B200
BERKEBILE STARTING FLUID
SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Mixture
CAS No.	Mixture
Trade Name	BERKEBILE STARTING FLUID
Product Code	SP-500678

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

Identified Use(s)	Engine starting aid
Uses Advised Against	None

Company Identification	The Berkebile Oil Company P.O. Box 715 1216 Red Brant Road Somerset, PA 15501
Telephone	814-443-1656
Fax	814-443-2873
E-Mail (competent person)	info@berkebileoil.com

Emergency telephone number

Emergency Phone No.	**Transportation Emergency:** CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200) — Flam. Aerosol 1; Compressed dissolved gas; Carc. 2; Skin Irrit. 2; STOT SE 3; Asp. Tox. 1

Label elements

Hazard Symbol

Signal word(s): **DANGER**

Hazard Statement(s):

Extremely flammable aerosol.

Contains gas under pressure; may explode if heated.

May cause cancer.

Causes skin irritation. Repeated exposure may cause skin dryness or cracking.

May cause drowsiness or dizziness.

May be fatal if swallowed and enters airways.

Precautionary Statement(s):

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Do not spray on an open flame or other ignition source.

Do not pierce or burn, even after use.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/eye protection.

Avoid breathing spray.

Protect from sunlight and do not expose to temperatures exceeding 50 ºC/122 ºF.

Wash hands and exposed skin after use.

Other hazards Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	% wt. *	CAS No.	Hazard classification
Heptanes	70 - 80	426260-76-6	Flam. Liq. 2, H225 Asp. Tox. 1; H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 2, H402 Aquatic Chronic 3, H412
Diethyl Ether	10 - 20	60-29-7	Flam. Liq. 1; H224 Acute Tox. 4; H302 STOT SE 3; H336
Carbon Dioxide	5 - 10	124-38-9	Compressed dissolved gas; H280
Chloroethane	< 1	75-00-3	Flam. Gas 1; H220 Carc. 2; H351

Additional Information – None

* The exact percentage withheld as a trade secret in accordance with 29 CFR 1910.1200.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Inhalation	Move person to fresh air. If breathing is labored, administer oxygen. If symptoms develop, obtain medical attention.
Skin Contact	Wash affected skin with soap and water. If irritation (redness, rash, blistering) develops, get medical attention.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Do not induce vomiting. Do not give anything by mouth to an unconscious person. Get immediate medical attention.

Most important symptoms and effects, both acute and delayed May be fatal if swallowed and enters airways. Do NOT induce vomiting.

Indication of any immediate medical attention and special treatment needed IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

-Suitable Extinguishing Media	Extinguish with carbon dioxide, dry chemical, foam or water spray.
-Unsuitable Extinguishing Media	Do not use water jet.

Special hazards arising from the substance or mixture Highly flammable vapor (flash point below 23°C).

Advice for fire-fighters — A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions. Keep containers cool by spraying with water if exposed to fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures — Avoid contact with skin and eyes.

Environmental precautions — Prevent liquid entering sewers, basements and work pits.

Methods and material for containment and cleaning up — Cover spills with inert absorbent material. Transfer to a container for disposal or recovery.

Reference to other sections — None

Additional Information — None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling — Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with skin and eyes. Use product in a well-ventilated area only. Do not use in confined spaces.

Conditions for safe storage, including any incompatibilities

-Storage temperature — Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50°C/ 122°F. Keep container tightly closed.

-Incompatible materials — This product should be stored away from sources of strong heat or oxidizing chemicals.

Specific end use(s) — Engine starting aid

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA)		(STEL)		Note:
		PEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
Heptane, branched, cylic and linear	426260-76-6	500 ppm*	1500 mg/m^3	-----	-----	*n-heptane
Diethyl ether	60-29-7	400 ppm	400 ppm	-----	500 ppm	-----
Chloroethane	75-00-3	1000 ppm	100 ppm*	-----	-----	*A3
Carbon dioxide	124-38-9	-------	5000 ppm	------	30,000 ppm	-----

#Assure minimum oxygen content of work atmosphere. *A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans

Recommended monitoring method — NIOSH 1500 (hydrocarbons, B.P. 36 - 126 ºC); NIOSH 1610 (Ethyl ether); NIOSH 2519 (Ethyl chloride)

Exposure controls

Appropriate engineering controls — Provide adequate ventilation to ensure that the occupational exposure limit is not exceeded.

