



Section 1: Identification

Product Name: Smarter Starter Fluid™
Synonyms: Natural Charcoal Lighter Fluid
SDS Number: SSF00005 Version 1.0
Formula: "ESTERNOL™" - Mixture of refined waste vegetable oil and alcohol

Product Use: Charcoal Lighter Fluid

Manufacturer: ESCOGO LLC
941 Monroe Jersey Road
Monroe, Georgia 30655 USA

Web Site: www.escogo.com
Enquires: info@escogo.com
Emergency Phone: CALL CHEMTREC: 1-800-424-9300 (USA) +1-703-527-3887 (INT)

Section 2: Hazard(s) identification

Classifications :

Flammable liquids, n.o.s. – UN1993 Hazard Class 3, Packing Group III
Aspiration Hazard – Category 2
Carcinogenicity – IARC Group 4: the agent (mixture) is probably not carcinogenic to humans.
Specific Target Organ Toxicity (Repeated Exposure) – Category 5 - LD50 = 15.7 g/kg
Specific Target Organ Toxicity (Single Exposure) – Category 5 - LD50 = 15.7 g/kg
Skin Irritation – Category 2
Eye Irritation – Category 2B
Chronic Aquatic Toxicity – Category 3

Pictograms :



Signal Word:

Caution

Hazard Statements:

Combustible liquid. Keep out of reach of children.
Avoid contact with skin and eyes.
In event of contact, wash skin or flush eyes with water.
Store away from heat, sparks and open flame.
Do not place bottle on hot surfaces or in direct sunlight.

Prevention:

Read instructions before use.

Keep away from heat, sparks, open flames, welding and hot surfaces.
 No smoking.
 Keep container tightly closed.
 Ground and/or bond container and receiving equipment.
 Use explosion-proof electrical equipment.
 Use only non-sparking tools (if tools are used in flammable atmosphere).
 Take precautionary measures against static discharge.
 Wear gloves, eye protection and face protection (as needed to prevent skin and eye contact).
 Wash hands or liquid-contacted skin thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Do not breathe vapors.
 Use only outdoors or in a well-ventilated area.

Response:

In case of fire: Use dry chemical, CO2, water spray or fire-fighting foam to extinguish.
 If swallowed: Immediately call a poison center, doctor, hospital emergency room, medical clinic or 911. Do NOT induce vomiting. Rinse mouth.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 If in eye: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If skin or eye irritation persists, get medical attention.
 If inhaled: Remove person to fresh air and keep comfortable for breathing.
 Get medical attention if you feel unwell.

Storage:

Store in a well ventilated place. Keep cool. Store locked up. Keep container tightly closed. Use only approved containers. Some containers not approved for gasoline may dissolve and release flammable gasoline liquid and vapors.

Disposal:

Dispose of contents/containers to approved disposal site in accordance with local, regional, national, and/or international regulations.

Section 3: Composition/information on ingredients

Component Information Name/CAS No.	Concentration (%)
CA Index Name: Cooking oil wastes, Fatty Acids Registry Number: 1301628-90-9	0 - 100
Ethanol CAS Number: 64-17-5	0 - 100
Denatonium Benzoate CAS Number: 3734-33-6	0 - 100
tert-Butyl Alcohol CAS Number: 75-65-0	0 - 100

Section 4: First-aid measures

Potential Acute Health Effects

Inhalation:

Breathing high concentrations may be harmful. Mist or vapor can irritate the throat and lungs. Effects of overexposure include irritation of the eyes, nose, throat and respiratory tract and blurred vision.

Eye Contact:

This product can cause eye irritation from short-term contact with liquid, mists or vapors. Symptoms include stinging, watering, redness and swelling. Effects may be more serious with repeated or prolonged contact.

Skin Contact:

Mild to moderate skin irritant. Contact may cause redness, itching, burning and skin damage. Prolonged or repeated skin contact may cause drying and cracking of the skin, and dermatitis (inflammation).

Ingestion:

Ingestion may result in nausea, vomiting, diarrhea and restlessness. Aspiration (inadvertent suction) of liquid into the lungs must be avoided as even small quantities in the lungs can produce lung inflammation and damage.

Potential Chronic Health Effects

Signs and Symptoms:

Chronic effects of overexposure are similar to acute effects including skin dermatitis and conjunctivitis.

Carcinogenic Potential:

Specific subchronic toxicity studies have not been conducted, but this product is considered to have a low order of oral and dermal toxicity.

Target Organs:

No Data Available.

Conditions Aggravated by Overexposure:

No Data Available

Section 5: Fire-fighting measures

Suitable extinguishing media:

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO₂, water spray or fire-fighting foam. LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire exposed containers. Keep containers and surroundings cool with water spray.

Specific hazards during fire-fighting:

Combustible liquid. This material is combustible/flammable and is sensitive to fire, heat, and static discharge.

