#### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 08/04/2014

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### **Product identifier**

: Mixture Product form

Trade name : 1ST AYD STARTING FLUID 25% 10.7 OZ.

Product code : 1-11

#### Relevant identified uses of the substance or mixture and uses advised against

: Starting Fluid Use of the substance/mixture

#### Details of the supplier of the safety data sheet

FIRST AYD CORPORATION 1325 GATEWAY DRIVE **ELGIN,IL 60123** T 800-422-3033

#### **Emergency telephone number**

Emergency number : CHEMTREC 24 Hour 1-800-424-9300, 1-703-527-3887 (International)

#### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

#### **Classification (GHS-US)**

Flam. Aerosol 1 H222 Compressed gas H280 Skin Irrit. 2 H315 Muta. 1B H340 Carc. 1A H350 Repr. 2 H361 STOT SE 3 H336 STOT RE 2 H373

Full text of H-phrases: see section 16

#### 2.2. Label elements

#### **GHS-US** labeling

Hazard pictograms (GHS-US)







GHS04

GHS07

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) H222 - Extremely flammable aerosol

H280 - Contains gas under pressure; may explode if heated

H315 - Causes skin irritation

H336 - May cause drowsiness or dizziness

H340 - May cause genetic defects

H350 - May cause cancer

H361 - Suspected of damaging fertility or the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) P201 - Obtain special instructions

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

P211 - Do not spray on an open flame or other ignition source P251 - Pressurized container: Do not pierce or burn, even after use

P260 - Do not breathe dust, fumes, gas, mist, vapor spray P261 - Avoid breathing dust, fume, gas, mist, vapor spray P264 - Wash affected areas thoroughly after handling P271 - Use only outdoors or in a well-ventilated area

P280 - Wear protective gloves, protective clothing, eye protection, face protection

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 P312 - Call a POISON CONTROL CENTER, doctor, if you feel unwell.

P314 - Get medical advice/attention if you feel unwell P321 - Specific treatment: See section 4.1 on SDS

P332+P313 - If skin irritation occurs: Get medical advice/attention P362 - Take off contaminated clothing and wash before reuse P403+P233 - Store in a well-ventilated place. Keep container tightly closed

01/12/2014 EN (English US) 1/11

Version:

#### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P405 - Store locked up

P410+P403 - Protect from sunlight. Store in a well-ventilated place

P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

#### 2.3. Other hazards

Other hazards not contributing to the classification

: Contains gas under pressure; may explode if heated.

#### 2.4. Unknown acute toxicity (GHS-US)

No data available

#### **SECTION 3: Composition/information on ingredients**

#### 3.1 Substance

Not applicable

#### 3.2. Mixture

| Name   | Product identifier   | %                  | Classification (GHS-US)   |
|--|----------------------|--------------------|---|
| Heptane, Branched Cyclic                               | (CAS No) 426260-76-6 | 44.64 - 46.5       | Flam. Liq. 1, H224<br>Skin Irrit. 2, H315<br>STOT SE 3, H336<br>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412                          |
| Diethyl Ether  | (CAS No) 60-29-7     | 10 - 30            | Flam. Liq. 1, H224<br>Acute Tox. 4 (Oral), H302   |
| Petroleum Gases, Liquefied, Sweetened                  | (CAS No) 68476-86-8  | 10 - 30            | Flam. Gas 1, H220<br>Flam. Liq. 1, H224<br>Muta. 1B, H340<br>Carc. 1A, H350   |
| Heptane  | (CAS No) 142-82-5    | 11.625 -<br>20.925 | Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>STOT SE 3, H336<br>Asp. Tox. 1, H304<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |
| Carbon Dioxide, Liquefied, Under Pressure              | (CAS No) 124-38-9    | 5 - 10             | Compressed gas, H280  |
| Toluene  | (CAS No) 108-88-3    | 0.465 - 1.86       | Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>Repr. 2, H361<br>STOT SE 3, H336<br>STOT RE 2, H373<br>Asp. Tox. 1, H304                 |
| Distillates (Petroleum), Hydrotreated Heavy Naphthenic | (CAS No) 64742-52-5  | < 1                | Not classified  |

#### **SECTION 4: First aid measures**

#### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical

advice/attention

First-aid measures after inhalation : Cough. Remove to fresh air and keep at rest in a position comfortable for breathing. Call a

POISON CENTER/doctor/physician if you feel unwell.