Personal protection equipment

Eye/face protection — Wear protective eyewear (goggles, face shield, or safety glasses).

Skin protection (Hand protection/ Other) 	Wear suitable gloves if prolonged skin contact is likely (Nitrile rubber or Butyl rubber). Check with protective equipment manufacturer's data.
Respiratory protection 	Normally no personal respiratory protection is necessary. In case of insufficient ventilation, wear suitable respiratory equipment. Check with protective equipment manufacturer's data.
Thermal hazards	Not normally required. Use gloves with insulation for thermal protection, when needed.
Environmental Exposure Controls	Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Liquid
Color.	Colorless
Odor	Sweetish, Hydrocarbon-like
Odor Threshold (ppm)	Not available
pH (Value)	Not available
Melting Point (°C) / Freezing Point (°C)	Not available
Boiling point/boiling range (°C):	34 - 35 (Diethylether)
Flash Point (°C)	-45 (Diethylether)
Evaporation Rate	Not available
Flammability (solid, gas)	Extremely flammable
Explosive Limit Ranges	1.85% - 36.5% v/v (Diethylether)
Vapor pressure (Pascal)	7.16×10^4 (Diethylether)
Vapor Density (Air=1)	Not available
Density (g/ml)	Not available
Solubility (Water)	Not available
Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available
Auto Ignition Point (°C)	175 (Diethylether)
Decomposition Temperature (°C)	Not available
Kinematic Viscosity (cSt)	<20 @ 40 °C
Explosive properties	Not available
Oxidizing properties	Not available
Other information	Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable.
Possibility of hazardous reactions	None anticipated.
Conditions to avoid	Avoid contact with heat and ignition sources.
Incompatible materials	This product should be stored away from sources of strong heat or oxidizing chemicals.
Hazardous decomposition product(s)	Carbon monoxide, Carbon dioxide, Acrid smoke

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact

Information on toxicological effects

Heptane, branched, cylic and linear (CAS# 426260-76-6) - By analogy with similar materials:

Acute toxicity — Oral: LD50 >5 g/kg-bw
Dermal: LD50 >2 g/kg-bw
Inhalation: LC50 = 65 - 103 mg/L (Vapour), 4-hr. rat
May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.

Irritation/Corrosivity — Causes skin irritation. Repeated exposure may cause skin dryness or cracking. May cause eye irritation.

Sensitisation — It is not a skin sensitizer.

Repeated dose toxicity — NOAEC: 12350 mg/m3 (2 yr, inhal., rat, Systemic effects)
LOAEC: 1650 mg/m3 (2 hr, inhal., rat, CNS effects)
May cause drowsiness or dizziness.

Carcinogenicity — No data. It is unlikely to present a carcinogenic hazard to man.

NTP	IARC	ACGIH	OSHA	NIOSH
No.	No.	No.	No.	No.

Mutagenicity — There is no evidence of mutagenic potential.
Toxicity for reproduction — No information available

Hydrotreated Light Distillate (CAS No. 64742-47-8) - By analogy with similar materials:

Acute toxicity (calculated / estimated) — Oral: LD50 >5000 mg/kg-bw
Dermal: LD50 >2000 mg/kg-bw
Inhalation: LC0 ≥5.28 mg/l (Vapor), 4-hr. rat - May cause drowsiness or dizziness.

Irritation/Corrosivity — Causes skin irritation. Repeated exposure may cause skin dryness or cracking.

Sensitization — It is not a skin sensitizer.