Special protective equipment for fire-fighters:

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full face-piece and full protective clothing.

Further information:

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied firefighting foam. Exposure to decomposition products may be a hazard to health. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Section 6: Accidental Release Measures

Section 6: Accidental release measures

Protective Measures:

Keep all sources of ignition and hot metal surfaces away from spill/release. The use of explosion-proof electrical equipment is recommended. Stay upwind and away from spill/release.

Isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment as conditions warrant per Exposure Controls/Personal Protection guidelines.

Spill Management:

Stop the leak if it can be done without risk. Prevent spilled material from entering waterways, sewers, basements or confined areas. Contain release to prevent further contamination of soils, surface water or groundwater. Clean up spill as soon as possible using appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Dispose of contaminated materials in a manner consistent with applicable regulations.

Reporting:

Report spills/releases as required, to appropriate local, state and federal authorities. US Coast Guard and Environmental Protection Agency regulations require immediate reporting of spills/release that could reach any waterway including intermittent dry creeks. Report spill/release to the National Response

Personal precautions:

Evacuate personnel to safe areas. Ventilate the area. Remove all sources of ignition. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental precautions:

Discharge into the environment must be avoided. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up:

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

Section 7: Handling and storage

Precautions for safe handling:

Keep away from fire, sparks and heated surfaces. No smoking near areas where material is stored or handled. The product should only be stored and handled in areas with intrinsically safe electrical classification.

Precautions to prevent static-initiated fire or explosion during transfer, storage or handling, include but are not limited to these examples:

- (1) Ground and bond containers during product transfers. Grounding and bonding may not be adequate protection to prevent ignition or explosion of combustible liquids and vapors that are static accumulators.
- (2) Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such as gasoline or naphtha).
- (3) Storage tank level floats must be effectively bonded.

For more information on precautions to prevent static-initiated fire or explosion, see NFPA 77, Recommended Practice on Static Electricity (2007), and API Recommended Practice 2003, Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents (2008).

Conditions for safe storage, including incompatibilities:

Keep away from flame, sparks, excessive temperatures and open flame. Use approved containers. Keep containers closed and clearly labeled. Empty or partially full product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose containers to sources of ignition. Store in a well-ventilated area. The storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Fuel Storage Tanks".

Handling:

Use ONLY as a motor fuel. Do NOT siphon by mouth. Use non-sparking tools and explosion proof equipment. Open container slowly to relieve any pressure. Bond and ground all equipment when transferring from one vessel to another. Can accumulate static charge by

flow or agitation. Can be ignited by static discharge. Explosion-proof electrical equipment is recommended and may be required by fire codes. Warning! Use of this material in spaces without adequate ventilation may result in the generation of hazardous levels of combustion products and/or inadequate oxygen levels for breathing. Odor is an inadequate warning for hazardous conditions.

Storage:

Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces and all sources of ignition. Post area warnings: 'No Smoking or Open Flame'. Keep away from incompatible material. Outdoor or detached storage of portable containers is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

Special Precautions:

To prevent and minimize fire or explosion risk from static accumulation and discharge, effectively bond and/or ground product transfer system. Do not use electronic devices (such as cellular phones, computers, calculators, pagers, etc.) in or around any fueling operation or storage area unless the devices are certified as intrinsically safe. Electrical equipment and fittings should comply with local fire codes.

Portable Containers:

Portable containers should never be filled while they are in or on a motor vehicle or marine craft. Static electricity may ignite vapors when filling non-grounded containers or vehicles on trailers.

To avoid static buildup, do not use a nozzle lock open device. Use only approved containers. Keep containers tightly closed. Place the container on the ground before filling. Keep the nozzle in contact with the container during filling.

Empty Container Warning:

Empty containers retain liquid and vapor residues and can be dangerous. Do NOT pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat, flame, sparks, static electricity or other sources of ignition; they may explode and cause injury or death. Do not attempt to refill or clean containers since residue is difficult to remove. Empty drums should be completely drained, properly closed and returned to the supplier or a qualified drum reconditioner. All containers should be disposed of in an environmentally safe manner in accordance with government regulations.

Section 8: Exposure controls/personal protection

Component Information Name/CAS No.	ACGIH Exposure Limits	OSHA Exposure Limits	NIOSH Exposure Limits
CA Index Name: Cooking oil wastes, Fatty Acids Registry Number: 1301628-90-9	Not Available	Not Available	Not Available
Ethanol 64-17-5	1,000 ppm (1,880 mg/m3) STEL	1,000 ppm 1,900 mg/m3) TWA	1,000 ppm (1,900 mg/m3) TWA

Denatonium Benzoate	Not Available	Not Available	Not Available
tert-Butyl Alcohol	100 ppm, 300 mg/m3	150 ppm	Not Available

Section 8: Continued PPE

General Considerations:

Consider the potential hazards of this material, applicable exposure limits, job activities and other substances in the work place when designing engineering controls and selecting personal protective equipment.