First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation

occurs: Get medical advice/attention. Specific treatment: See section 4.1 on SDS.

First-aid measures after eye contact : Direct contact with the eyes is likely to be irritating. Rinse immediately with plenty of water.

Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : May cause genetic defects. Suspected of damaging fertility or the unborn child. Causes damage

to organs.

Symptoms/injuries after inhalation : Shortness of breath. May cause cancer by inhalation. May cause drowsiness or dizziness.

Symptoms/injuries after skin contact : Causes skin irritation.

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

#### **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable aerosol.

01/12/2014 EN (English US) 2/11

#### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns

and injuries.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

chemical fire. Prevent fire-fighting water from entering environment. DO NOT fight fire when fire

reaches explosives. Evacuate area.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Aerosol level 3.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : No naked lights. No smoking. Isolate from fire, if possible, without unnecessary risk. Remove

ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Avoid breathing dust, fume, gas, mist, vapor spray.

Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

For containment : Dam up the liquid spill.

Methods for cleaning up : Store away from other materials.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

#### **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

Additional hazards when processed : Hazardous waste due to potential risk of explosion. Pressurized container: Do not pierce or burn,

even after use.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not spray on an open flame or other ignition source. Obtain special instructions. Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do so. Avoid breathing dust,fume,gas,mist,vapor spray. Use only outdoors or in

a well-ventilated area.

Hygiene measures : Wash affected areas thoroughly after handling.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Do not expose to

temperatures exceeding 50 °C/ 122 °F. Keep in fireproof place. Keep container tightly closed.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: ignition sources. heat sources.

Storage area : Store in a well-ventilated place.

#### 7.3. Specific end use(s)

Follow Label Directions.

#### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

| Diethyl Ether (60-29-7) |                        |            |
|-------------------------|------------------------|------------|
| USA ACGIH               | ACGIH TWA (mg/m³)      | 1200       |
| USA ACGIH               | ACGIH TWA (ppm)        | 400 ppm    |
| USA ACGIH               | ACGIH STEL (mg/m³)     | 1500 mg/m³ |
| USA ACGIH               | ACGIH STEL (ppm)       | 500 ppm    |
| USA OSHA                | OSHA PEL (TWA) (mg/m³) | 1200 mg/m³ |

01/12/2014 EN (English US) 3/11

#### Safety Data Sheet

Diethyl Ether (60 20 7)

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Diethyl Ether (60-29-7) |                          |          |  |
|-------------------------|--------------------------|----------|--|
| USA OSHA                | OSHA PEL (TWA) (ppm)     | 400 ppm  |  |
|                         | ·                        | ·        |  |
| Toluene (108-88-3)      |                          |          |  |
| USA ACGIH               | ACGIH TWA (mg/m³)        | 75 mg/m³ |  |
| USA ACGIH               | ACGIH TWA (ppm)          | 20 ppm   |  |
| USA OSHA                | OSHA PEL (TWA) (ppm)     | 200 ppm  |  |
| USA OSHA                | OSHA PEL (Ceiling) (ppm) | 300 ppm  |  |
| H( (4.40.00.5)          | '                        | '        |  |
|                         |                          |          |  |

| Heptane (142-82-5) |                  |         |
|--------------------|------------------|---------|
| USA ACGIH          | ACGIH TWA (ppm)  | 400 ppm |
| USA ACGIH          | ACGIH STEL (ppm) | 400 ppm |

| Heptane, Branched Cyclic (426260-76-6) |                      |         |
|--|----------------------|---------|
| USA ACGIH                              | ACGIH TWA (ppm)      | 400 ppm |
| USA ACGIH                              | ACGIH STEL (ppm)     | 500 ppm |
| USA OSHA                               | OSHA PEL (TWA) (ppm) | 500 ppm |

| Distillates (Petroleum), Hydrotreated Heavy Naphthenic (64742-52-5) |                        |                      |
|---|------------------------|----------------------|
| USA ACGIH   | ACGIH TWA (mg/m³)      | 5 mg/m³ MIST 8 HOURS |
| USA OSHA  | OSHA PEL (TWA) (mg/m³) | 5 mg/m³ MIST 8 HOURS |

