

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Starting Fluid 25%
MSDS NO. 6762
Revision Date: 03/28/2002
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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Johnsens Starting Fluid 25%
Chemical Family: ETHER
Synonyms: None
Emergency Telephone (24 hr.): 24-Hour Emergency Information: CHEMTREC (800) 424-9300

Supplier: Technical Chemical Company, P.O. Box 139, Cleburne, Texas 76033

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient/CAS No.	wt. %	OSHA PEL TWA	OSHA PEL Ceiling Limits	ACGIH TLV TWA	ACGIH TLW STEL
Heptane 142-82-5	40-50	500 ppm: 2000 mg/m3	None Established	400 ppm: 1640 mg/m3	500 ppm
Ethyl Ether 60-29-7	23-30	400 ppm	None Established	400 ppm	500 ppm
Propane 74-98-6	15-25	1000 ppm	Not Known	2500 ppm	Not Known
Carbon Dioxide 124-38-9	2-10	5000 ppm (exposures <10,000 ppm to be cited de minimus)	Not Known	5000 ppm	30,000 ppm
Iso-Butane 75-28-5	5-15	None Established	None Established	None Established	None Established
Lubricating Oil 64742-52-5	0-5	Not known	Mist 5 mg/m3	TLV Mist 5 mg/m3 8 HR.	Not Known

This product contains trace amounts of (<15 ppm) of Butylated hydroxytoluene (BHT) as an inhibitor to prevent or reduce the formation of potentially explosive peroxides.

3. HAZARDS IDENTIFICATION

Emergency Overview: Danger: Extremely flammable. Breathing high concentrations of vapor or mist may cause nausea, vomiting, central nervous system (CNS) depression and asphyxiation. Symptoms may include headache, dizziness, blurred vision, slurred speech, memory loss, confusion, fatigue, loss of consciousness, convulsions, paralysis, or coma. This material is irritating to skin, eyes and respiratory tract. Keep away from heat, sparks and flame. Prolonged or repeated inhalation or ingestion may result in kidney and liver changes.

HMIS Classification: Health: *2 Flammability: 4 Physical Hazard: 2
NFPA Rating: Health: 2 Flammability: 4 Reactivity: 1

4. FIRST AID MEASURES

Eye Contact: In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing. Do not permit victim to rub eyes.

Ingestion: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person. Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration.

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

Skin Contact: Wash with soap and water for 15 minutes. If irritation persists or signs of toxicity occur, seek medical attention. Remove contaminated clothing and shoes, and launder before reuse.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point °F(°C): <-10 F
Flash Point Method: TAG Closed Cup
Flammable Limits in Air - Lower (%): 1.2% (Lowest Component)
Flammable Limits in Air - Upper (%): 6.7% (Lowest Component)
Autoignition Temperature °F(°C): 356 F (Lowest Component)
Extinguishing Media: Dry chemical. Carbon dioxide. Alcohol foam. Use water spray to keep containers cool that are

Trade Name: Johnsens Starting Fluid 25% **MSDS NO.** 6762
exposed to heat or flames.

Protection Of Fire-Fighters:

Special Fire-Fighting Procedures:

Wear approved positive-pressure self-contained breathing apparatus and protective clothing. Vapor may cause flash fire. Fight from a maximum distance or use unmanned hose holders or monitor nozzles. Containers can build up pressure if exposed to heat; cool with flooding quantities of water until well after the fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of vessel.

Hazardous Combustion Products:

Carbon Dioxide. Carbon Monoxide.

Aerosol Comments:

NFPA Level 3 Aerosol

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Wear appropriate protective clothing and equipment to prevent skin and eye contact.

Spill Procedures:

Contain any liquid from leaking containers. Avoid all sources of ignition; heat, sparks and open flames.

Do not puncture or incinerate container. Contents under pressure. Wear proper protective equipment as specified in the protective equipment section. Remove sources of ignition. Leaking containers should be removed to an isolated, well-ventilated area and transferred to other suitable containers. Wipe, scrape, or soak up in an inert material and put in a container intended for flammable materials for disposal.

Environmental Precautions:

Do not allow to enter sanitary drains, sewer or surface and subsurface waters. Keep out of lakes, ponds or streams.

7. HANDLING AND STORAGE

Handling and Storage:

Caution: Contents under pressure. Keep away from heat and open flame. Use only in a well ventilated area. Avoid breathing vapors, if exposed to high vapor concentration, leave area at once. Avoid contact with skin and eyes. Do not puncture, incinerate or store above 120 F. Exposure to high temperatures may cause bursting. DO NOT store in the passenger compartment of an automobile. Store in a cool, dry place, out of direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Use in a well ventilated area. Local exhaust ventilation as necessary to maintain exposures to within applicable limits.

Eyes:

Chemical goggles; also wear a face shield if splashing hazard exists.

Skin Protection:

Avoid skin contact. Wear protective clothing and gloves.

