion Cleaner Part No: 201220 & 201420 Description: Gasoline Engine Fuel Injection Cleaner Company Identification: UView Ultraviolet Systems Inc. 1324 Blundell Road Mississauga, Ontario, Canada L4Y 1M5 (905) 615-8620 (for inquiries only)

Issue Date: March 22, 2010

2. Composition/Information on Ingredients

| Chemical Name | CAS Number | %W |
|--------------------------|---|----------|
| Petroleum Distillate | 8006-61-9 | 60 - 100 |
| Carbon Dioxide | 124-38-9 | 1 - 5 |
| 3. Hazards Identificatio | n | |
| WHMIS Classification: | A, Compressed Gas D2A, Toxic Material B5, Flammable Aerosol | |
| NFPA Rating - Heal | lth: | 1 |
| Flam | nmability: | 4 |
| Read | ctivity: | 0 |

Emergency Overview: Extremely flammable aerosol. Harmful if swallowed. May cause lung damage if swallowed. Causes skin and eye irritation. High concentration of vapour may cause nausea, dizziness, headaches and drowsiness. Contents under pressure. Primary entry route(s): Inhalation, Ingestion, Eyes and Skin. Effects of short-term (acute) exposure: (for more details, refer to Section 11).

Potential Health Effects

Eye: Contact will cause irritation. Liquid may cause temporary pain if splashed in the eye(s). May cause redness, tearing and moderate irritation.

Skin: Prolonged or repeated contact will cause skin irritation. If trapped against the skin for a long period (probably more than 30 minutes), serious irritations, even burns and skin loss may occur. If not, mild irritation may occur.

Inhalation: Vapours may cause respiratory irritation. Breathing vapours at concentration above recommended exposure limits could cause headache, dizziness, nausea and drowsiness. Vapours may cause central nervous system (CNS) depression. Other CNS effects such as headache, lack of appetite, drowsiness, and in-coordination can occur. Very high

concentrations may cause unconsciousness and pulmonary edema.

Ingestion: If swallowed, this material may irritate the respiratory tract. Due to its low viscosity, there is danger of aspiration into the lungs during swallowing and subsequent vomiting. Aspiration can result in severe lung damage. Product is moderately toxic if ingested. It may cause burning in the mouth, throat and chest as well as stomach irritation, nausea, vomiting and cyanosis (bluish discoloration of the fingertips, toes, lips and other extremities). Central nervous symptom depression, such as unconsciousness and coma, can occur. Inhalation of product into the lungs (aspiration) can occur while product is in the mouth, being swallowed or during vomiting. The aspiration of even a small amount of product into the lungs is very hazardous and may cause death. Aspirated product can cause chemical pneumonitis and/or pulmonary edema.

Medical Conditions Aggravated by Long-term Exposure: Repeated or prolonged contact can dry the skin and cause cracking, irritation and dermatitis.

Carcinogenicity: Gasoline is listed by IARC, ACGIH, NTP and/or OSHA as a possible human carcinogen.

Teratogenicity, mutagenicity, and other reproductive effects: $N/A\,\nu.$

Skin sensitization: N/Av. Respiratory tract sensitization: N/Av Synergistic materials: N/Av

4. First Aid Measures

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention if irritation develops or persists. **Skin Contact:** Remove contaminated clothing and wash affected area immediately with large amounts of soap and water. Get medical attention if irritation develops or persists. **Inhalation:** Remove source of contamination or move the exposed person to fresh air. If not breathing, trained personnel should give artificial respiration. Get medical attention. **Ingestion:** Do Not induce vomiting. Contact a physician. Never give anything by mouth to an unconscious person. If swallowed, immediately give 2 glasses of water.

5. Fire Fighting Measures

COC Flash Point: -49 to -30 °C (-56.2 to -22 °F) Autoignition Temperature: 257 – 400 °C (495 – 750 °F) Flammable Limits in Air: LEL (% by volume): 0.6 - 1.4 UEL (% by volume): 7.6 – 8.0 Extinguishing Media: Use dry chemical carbon dioxide foal

Extinguishing Media: Use dry chemical, carbon dioxide, foam or water fog. Water may be ineffective since it may not cool the material below its flash point



Fire & Explosion Hazards: Material probably not sensitive to mechanical impact. Vapour can be readily ignited by static charge.

Fire Fighting Instructions: Flammable liquid and vapour. This material releases vapours at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, its vapour can cause a flash fire. Vapours are heavier than air and may travel long distances along the ground to an ignition source and flash back. Liquid can float on water and may travel to distant locations and/or spread fire. If container is not cooled, it can rupture in the heat of the fire. As in any fire, wear self-contained breathing apparatus pressure-demand MSHA/NIOSH (approved or equivalent) and full protective gear. Avoid breathing smoke, fumes and decomposition products.

Hazardous Combustion Products: In the case of a fire, oxides of carbon, oxides of nitrogen, hydrocarbons, trace elements, fumes and smoke may be produced.