| Petroleum Gases, Liquefied, Sweetened (68476-86-8) |                        |  |
|--|------------------------|--|
| USA ACGIH  | ACGIH TWA (ppm)        | 1000 ppm Listed under Aliphatic hydrocarbon gases alkane C1-C4 |
| USA OSHA   | OSHA PEL (TWA) (mg/m³) | 1800 mg/m³   |
| USA OSHA   | OSHA PEL (TWA) (ppm)   | 1000 ppm   |

| Carbon Dioxide, Liquefied, Under Pressure (124-38-9) |                        |            |
|--|------------------------|------------|
| USA ACGIH  | ACGIH TWA (mg/m³)      | 9000 mg/m³ |
| USA ACGIH  | ACGIH TWA (ppm)        | 5000 ppm   |
| USA ACGIH  | ACGIH STEL (mg/m³)     | 54000      |
| USA ACGIH  | ACGIH STEL (ppm)       | 30000 ppm  |
| USA OSHA   | OSHA PEL (TWA) (mg/m³) | 9000 mg/m³ |
| USA OSHA   | OSHA PEL (TWA) (ppm)   | 5000 ppm   |

#### 8.2. Exposure controls

Appropriate engineering controls : Local exhaust venilation, vent hoods.

Personal protective equipment : Gloves. Safety glasses. Avoid all unnecessary exposure.





Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses. Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is

recommended.

Other information : Do not eat, drink or smoke during use.

#### **SECTION 9: Physical and chemical properties**

| 0.4   | 1 C 21 1                 | and the second second | and the second second second |
|-------|--------------------------|-----------------------|------------------------------|
| 9.1.  | Intermation on he        | eic nhveical and      | d chamical properties        |
| J. I. | IIII OI III au OII OII D | Sic biivsical alic    | d chemical properties        |

Physical state : Gas

Appearance : Colorless to pale yellow liquid.
Color : Colourless to light yellow.

Odor : Sweet.

Odor threshold : No data available

01/12/2014 EN (English US) 4/11

#### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : No data available
Freezing point : No data available

Boiling point : -42 °C (LOWEST COMPONENT)

Flash point : -23 °C

Auto-ignition temperature : 180 °C (LOWEST COMPONENT)

Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapor pressure : No data available

Relative vapor density at 20 °C : > 1.5

Relative density : No data available
Solubility : Poorly soluble in water.
Log Pow : No data available
Log Kow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available

Explosive properties : Heating may cause an explosion. Heating may cause a fire.

Oxidizing properties : No data available Explosive limits : No data available

9.2. Other information

VOC content : 93.3 % CARB METHOD 310

#### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Open flame. Overheating

#### 10.5. Incompatible materials

Strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

Toxic fume. . Carbon monoxide. Carbon dioxide.

#### **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

| Diethyl Ether (60-29-7)    |   |
|----------------------------|---|
| LD50 oral rat              | 1215 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 1600 mg/kg bodyweight; Rat) |
| LD50 dermal rabbit         | > 14200 mg/kg (Rabbit)  |
| LC50 inhalation rat (mg/l) | 99 mg/l/4h (Rat)  |
| LC50 inhalation rat (ppm)  | 32000 ppm/4h (Rat)  |

| Toluene (108-88-3)         |   |
|----------------------------|---|
| LD50 oral rat              | 5580 mg/kg body weight (Rat; Equivalent or similar to OECD 401; Literature study; 5580 mg/kg bodyweight; Rat; Experimental value) |
| LD50 dermal rabbit         | > 5000 mg/kg body weight LD50 quoted as 14.1 mL/kg (12267 mg/kg using density of 0.87)  |
| LC50 inhalation rat (mg/l) | > 28.1 mg/l/4h (Rat; Air, Literature study)   |

| Heptane (142-82-5) |  |
|--------------------|--|
| LD50 oral rat      | > 15000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; >5000 mg/kg bodyweight; Rat; Read-across) |

