1. IDENTIFICATION OF SUBSTANCE

Trade name: FRONTIER
Product Number: 5512
Application of the substance / the preparation
Drycleaning Detergent for perchloroethylene solvent

Manufacturer/Supplier:
Fabritec International, Inc.
8145 Holton Drive, Suite 110
Florence, KY 41042 USA
(859) 781-8200

Further Information:
Chemtrec Assistance (800) 262-8200 USA

2. HAZARDS IDENTIFICATION

Hazard Description: Skin irritant Category 2, Eye damage Category 1, Health Hazard Category 1, Flammable liquid Category 4

Signal word
Danger!

Hazard statement(s)
Causes skin irritation.
Causes serious eye damage.
May be fatal if swallowed and enters airway.
Causes damage to organs through prolonged or repeated exposure: Central nervous system.
Combustible liquid.

Precautionary statement(s)
Wear protective gloves/protective clothing/eye protection/face protection.
Immediately call a POISON CENTER/doctor.
IF ON SKIN: Wash with plenty of water.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Do not breathe vapors.
IF SWALLOWED: Rinse mouth, do not induce vomiting.
Keep away from flames and hot surfaces, no smoking.
3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization: Mixture of substances with nonhazardous additives.

CAS No. & Description:

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Description</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>64742-88-7</td>
<td>Aliphatic Hydrocarbons</td>
<td>30-40%</td>
</tr>
<tr>
<td>107-41-5</td>
<td>Hexylene Glycol</td>
<td>2-5%</td>
</tr>
<tr>
<td>67892-37-9</td>
<td>Betaine</td>
<td>8-15%</td>
</tr>
<tr>
<td>111-05-7</td>
<td>Oleyl isopropylamide</td>
<td>4-5%</td>
</tr>
<tr>
<td>27176-87-0</td>
<td>Dodecylbenzene sulphonic acid</td>
<td>≤9%</td>
</tr>
<tr>
<td>78-96-6</td>
<td>Monoisopropylamine</td>
<td>≤2%</td>
</tr>
<tr>
<td></td>
<td>Fragrance and additives</td>
<td>≤0.5%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

General information: Remove clothing.
After inhalation: Remove to fresh air.
After skin contact: Wash affected air with soap and water.
After eye contact: Remove contacts, if worn, flush eyes with water for 15 minutes-seek medical help.
After swallowing: Unlikely route of contact. However if swallowed, give lots of water and due not induce vomiting - get medical help.

5. FIRE FIGHTING MEASURES

Suitable extinguishing agents: Carbon Dioxide, dry chemicals or foam spray.

Special hazards caused by the substance, its products of combustion or resulting gases: May release poison gases.

Protective equipment:

Additional information:

6. ACCIDENTAL RELEASE MEASURES

Person-related safety precautions: Wear protective clothing and respirator when cleaning up large spills.

Measures for environmental protection: Contain and adsorb the product with absorbent materials. Do not allow the material to contaminate water systems.

Measures for cleaning/collecting: Absorb product on sand, saw dust, universal commercial binders, kitty litter. Dispose as hazardous waste.

Additional information:

7. HANDLING AND STORAGE

Handling:

Information for safe handling:

Information about fire and explosion prevention: Keep away from heat and ignition systems.

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: No special requirements.

Further information about storage conditions:
8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Additional information about design of technical systems:
Ingredients with limit values that require monitoring at the workplace:
Additional information:
Personal protective equipment: safety goggles/glasses and protective gloves.
General protective and hygienic measures: avoid direct contact, wash hands before eating, etc.
Respiratory protection: Use respiratory device in case of poor ventilation.
Protection of hands: Use protective gloves.
Eye protection: Use safety goggles/glasses.

9. PHYSICAL AND CHEMICAL PROPERTIES

General information:
Form: Liquid
Color: amber
Odor: pleasant-contains scent
Change in condition:
Melting point/Melting range: Not applicable
Boiling point/Boiling range: ≥180 °C
Flash point: 144°F (62°C) Tag closed cup.
Auto-ignition temperature: No data
Decomposition temperature: No data.
Danger of explosion: No data.
Density at 20° C (68°F): 0.9
Solubility in/ Miscibility with water: Not soluble.
pH value at 20°C (68°F): Not determined.
Viscosity: Not determined.
Solvent content: Approx. 60 %

10. STABILITY AND REACTIVITY

Thermal decomposition / conditions to be avoided:
Decomposition starts at: No data
Dangerous reactions: No data.
Dangerous decomposition products: oxides of carbon and sulfur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:
LD/LC50 values that are relevant for classification: Based on Hydrocarbon content.
Primary irritant effect: Not determined.
On the skin: LD50/rat/15.4g./Kg.
On the eye: No data available.
Sensitization: No data available.
Additional toxicological information:
12. ECOLOGICAL INFORMATION

- **Information about elimination (persistence and degradability):**
- **Other information:** The product is not expected to be readily biodegradable.
- **Behavior in environmental systems:** No data available.
- **Mobility and bioaccumulation potential:** No data available.
- **Ecotoxic effects:** No data available.
- **Aquatic toxicity:** No data available.
- **General notes:** Do not allow product to enter water systems.

13. DISPOSAL CONSIDERATIONS

- **Product:**
  - **Recommendation:** Dispose according to all applicable regulations.
- **Uncleaned packaging:** Dispose according to all applicable regulations.
  - **Recommendation:**

14. TRANSPORT INFORMATION

- **DOT Regulations:** Combustible liquid.
- **Hazard Class:**
  - **Land Transport ADR/RID (cross-border):** Not regulated.
  - **ADR-RID class:**
    - **Maritime transport IMDG:**
      - **IMDG class:**
      - **Marine pollutant:** None known.
    - **Air transport ICAO-TI and IATA-DGR:** Not regulated.
    - **ICAO/IATA class:**

15. REGULATORY INFORMATION

- **Labeling:**
  - **Code letter and hazard designation of product:**
    - **Risk phrases:** R26/21/22
    - **Safety phrases:** S9/15/16/24/25/26/35/36/37/38
  - **National regulations:**
  - **Technical instructions (air):**
  - **Waterhazard class:**
### 16. OTHER INFORMATION

The information provided in these documents is based on our present state of knowledge of the product and is given in good faith and to the best of our experience. However, it should not be construed as a technical specification or as guaranteeing specific properties. In no event will we be responsible for damages of effects of any nature whatsoever, either express or implied, resulting from the use of this information. It is the responsibility of the consignee and the user of the product to comply with all prevailing and applicable laws, regulations and directives. They should also make their own determination as to the suitability of the product for a particular use or application.

**Abbreviations and acronyms:**
- **ADR:** Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- **RID:** Reglement internationale concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- **IMDG:** International Maritime Code for Dangerous Goods
- **IATA:** International Air Transport Association
- **IATA-DGR:** Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
- **ICAO:** International Civil Aviation Organization
- **ICAO-TI:** Technical Instructions by the "International Civil Aviation Organization" (ICAO)
- **P:** Marine Pollutant
- **GHS:** Globally Harmonized System of Classification and Labelling of Chemicals
- **EINECS:** European Inventory of Existing Commercial Chemical Substances
- **CAS:** Chemical Abstracts Service (division of the American Chemical Society)
- **LC50:** Lethal concentration, 50 percent
- **LD50:** Lethal dose, 50 percent