6. Accidental Release Measures

Safeguards (Personnel): Wear appropriate personal protective equipment. Eliminate all sources of ignition in the vicinity of the spill. All equipment used when handling this material must be grounded. See Section 8.

Large Spills Procedure: Contain spilled material. Large spillage should be dammed-off. Prevent spilled product from entering stream or drinking water supply. Pick up free liquid if it can be safely done with explosion-proof equipment. Take up the remainder with absorbent material. Treat or dispose of waste material in accordance with all local, state/provincial and federal regulations.

Small Spills Procedure: Absorb spills with inert material. Avoid disposal into wastewater treatment facilities. Treat or dispose of waste material in accordance with all local, state/provincial and federal regulations.

7. Handling and Storage

Handling (Personnel): Do not get into eyes, on skin or clothing. Use only with adequate ventilation and personal protection. When sampling containers use appropriate personal protective equipment. When handling material use spark-proof tools and explosion-proof equipment.

Storage Requirements: Always keep containers tightly closed and do not handle or store near heat, sparks or any potential ignition sources. Store away from incompatible materials such as strong oxidizers. Protect containers from physical damage.

8. Exposure Controls/Personal Protection

Engineering Controls/Ventilation: Good general ventilation should be sufficient to control airborne levels. An emergency eye wash station and safety shower should be located near the workstation.

Eye/Face Protection Requirements: Wear splash-proof safety glasses.

Skin Protection: Wear protective gloves to minimize skin contamination. For brief contact, normal work attire should be sufficient. When prolonged or repeated contact could occur, use protective clothing impervious to this material.

Respiratory Protection Requirements: Under normal use conditions while handling small quantities, with adequate ventilation, no special handling equipment is required.

Exposure Guidelines:

| Ingredients | ACGIH TLV | |
|----------------------|-----------|---------|
| | TWA | STEL |
| | | |
| Petroleum Distillate | 300 ppm | 500 ppm |

9. Physical and Chemical Properties:

| Appearance | : Clear Liquid |
|---------------------------------------|-----------------------------|
| Odour | : Characteristic |
| Water Solubility | : Insoluble |
| Boiling Point | : 29 – 200 °C (84 – 392 °F) |
| Melting Point | :: - 60 °C |
| Vapour Density | : Approx. 3 - 4 (Air = 1) |
| Vapour Pressure °C | : 400 – 775 mmHg @ 20 |
| Specific Gravity | : 0.71 – 0.76 |
| Odour Threshold | : 0.06 – 0.08 ppm |
| рН | : Not Available |
| Coefficient of Oil/Water Distribution | on: Not Available |
| | |

10. Stability and Reactivity

Chemical Stability: Stable under normal conditions of storage and use.

Conditions to Avoid: Avoid contact with strong oxidizers (e.g. peroxides, nitric acid and perchlorates). Avoid heat, sparks, static discharge, friction, open flames and other sources of ignition. **Hazardous Polymerization:** Will not occur

Hazardous Decomposition Products: Decomposition will not occur if handled and stored properly.

11. Toxicological Information

Dermal LD50 Species: Rabbit Results: > 5,000 mg/kg. Based on similar materials.

Oral LD50 Species: Rat Results: 13,600 mg/kg. Based on similar materials.

Routes of Exposure: Skin, eyes, ingestion and inhalation. Reproductively Toxicity: None Sensitization to Material: None Carcinogenicity: No data available

12. Ecological Information

Environmental Effects: Not Available Important Environmental Characteristics: Not Available Aquatic Toxicity: Not Available



13. Disposal Information

Waste Disposal: Unclean empty containers should be disposed of in the same manner as the contents. Avoid washing material into sewer systems without proper treatment and authorization by the treatment facility management. Treat or dispose of waste material in accordance with all local, state/provincial and federal regulations.

14. Transportation Information

Transportation of Dangerous Goods Information for TDG, DOT (49 CFR), by Ship (IMDG Code):

Shipping Description: This product is regulated according to those Regulations Proper Shipping Name: AEROSOLS Class: 2.1 Identification number: UN 1950 LTD QTY, ORM-D (425 ml/can or 225 ml/can)

Transportation of Dangerous Goods by Air (ICAO/IATA):

Shipping Description: This product is regulated according to those Regulations Proper Shipping Name: AEROSOLS, FLAMMABLE Class: 2.1 Identification number: UN 1950

15. Regulatory Information

Miscellaneous Information: This material or all of its components are listed on the Inventory of Existing Chemical Substances under the Toxic Substance Control Act (TSCA) and the Canadian Domestic Substance List (DSL).

16. Other Information

| Reason for Issue | Revision |
|------------------|----------------|
| Prepared By | Amjad Mousa |
| Approval Date | March 22, 2010 |

Additional Information: The data in this Material Safety Data Sheet relates only to the specific material designate herein. It does not relate to use in combination with any other material or in any process.

Disclaimer of Liability: The information is furnished without warranty, expressed or implied, except that it is accurate to the best of our knowledge and belief. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. It is the responsibility of the users to comply with all applicable federal, state/provincial and local laws and regulations.