01/12/2014 EN (English US) 5/11

#### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Heptane (142-82-5)         |   |
|----------------------------|---|
| LD50 dermal rabbit         | > 3160 mg/kg (Rabbit; Literature study; Equivalent or similar to OECD 402; >2000 mg/kg bodyweight; Rabbit; Read-across) |
| LC50 inhalation rat (mg/l) | 103 mg/l/4h (Rat; Literature study)   |
| LC50 inhalation rat (ppm)  | 25000 ppm/4h (Rat; Literature study)  |

| Heptane, Branched Cyclic (426260-76-6) |   |
|--|---|
| LD50 oral rat                          | > 15000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; >5000 mg/kg bodyweight; Rat; Read-across)      |
| LD50 dermal rabbit                     | > 3160 mg/kg (Rabbit; Literature study; Equivalent or similar to OECD 402; >2000 mg/kg bodyweight; Rabbit; Read-across) |
| LC50 inhalation rat (mg/l)             | 103 mg/l/4h (Rat; Literature study)   |
| LC50 inhalation rat (ppm)              | 25000 ppm/4h (Rat; Literature study)  |

| Distillates (Petroleum), Hydrotreated Heavy Naphthenic (64742-52-5) |                          |
|---|--------------------------|
| LD50 oral rat   | > 5000 mg/kg body weight |
| LD50 dermal rabbit  | > 2000 mg/kg body weight |
| LC50 inhalation rat (mg/l)  | > 5.2 mg/l/4h            |

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : May cause genetic defects.

Carcinogenicity : May cause cancer.

| Toluene (108-88-3) |   |
|--------------------|---|
| IARC group         | 3 |

#### Distillates (Petroleum), Hydrotreated Heavy Naphthenic (64742-52-5)

IARC group 3

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure)

: Not classified

Aspiration hazard

Potential Adverse human health effects and

symptoms

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

: May cause damage to organs through prolonged or repeated exposure.

Symptoms/injuries after inhalation : Shortness of breath. May cause cancer by inhalation. May cause drowsiness or dizziness.

Symptoms/injuries after skin contact : Causes skin irritation.

#### **SECTION 12: Ecological information**

#### 12.1. Toxicity

| Diethyl Ether (60-29-7)       |   |
|-------------------------------|---|
| LC50 fish 1                   | > 10000 ppm (96 h; Lepomis macrochirus) |
| EC50 Daphnia 1                | 165 mg/l (24 h; Daphnia magna)          |
| LC50 fish 2                   | 2560 mg/l (96 h; Pimephales promelas)   |
| EC50 Daphnia 2                | 1380 mg/l (48 h; Daphnia magna)         |
| TLM fish 1                    | > 1000 mg/l (96 h; Pisces)              |
| TLM other aquatic organisms 1 | > 1000 mg/l (96 h)                      |

| Toluene (108-88-3)      |  |
|-------------------------|--|
| LC50 fish 1             | 24 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)        |
| EC50 Daphnia 1          | 84 mg/l (24 h; Daphnia magna; Locomotor effect)            |
| LC50 fish 2             | 13 mg/l (96 h; Lepomis macrochirus)                        |
| EC50 Daphnia 2          | 11.5 - 19.6 mg/l (48 h; Daphnia magna)                     |
| Threshold limit algae 1 | > 400 mg/l (168 h; Scenedesmus quadricauda; Toxicity test) |
| Threshold limit algae 2 | 105 mg/l (192 h; Microcystis aeruginosa)                   |

| Heptane (142-82-5)             |   |
|--------------------------------|---|
| LC50 fish 1                    | 375 mg/l (96 h; Tilapia mosambica; Nominal concentration) |
| LC50 other aquatic organisms 1 | > 1000 mg/l (96 h)  |
| EC50 Daphnia 1                 | 1.5 mg/l (48 h; Daphnia magna)                            |
| LC50 fish 2                    | > 100 mg/l (96 h; Oncorhynchus kisutch)                   |
| TLM fish 1                     | 4924 mg/l (48 h; Gambusia affinis)                        |