Engineering Controls:

Use process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels below the recommended exposure limits. An emergency eye wash station and safety shower should be located near the work station.

Personal Protective Equipment:

If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, personal protective equipment (PPE) is recommended. A hazard assessment of the work should be conducted by a qualified professional to determine what PPE is required.

Respiratory Protection:

When airborne concentrations are expected to exceed the established exposure limits given in Section 2, use a NIOSH approved organic vapor respirator. Use a full-face positive-pressure supplied air respirator in circumstances where air-purifying respirators may not provide adequate protection. If internal combustion devices are used in an enclosed space, carbon monoxide will be present in the exhaust. If the airborne concentrations are above the occupational exposure limit for carbon monoxide, use a positive pressure air-supplying respirator.

Eye Protection:

Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Chemical goggles should be worn during transfer operations or when there is a likelihood of misting, splashing or spraying of this material.

Skin and Body Protection:

Avoid skin contact. Wear long-sleeved fire-retardant garments while working with flammable and combustible liquids. Additional chemical-resistant protective gear may be required if splashing or spraying conditions exist. This may include an apron, arm covers, impervious gloves, boots and additional facial protection.

Hand Protection:

Avoid skin contact. Use impervious gloves (e.g., PVC, neoprene, nitrile rubber). Wash hands with plenty of mild soap and water before eating, drinking, smoking, using toilet facilities or leaving work.

Section 9: Physical and chemical properties

Appearance (physical state, color, etc.):	Liquid. Light yellow color.
Auto-ignition temperature:	278C 533F
Benzene Content:	None
Decomposition temperature:	Not pertinent
Evaporation rate:	Not available
Flammability:	Yes
Flash point (Pensky Martin closed Cup):	49C 120F
Formula (ETHANOL):	C2H6O
Formula (tert-BUTYL ALCOHOL):	C4H10O
Freezing point:	Undefined
Initial boiling point:	136C 277F
Kinematic Viscosity cSt@40°C Method D445:	2.967
Molecular Weight (ETHANOL):	46.07 g/mol
Molecular Weight (tert-BUTYL ALCOHOL):	74.12 g/mol
Odor Characteristic:	Mild. Light Alcohol.
pH:	Neutral
Relative Density:	7.1 lb/gal @ 60F
SCAQMD Rule 1174 Certification Reference Number:	C235-E13L
Solubility:	Slightly soluble
Specific Gravity:	0.86 at 4C
Sulfur Content Method D5453:	5.6 ppm
Vapor Density (air =1):	>2

Section 10: Stability and reactivity

Stability:

Stable under normal anticipated storage and handling temperatures and pressures.

Conditions to Avoid:

Avoid all possible sources of ignition.

Incompatibility (Materials to Avoid):

Avoid contact with strong oxidizing agents such as strong acids, alkalis, chlorine and other halogens, dichromates or permanganates, which can cause fire or explosion.

Hazardous The use of fuel in an area without adequate ventilation may result in hazardous levels of exposure. Known to deform containers made of HDPE.

Decomposition Products:

Combustion products (e.g., oxides of carbon, sulfur and nitrogen, benzene and other hydrocarbons) and/or dangerously low oxygen levels.

Hazardous Polymerization:

Not known to occur

Section 11: Toxicological information

Acute Toxicity:

Dermal LD50 = > 2,000 mg/kg (Rabbit)
LC50 = Unknown 4000 ppm/4 hr; 13,367 ppm (Rat)
Oral LD50 = >5,000 mg/kg (Rat)

Carcinogenicity:

Specific subchronic toxicity studies have not been conducted, but is considered to have a low order of oral and dermal toxicity,

Target Organs:

Skin.

Section 12: Ecological information

Cooking oil wastes, Fatty Acids

Ecotoxicity 96 hours LC50: >1000 mg/l (Bluegill Fish)

Environmental Fate

This product does not concentrate or accumulate in the food chain. If released to soil and water, this product is expected to biodegrade under both aerobic and anaerobic conditions.

Ethanol

Ecotoxicity (aquatic and terrestrial, where available):

Acute Fish toxicity (ETHANOL)

LC50 / 96 HOUR *Oncorhynchus mykiss* (rainbow trout) > 10,000 mg/l

LC50 / 96 HOUR *Pimephales promelas* (fathead minnow) > 13,400 mg/l

Toxicity to aquatic plants (ETHANOL)

Growth inhibition / 96 HOURS *Chlorella vulgaris* (Fresh water algae) 1,000 mg/l

Toxicity to microorganisms (ETHANOL)

Toxicity Threshold / *Pseudomonas putida* 6,500 mg/l

Summary: Inhibition of cell multiplication begins.

Persistence and degradability: Biodegradation is expected.