Repeated dose toxicity — Oral: NOEAL 750 mg/kg
Dermal: NOEAL 0.5 ml/kg bw
Inhalation: NOAEL ≥1000 mg/m3

Carcinogenicity — It is unlikely to present a carcinogenic hazard to man.

NTP	IARC	ACGIH	OSHA	NIOSH
No.	No.	No.	No.	No.

Mutagenicity — Not to be expected
Reproductive toxicity — Not to be expected

Chloroethane (CAS# 75-00-3)

Carcinogenicity

NTP	IARC	ACGIH	OSHA	NIOSH
Clear Evidence in Female Mice	No.	A3 - Confirmed Animal Carcinogent	No.	Yes.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Heptane, branched, cylic and linear (CAS# 426260-76-6) - By analogy with similar materials:

Short term — LL50 (96 hour): >13.4 mg/L (*Oncorhynchus mykiss*)
EL50 (48 hour): 3 mg/l (*Daphnia magna,* mobility*)*
EC50 (96 hour): 13 mg/l (*Pseudokirchnerella subcapitata*)

Long Term — NOELR (28 days) 1.5 mg/l *(Fish*) QSAR
LOEC (21 days): 0.32 mg/l (*Daphnia magna*)
NOEL (96 hour) 6.3 mg/l (Algae)

Persistence and degradability	Readily biodegradable.
Bioaccumulative potential	The product has no potential for bioaccumulation.
Mobility in soil	Not available.
Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
Other adverse effects	None known.

Hydrotreated Light Distillate (CAS No. 64742-47-8) - By analogy with similar materials:

Short term	LC50 (96 hour): 2.5 mg/L (fish) EC50 (48 hour): 1.4 mg/L (crustacea) EC50 (72 hour): 1.3 mg/L (algae)
Long Term	NOEC (28 days): 0.098 mg/L (fish) LOEC (21 days): 1.2 mg/L (crustacea) LOEL (72 hour): 1 mg/L (algae)
Persistence and degradability	Biodegradable
Bioaccumulative potential	The product has no potential for bioaccumulation.
Mobility in soil	Not available.
Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
Other adverse effects	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods — Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

SECTION 14: TRANSPORT INFORMATION

	U.S. DOT	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	1950	1950	1950
Proper Shipping Name	Aerosols, flammable	Aerosols, flammable	Aerosols, flammable
Transport hazard class(es)	2.1	2.1	2.1
Packing group	Not applicable	Not applicable	Not applicable
Environmental hazards	None assigned	None assigned	None assigned
Special precautions for user	None assigned	None assigned	None assigned

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

TSCA (Toxic Substance Control Act) - Inventory Status**:** All components listed or polymer exempt.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
Chloroethane	75-00-3	< 1	1000

SARA 311/312 - Hazard Categories:

☒ Fire ☒ Sudden Release ☐ Reactivity ☒ Immediate (acute) ☒ Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
Chloroethane	75-00-3	< 1

SARA 302 - Extremely Hazardous Substances (40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	TPQ (pounds)
None	----	----	----

California Proposition 65 List:

Chemical Name	CAS No.	Type of Toxicity
Toluene	108-88-3	Developmental
Chloroethane	45-00-3	Cancer

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.
Date of preparation: February 17, 2015

Hazard Statement(s) and Risk Phrases Listed in: SECTION 2:/ SECTION 3:

Hazard Statement(s)
- H227: Combustible liquid.
- H280: Contains gas under pressure; may explode if heated.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation.
- H336: May cause drowsiness or dizziness.
- H401: Toxic to aquatic life.
- H411: Toxic to aquatic life with long lasting effects.
- H280: Contains gas under pressure; may explode if heated.
- H412: Harmful to aquatic life with long lasting effects.
- H224: Extremely flammable liquid and vapour.
- H225: Highly flammable liquid and vapor.
- H302: Harmful if swallowed.
- H319: Causes serious eye irritation.
- H351: Suspected of causing cancer.
- H220: Extremely flammable gas.

Training advice: None.

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