01/12/2014 EN (English US) 6/11

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Coording to Federal Register / Vol. //, No. 58 / Mono                |   |
|--|---|
| Heptane (142-82-5)   | . 1000 mg/l (0C h)  |
| Threshold limit other aquatic organisms 1                            | > 1000 mg/l (96 h)  |
| Threshold limit algae 1  | > 200 mg/l (Scenedesmus quadricauda; Toxicity test)   |
| Threshold limit algae 2  | 1.5 mg/l (8 h; Algae; Photosynthesis)   |
| Carbon Dioxide, Liquefied, Under Pressu                              | ire (124-38-9)  |
| LC50 fish 1  | 35 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)   |
| LC50 fish 2  | 60 - 240 mg/l (12 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)   |
| 12.2. Persistence and degradability                                  |   |
| 1ST AYD STARTING FLUID 25% 10.7 OZ.                                  |   |
| Persistence and degradability  | Not established.  |
|  | INOT GSTADIISTICU.  |
| Diethyl Ether (60-29-7)  |   |
| Persistence and degradability  | Not readily biodegradable in water. No (test)data on mobility of the substance available. Reacts with air.            |
| Biochemical oxygen demand (BOD)                                      | 0.03 g O <sub>2</sub> /g substance  |
| Chemical oxygen demand (COD)   | 0.026 g O <sub>2</sub> /g substance (KMnO4)   |
| ThOD   | 2.60 g O <sub>2</sub> /g substance  |
| BOD (% of ThOD)  | 0.012 % ThOD  |
| Toluene (108-88-3)   |   |
| Persistence and degradability  | Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.                      |
| Biochemical oxygen demand (BOD)                                      | 2.15 g O <sub>2</sub> /g substance  |
| Chemical oxygen demand (COD)   | 2.52 g O <sub>2</sub> /g substance  |
| ThOD   | 3.13 g O <sub>2</sub> /g substance  |
| BOD (% of ThOD)  | 0.69 % ThOD   |
|  |   |
| Heptane (142-82-5)  Persistence and degradability                    | Poodily higher adable in water Pindegradeble in the sail. Adapthe into the sail                                       |
| Biochemical oxygen demand (BOD)                                      | Readily biodegradable in water. Biodegradable in the soil. Adsorbs into the soil.  1.92 g O <sub>2</sub> /g substance |
| Chemical oxygen demand (COD)   | 0.06 g O <sub>2</sub> /g substance  |
| ThOD   | 3.52 g O <sub>2</sub> /g substance  |
| BOD (% of ThOD)  | > % ThOD (5 day(s)) > 0.5   |
|  | > % 1110D (3 day(3)) > 0.3  |
| Heptane, Branched Cyclic (426260-76-6)                               |   |
| Persistence and degradability  | May cause long-term adverse effects in the environment.   |
| Petroleum Gases, Liquefied, Sweetened                                | (68476-86-8)  |
| Persistence and degradability  | Not established.  |
| Carbon Dioxide, Liquefied, Under Pressu                              | re (124-38-9)   |
| Persistence and degradability  | Biodegradability: not applicable. No (test)data on mobility of the substance available.                               |
| Biochemical oxygen demand (BOD)                                      | Not applicable  |
| Chemical oxygen demand (COD)   | Not applicable  |
| ThOD   | Not applicable  |
| BOD (% of ThOD)  | Not applicable  |
| 12.3. Bioaccumulative potential                                      |   |
|  |   |
| <b>1ST AYD STARTING FLUID 25% 10.7 OZ.</b> Bioaccumulative potential | Not established.  |
| ыоассиниануе ротенна   | เขอเ ฮอเสมแอแฮน.  |
| Diethyl Ether (60-29-7)  |   |
| BCF fish 1   | 0.9 - 9.1 (Cyprinus carpio; Test duration: 6 weeks)   |
| Log Pow  | 0.82 - 0.89 (Experimental value)  |
| Bioaccumulative potential  | Low potential for bioaccumulation (BCF < 500).  |
| Toluene (108-88-3)   | 42.2 (Apprillation arise)   |
| BCF fish 1   | 13.2 (Anguilla japonica)  |
| BCF fish 2   | 90 (72 h; Leuciscus idus)   |
| BCF other aquatic organisms 1  | 380 (24 h; Chlorella sp.; Fresh weight)   |
| BCF other aquatic organisms 2  | 4.2 (Mytilus edulis; Fresh weight)  |
| Log Pow  | 2.73 (Experimental value; Other; 20 °C)   |
| Bioaccumulative potential  | Low potential for bioaccumulation (BCF < 500).  |
| Heptane (142-82-5)   |   |
| BCF other aquatic organisms 1  | 552   |
| 01/12/2014   | EN (English US)   |

01/12/2014 EN (English US) 7/11

#### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Heptane (142-82-5)        |  |
|---------------------------|--|
| Log Pow                   | 4.66 (Experimental value; 4.5; Literature)       |
| Bioaccumulative potential | Potential for bioaccumulation (4 ≥ Log Kow ≤ 5). |

#### Heptane, Branched Cyclic (426260-76-6)

Bioaccumulative potential Not established.