Respiratory Protection:

Do not breath mist or vapor. Use in a well ventilated area. Appropriate respiratory protection shall be worn when applied engineering controls are not adequate to protect against inhalation exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Colorless to pale yellow liquid

Odor:

PUNGENT SWEET

pH Value:

Not Determined

Vapor Pressure:

Not Determined

Vapor Density (Air=1): >1.5 Approximate

Boiling Point (°F):

-44 F (Lowest Component)

Melting/Freezing Point: Freezing -176F (Ether)

Solubility in Water:

PARTLY SOLUBLE

Bulk Density at 20°C: Not Determined

Molecular Weight:

Mixture

Evaporation Rate: Not Determined

Viscosity:

Not Determined.

Specific Gravity (H2O=1): Not Determined

VOC Content(%):

Not determined.

Decomposition Temperature: Not Determined

10. STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal conditions of handling, use and transportation.

Conditions to Avoid:

Keep away from heat, sparks and flame. Avoid any source of ignition. Do not expose to heat or store at temperatures above 120 F.

Materials to Avoid:

Contact with oxidizing agents. Concentrated oxygen. Nitric acid. Avoid contact with chlorine in the presence of light.

Hazardous Decomposition Products:

Carbon monoxide. and other asphxiants. Explosive peroxides. Will react with nitric acid to form explosive nitrates.

Hazardous Polymerization:

WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Ingredient/CAS No.	wt. %	Route	Species	Dose
Heptane 142-82-5	40-50	Inhalation	Rats	LC50 103 gm/m3/4H
Ethyl Ether 60-29-7	23-30	Inhalation	Mice	LC50 31000 ppm/30M
Propane 74-98-6	15-25	NA	NA	Not known.
Carbon Dioxide 124-38-9	2-10	NA	NA	Not known.
Iso-Butane 75-28-5	5-15	Inhalation	Rats	LC50 57 pph/15M
Lubricating Oil 64742-52-5	0-5	NA	NA	Not known.

Trade Name:
Carcinogenicity:

Johnsens Starting Fluid 25%

MSDS NO. 6762

Ingredient/CAS No.	wt. %	IARC	NTP	OSHA
Heptane 142-82-5	40-50	Not Listed	Not Listed	Not Listed
Ethyl Ether 60-29-7	23-30	Not Listed	Not Listed	Not Listed
Propane 74-98-6	15-25	Not Listed	Not Listed	Not Listed
Carbon Dioxide 124-38-9	2-10	Not Listed	Not Listed	Not Listed
Iso-Butane 75-28-5	5-15	Not Listed	Not Listed	Not Listed
Lubricating Oil 64742-52-5	0-5	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

Ecological testing has not been conducted on this product.

13. DISPOSAL CONSIDERATION

Waste Classification: Residues and spilled material are hazardous waste due to ignitability.

Waste Management: Not determined.

Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT:

Proper Shipping Name: Aerosols, flammable, n.o.s. (Engine Starting Fluid)
Hazard Class: 2.1 (limited quantity)
UN/NA Number: UN 1950
DOT Packing Group: Not Determined

IMDG:

Proper Shipping Name: Aerosols (Limited Quantity)
Hazard Class: 2.1
Hazard Subclass: Not determined.
UN No.: UN 1950
Packing Group: Not Determined
Marine Pollutant: No

15. REGULATORY INFORMATION

US Federal Regulations:

Ingredient/CAS No.	wt. %	SARA 313	SARA 302	RQ	TPQ
Heptane 142-82-5	40-50	Not Listed	Not Listed	NA	NA
Ethyl Ether 60-29-7	23-30	Not Listed	Not Listed	100 lbs.	NA
Propane 74-98-6	15-25	Not Listed	Not Listed	NA	NA
Carbon Dioxide 124-38-9	2-10	Not Listed	Not Listed	NA	NA
Iso-Butane 75-28-5	5-15	Not Listed	Not Listed	NA	NA
Lubricating Oil 64742-52-5	0-5	Not Listed	Not Listed	NA	NA

Trade Name: Johnsens Starting Fluid 25% **MSDS NO.** 6762
Hazardous per OSHA 29 CFR 1910.1200

SARA 311/312 Hazard Categories: Immediate/Acute, Delayed/Chronic, Fire

State Regulations:

Ingredient/CAS No.	wt. %	California Prop. 65 Cancer list	California Prop. 65 Developmental Toxicity	California Prop. 65 Reproductive Female	California Prop. 65 Reproductive Male
Heptane 142-82-5	40-50	Not Listed	Not Listed	Not Listed	Not Listed
Ethyl Ether 60-29-7	23-30	Not Listed	Not Listed	Not Listed	Not Listed
Propane 74-98-6	15-25	Not Listed	Not Listed	Not Listed	Not Listed
Carbon Dioxide 124-38-9	2-10	Not Listed	Not Listed	Not Listed	Not Listed
Iso-Butane 75-28-5	5-15	Not Listed	Not Listed	Not Listed	Not Listed
Lubricating Oil 64742-52-5	0-5	Not Listed	Not Listed	Not Listed	Not Listed

U.S. TSCA: The components of this product are listed on the TSCA Inventory.

16. OTHER INFORMATION

General Notes: Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system.

Disclaimer:

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