Bioaccumulative potential: Bioaccumulation is unlikely

Section 13: Disposal considerations

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. However, it should be fully characterized prior to disposal (40 CFR 261). Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.

Container contents should be completely used and containers should be emptied prior to discard. Container rinsate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a qualified drum reconditioner. To assure

Section 14: Transport information

UN Number	UN1993
UN Proper Shipping Name	Flammable liquids, n.o.s.
Transport hazard Class(es)	3
Packing group (if applicable)	III
United States Department of Transportation (US DOT)	UN1993, Class 3, Packing Group III, Proper Shipping Name: Flammable liquids, n.o.s.
IMDG	UN1993, Class 3, Packing Group III, Proper Shipping Name: Flammable liquids, n.o.s.
IATA	UN1993, Class 3, Packing Group III, Proper Shipping Name: Flammable liquids, n.o.s.
Transportation of Dangerous Goods (TDG) Canada	UN1993, Class 3, Packing Group III, Proper Shipping Name: Flammable liquids, n.o.s.
International Maritime Organization International Maritime Dangerous Goods Code (IMO/IMDG)	UN1993, Class 3, Packing Group III, Proper Shipping Name: Flammable liquids, n.o.s.
European Agreements Concerning the International Carriage by Rail (RID) and by Road (ADR)	UN1993, Class 3, Packing Group III, Proper Shipping Name: Flammable liquids, n.o.s.
International Civil Aviation Organization / International Air Transport Association (ICAO/IATA)	UN1993, Class 3, Packing Group III, Proper Shipping Name: Flammable liquids, n.o.s.

Section 15: Regulatory information

United States Federal Regulatory Information

Cooking oil wastes, Fatty Acids

EPA TSCA Inventory

This product and/or its components are listed on the Toxic Substances Control Act (TSCA) Inventory

EPA SARA 302/304 Emergency Planning and Notification

This material contains the following chemicals subject to reporting under the Superfund Amendments and Reauthorization Act of 1986 (SARA): Product is not listed as an extremely hazardous substance

EPA SARA 311/312 (Title III Hazard Categories)

Acute Health: No
 Chronic Health: No
 Fire Hazard: No
 Pressure Hazard: No
 Reactive Hazard: No

EPA SARA Toxic Chemical Notification and Release Reporting (40 CFR 372) and CERCLA Reportable

Quantities (40 CFR 302.4)

None

EPA CWA and OPA

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (CWA). This product is considered an oil and is subject to federal oil spill reporting requirements.

Canadian Regulatory Information

DSL/NDSL Inventory

This product and/or its constituents are listed either on the Domestic Substances List (DSL), the Non Domestic Substances List (NDSL) or are exempt.

Workplace Hazardous Materials Information System (WHMIS) Hazard Class

This product is not regulated by the WHMIS.

European Union Regulatory Information

Labeling: Product is not dangerous as defined by the European Union Dangerous Substances / Preparations Directives

Carcinogen Identification by International Agency for Research on Cancer

Group 1 Carcinogenic to Humans: None

Group 2A Probably Carcinogenic to Humans: None

Group 2B Possibly Carcinogenic to Humans: None

Group 3 Not Classifiable: None

Ethanol

Safety, health and environmental regulations specific for the product in question:

OSHA Hazards

Flammable liquid, Target Organ Effect, Irritant

All ingredients are on the following inventories or are exempted from listing

Country/Notification

Australia/AICS

Canada/DSL

China/IECS

European Union/EINECS

Japan/ENCS/ISHL

Korea/ECL

New Zealand/NZIoC

Philippines/PICCS

United States of America/TSCA

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA title III, Section 313: tert-Butyl Alcohol CAS-No. 75-65-0 Revision Date 2007-07-01

SARA 311/312 Hazards

Acute Health Hazard
Chronic Health Hazard
Fire Hazard

CERCLA

No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA

Massachusetts Right To Know Components

Ethanol CAS-No.64-17-5 Revision Date 2007-03-01
tert-Butyl alcohol CAS-No. 75-65-0 Revision Date 2007-07-01

Pennsylvania Right To Know Components

Denatonium Benzoate CAS-No. 3734-33-6
Ethanol CAS-No.64-17-5 Revision Date 2007-03-01
tert-Butyl alcohol CAS-No. 75-65-0 Revision Date 2007-07-01

New Jersey Right To Know Components

Denatonium benzoate CAS-No. 3734-33-6
Ethanol CAS-No.64-17-5 Revision Date 2007-03-01
tert-Butyl alcohol CAS-No. 75-65-0 Revision Date 2007-07-01

California Prop 65 Components

WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm (ETHYL ALCOHOL) CAS No. 64-17-5 Revision Date: December 11, 2009

Section 16: Other information

ESCOGO LLC believes that the information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This SDS was duly completed May 21, 2015.