#### Petroleum Gases, Liquefied, Sweetened (68476-86-8)

Bioaccumulative potential Not established.

#### Carbon Dioxide, Liquefied, Under Pressure (124-38-9)

|                           | •  |
|---------------------------|--|
| Log Pow                   | 0.83 (Experimental value)                        |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

#### 12.4. Mobility in soil

| Diethyl Ether (60-29-7) |                   |
|-------------------------|-------------------|
| Surface tension         | 0.017 N/m (20 °C) |
| Toluene (108-88-3)      |                   |
| Surface tension         | 0.03 N/m (20 °C)  |
| Heptane (142-82-5)      |                   |

# Surface tension

12.5. Other adverse effects
Other information : Avoid release to the environment

#### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Container under

pressure. Do not drill or burn even after use. Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

Additional information : Flammable vapors may accumulate in the container.

0.020 N/m (20 °C)

Ecology - waste materials : Avoid release to the environment.

#### **SECTION 14: Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground): UN1950, Aerosols, 2.1, Limited Quantity ICAO/IATA (air): UN1950, Aerosols, 2.1, Limited Quantity IMO/IMDG (water): UN1950, Aerosols, 2.1, Limited Quantity

Special Provisions: N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.

#### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Aerosols

flammable, n.o.s. (engine starting fluid) (each not exceeding 1 L capacity)

Department of Transportation (DOT) Hazard

Classes

: 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

Hazard labels (DOT) : 2.1 - Flammable gas



DOT Special Provisions (49 CFR 172.102) : N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.

DOT Packaging Exceptions (49 CFR 173.xxx) : 306

DOT Packaging Non Bulk (49 CFR 173.xxx) : 304

DOT Packaging Bulk (49 CFR 173.xxx) : None

#### 14.3. Additional information

Other information : No supplementary information available.

#### **Overland transport**

No additional information available

01/12/2014 EN (English US) 8/11

#### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a

passenger vessel.

DOT Vessel Stowage Other : 48 - Stow "away from" sources of heat,87 - Stow "separated from" Class 1 (explosives) except

Division 14,126 - Segregation same as for Class 9, miscellaneous hazardous materials

Air transport

DOT Quantity Limitations Passenger aircraft/rail : Forbidden

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 150 kg

CFR 175.75)

#### **SECTION 15: Regulatory information**

#### 15.1. US Federal regulations

| 1ST AYD STARTING FLUID 25% 10.7 OZ. |   |
|-------------------------------------|---|
| SARA Section 311/312 Hazard Classes | Delayed (chronic) health hazard Fire hazard |
|                                     | Immediate (acute) health hazard             |
|                                     | Sudden release of pressure hazard           |

| Diethy | l Ether ( | (60-29-7 | ') |
|--------|-----------|----------|----|
|        |           |          |    |

| , |   |
|---|---|
| SARA Section 311/312 Hazard Classes     | Delayed (chronic) health hazard Fire hazard |

#### Toluene (108-88-3)

| Listed on United States SARA Section 313                                  |
|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |

|  | Delayed (chronic) health hazard |  |
|--|---------------------------------|--|
|  | Fire hazard                     |  |
|  | Immediate (acute) health hazard |  |

#### Heptane, Branched Cyclic (426260-76-6)

| Not listed on the United States TSCA (Toxic Substances Control Act) inventory |                                 |  |
|---|---------------------------------|--|
| SARA Section 311/312 Hazard Classes   | Fire hazard                     |  |
|   | Immediate (acute) health hazard |  |
|   | Delayed (chronic) health hazard |  |

#### Distillates (Petroleum), Hydrotreated Heavy Naphthenic (64742-52-5)

SARA Section 311/312 Hazard Classes Delayed (chronic) health hazard

| Petroleum | Gases | Liquefied. | Sweetened | (68476-86-8) |
|-----------|-------|------------|-----------|--------------|

| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard Fire hazard |
|-------------------------------------|---|
|                                     | Sudden release of pressure hazard           |

