



Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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PRODUCTS COVERED BY THIS MSDS:

- StarSource Coal Masterbatch C

COMPANY CONTACT INFORMATION:

StarSource, LLC
3757 State Street Suite 2A
Santa Barbara, CA 93105 USA
805-456-7900

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS:

Proprietary Ingredient Name	Collection aid Hydro treated middle distillate >99 wt.% CAS #: 64742-46-7 Proprietary additive <18 ppm
Product Name:	Hydrocarbon Solvent Oil
Chemical Name:	Petroleum Distillates
Chemical Formula:	Not available.

Toxicological Data on Ingredients: see section 11

SECTION 3: HAZARDS IDENTIFICATION

Combustible Liquid and Vapor

EYES: Contact may cause immediate or delayed eye irritation.

SKIN: May cause skin irritation.

INGESTION: May be harmful if swallowed. Side effects may include: temporary irritation of the throat, stomach, and gastrointestinal tract.

INHALATION: Inhalation causes headaches, dizziness, drowsiness, and nausea, and may lead to unconsciousness.

POTENTIAL ACUTE HEALTH EFFECTS:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator). Severe over-exposure can result in death.

POTENTIAL CHRONIC HEALTH EFFECTS:

Slightly hazardous in case of skin contact (sensitizer).

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance is toxic to the nervous system. The substance may be toxic to blood, kidneys, liver, central nervous system. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

SECTION 4: FIRST AID MEASURES

EYES: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

SKIN: In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention. **Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

INGESTION: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. **Serious Inhalation:** Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABILITY OF THE PRODUCT: Combustible Liquid

AUTO-IGNITION TEMPERATURE: 254 - 285°C (490 - 545°F)

FLASH POINTS: CLOSED CUP: 38°C (100.4°F). (Tagliabue.)

FLAMMABLE LIMITS: LOWER: 0.7% UPPER: 5% - 7%

PRODUCTS OF COMBUSTION: Include carbon oxides (CO, CO2) (carbon monoxide, carbon dioxide).

FIRE HAZARDS IN PRESENCE OF VARIOUS SUBSTANCES: Combustible liquid and vapor. Vapor may cause flash fire. Vapors may accumulate in low or confined areas, travel considerable distance to source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

EXPLOSION HAZARDS IN PRESENCE OF VARIOUS SUBSTANCES:

- **MECHANICAL IMPACT:** Not available.

- **IN PRESENCE OF STATIC DISCHARGE:** Not available.

FIRE FIGHTING MEDIA AND INSTRUCTIONS: Flammable liquid, insoluble in water.

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: In case of fire, use water fog, foam, dry chemicals, or carbon dioxide. DO NOT FIGHT FIRE WHEN IT REACHES MATERIAL. Withdraw from fire and let it burn. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. First move people out of line-of-sight of the scene and away from windows.

PROTECTIVE CLOTHING: Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SPECIAL REMARKS ON HAZARDS: Do not use water jet.

HMIS HAZARD CLASSIFICATION

HEALTH: 2

FLAMMABILITY: 2

REACTIVITY: 0

Hazard Scale: 0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

SECTION 6: ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

- **Small Spill:** Absorb with an inert material and put the spilled material in an appropriate waste disposal.

- **Large Spill:** Toxic flammable liquid, insoluble or very slightly soluble in water. Poisonous liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Keep locked up. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure eyewash stations and safety showers are proximal to the work-station location.

EYE and SKIN PROTECTION: Wear safety splash goggles, lab coat, gloves, and vapor respirator. Be sure to use an approved/certified respirator or equivalent.

PERSONAL PROTECTION IN CASE OF A LARGE SPILL: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

EXPOSURE LIMITS: Not available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid (oily liquid).

COLOR: Yellow. Clear (light).

ODOR: Petroleum.

MELTING POINT: No data available.

FREEZING POINT: Not applicable.

VAPOR PRESSURE: 0.06kPa (@20°C).

BOILING POINT: 160°C - 399 °C (320 - 690 °F)

AUTO IGNITION: 494 °F (257 °C)

VAPOR DENSITY (AIR = 1): 4.5.

SPECIFIC GRAVITY (H₂O = 1): 0.820 - .875

UPPER FLAMMABILITY LIMIT (UfL): 7.5

LOWER FLAMMABILITY LIMIT (LFL): 0.6

SOLUBILITY: Insoluble in cold water, hot water. Miscible with other petroleum solvents.

EVAPORATION RATE: Not available.

PERCENT VOLATILE: Not available.

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under recommended handling and storage conditions.

INSTABILITY TEMPERATURE: Not available.

CONDITIONS TO AVOID (STABILITY): Avoid excess heat. Avoid ignition sources (sparks, flames, static discharge) and incompatible materials.

INCOMPATIBILITY (MATERIAL TO AVOID): Avoid contact with oxidizing agents.