#### 15.2. International regulations

#### **CANADA**

| 1ST AYD STARTING FLUID 25% 10    | ).7 OZ.  |
|----------------------------------|--|
| WHMIS Classification             | Class B Division 5 - Flammable Aerosol<br>Class D Division 2 Subdivision B - Toxic material causing other toxic effects  |
| Toluene (108-88-3)               |  |
| WHMIS Classification             | Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects |
| Heptane, Branched Cyclic (426260 | -76-6)   |

| періапе, | Diantineu | Cyclic | (420200-70 | -0 <i>)</i> |
|----------|-----------|--------|------------|-------------|
|          |           |        |            |             |

| WHMIS Classification | Class B Division 2 - Flammable Liquid   |
|----------------------|---|
|                      | Class D Division 2 Subdivision B - Toxic material causing other toxic effects |

#### **EU-Regulations**

#### Toluene (108-88-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc.Cat.1; R45 Muta.Cat.2; R46

01/12/2014 EN (English US) 9/11

#### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Repr.Cat.3; R63 F+; R12 Xn; R22 Xi; R38 R19

Full text of R-phrases: see section 16

#### 15.2.2. National regulations

No additional information available

#### 15.3. US State regulations

| 1ST AYD STARTING FLUID 25% 10.7 OZ.                |  |
|--|--|
| U.S California - Proposition 65 - Carcinogens List | Yes  |
| State or local regulations                         | U.S California - Proposition 65 - Maximum Allowable Dose Levels (MADL) |

| Toluene (108-88-3)   |  |
|--|--|
|  |  |
| U.S California - Proposition 65 - Maximum Allowable Dose Levels (MADL) |  |

#### **SECTION 16: Other information**

Training advice

Other information

: Ensure operators understand the flammability hazard. Ensure operators understand the hazard of oxygen enrichment. Receptacle under pressure.

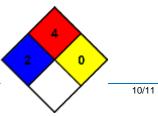
: None.

Full text of H-phrases: see section 16:

| Acute Tox. 4 (Oral) | Acute toxicity (oral) Category 4                                  |
|---------------------|---|
| Aquatic Acute 1     | Hazardous to the aquatic environment - Acute Hazard Category 1    |
| Aquatic Chronic 1   | Hazardous to the aquatic environment - Chronic Hazard Category 1  |
| Aquatic Chronic 3   | Hazardous to the aquatic environment - Chronic Hazard Category 3  |
| Asp. Tox. 1         | Aspiration hazard Category 1                                      |
| Carc. 1A            | Carcinogenicity Category 1A                                       |
| Compressed gas      | Gases under pressure Compressed gas                               |
| Flam. Aerosol 1     | Flammable aerosol Category 1                                      |
| Flam. Gas 1         | Flammable gases Category 1  |
| Flam. Liq. 1        | Flammable liquids Category 1                                      |
| Flam. Liq. 2        | Flammable liquids Category 2                                      |
| Muta. 1B            | Germ cell mutagenicity Category 1B                                |
| Repr. 2             | Reproductive toxicity Category 2                                  |
| Skin Irrit. 2       | Skin corrosion/irritation Category 2                              |
| STOT RE 2           | Specific target organ toxicity (repeated exposure) Category 2     |
| STOT SE 3           | Specific target organ toxicity (single exposure) Category 3       |
| H220                | Extremely flammable gas   |
| H222                | Extremely flammable aerosol                                       |
| H224                | Extremely flammable liquid and vapor                              |
| H225                | Highly flammable liquid and vapor                                 |
| H280                | Contains gas under pressure; may explode if heated                |
| H302                | Harmful if swallowed  |
| H304                | May be fatal if swallowed and enters airways                      |
| H315                | Causes skin irritation  |
| H336                | May cause drowsiness or dizziness                                 |
| H340                | May cause genetic defects   |
| H350                | May cause cancer  |
| H361                | Suspected of damaging fertility or the unborn child               |
| H373                | May cause damage to organs through prolonged or repeated exposure |
| H400                | Very toxic to aquatic life  |
| H410                | Very toxic to aquatic life with long lasting effects              |
| H412                | Harmful to aquatic life with long lasting effects                 |

NFPA health hazard

 <sup>2 -</sup> Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.



01/12/2014 EN (English US)

#### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

NFPA fire hazard : 4 - Will rapidly or completely vaporize at normal pressure

and temperature, or is readily dispersed in air and will burn

readily.

: 0 - Normally stable, even under fire exposure conditions, NFPA reactivity

and are not reactive with water.

#### **HMIS III Rating**

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 4 Severe Hazard Physical : 1 Slight Hazard

Personal Protection : B

SDS US (GHS HazCom 2012) - TCC

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product

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01/12/2014 EN (English US) 11/11