CORROSIVITY: Not considered to be corrosive for metals and glass.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

ROUTES OF ENTRY: Absorbed through skin. Eye contact.

ACUTE TOXICITY: Acute oral toxicity to animals (LD50): 2835 mg/kg [Rabbit].

CHRONIC EFFECTS ON HUMANS:

MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. Causes damage to the following organs: the nervous system.

May cause damage to the following organs: blood, kidneys, liver, central nervous system (**CNS**).

OTHER TOXIC EFFECTS ON HUMANS:

Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator).

SPECIAL REMARKS ON TOXICITY TO ANIMALS: Not available.

SPECIAL REMARKS ON CHRONIC EFFECTS ON HUMANS: May affect genetic material (mutagenic)

SPECIAL REMARKS ON OTHER TOXIC EFFECTS ON HUMANS:

-Acute Potential Health Effects:

-Skin: Causes moderate to severe skin irritation. It can cause defatting dermatitis.

-Eyes: May cause eye irritation.

-Inhalation: May cause respiratory tract and mucous membrane irritation and a burning sensation in the chest. Because of its relatively low volatility, overexposure by inhalation is uncommon, but it can occur in poorly ventilated areas or by inhalation of mists or aerosols. Symptoms of inhalation overexposure include CNS depression (transient euphoria, headache, irritability, excitement, ringing in the ears, weakness, incoordination, confusion, disorientation, drowsiness, tremor, somnolence, hallucinations, seizures, coma, death).

May affect the heart (cardiac arrhythmias), liver, kidneys, and respiration(asphyxia, apnea, acute pulmonary edema, dyspnea, fibrosis, or cyanosis).

-Ingestion: Causes gastrointestinal tract irritation with burning sensation in mouth, esophagus, and stomach, abdominal pain, nausea, vomiting, hypermotility, diarrhea, headache, malaise. May affect respiration/ trachea/bronchi through accidental pulmonary aspiration which can cause hypoxia, chemical pneumonitis, and noncardiogenic pulmonary edema, pulmonary hemorrhage, coughing, breathing difficulty, acute or chronic pulmonary edema, emphysema, respiratory stimulation. It may also affect the heart (dysrhythmias, myocardial depression, tachycardia), liver, endocrine system (pancreas - hypoglycemia), behavior/central nervous system (symptoms similar to that of inhalation).

-Chronic Potential Health Effects:

-Inhalation: Repeated or prolonged inhalation may cause respiratory tract irritation and affect behavior/central nervous system with symptoms similar to that of acute inhalation. It may also affect the blood (changes in white blood cell count, changes in serum composition, pigmented or nucleated red blood cells, leukopenia, normocytic anemia), cardiovascular system, respiratory system (trachea, bronchi), and may cause kidney damage.

-Ingestion: Repeated or prolonged ingestion may affect the liver, endocrine system (adrenal gland, pancreas, spleen), and metabolism (weight loss), and blood.

-Skin: Repeated or prolonged skin contact may cause defatting dermatitis, erythema, and eczema-like skin lesions, drying and cracking of the skin, and possible burns.

Exhaust particulates have been classified by the National Toxicological Program (NTP) to be a reasonably anticipated human carcinogen. Exposure should be minimized to reduce potential risk.

SECTION 12: ECOLOGICAL INFORMATION

BOD5 AND COD: Not available.

ECOTOXICITY: Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

PERSISTENCE AND DEGRADABILITY: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

BIOACCUMULATIVE POTENTIAL: This product is not expected to bioaccumulate through food chains in the environment.

MOBILITY: Spillages may penetrate the soil causing ground water contamination.

OTHER ECOLOGICAL INFORMATION: Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Do not dump into any sewers, on the ground, or into any body of water. All disposal practices must be in compliance with all local, state and federal laws and regulations.

SECTION 14: TRANSPORT INFORMATION

IDENTIFICATION: Hydrocarbon Solvent Oil

US DOT CLASSIFICATION: CLASS 3: Flammable liquid.

NA#: 1993

PACKAGING GROUP: III.

SPECIAL PROVISIONS FOR TRANSPORT: Not available.

PLACARD:



SECTION 15: REGULATORY INFORMATION

The following components appear on one or more of the following state hazardous substances lists:

Component	CA	MA	MN	NJ	PA	RI
Hydrocarbon Solvent Oil	No	No	No	Yes	No	No

Component Analysis – Inventory

Component	TSCA	CAN	EEC
Hydrocarbon Solvent Oil	Yes	DSL	EINECS

EEC = European Economic Community

EINCS: European Inventory of Existing Commercial Chemical Substances

DSL: Domestic Substances List

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).

CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC): R10- Flammable. R65- Harmful: may cause lung damage if swallowed. S23- Do not breathe gas/fumes/vapour/spray S24- Avoid contact with skin. S62- If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

SECTION 16: OTHER INFORMATION

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 2

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment: Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

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