

SAFETY DATA SHEET

1. Identification

Product identifier	Fuel Oil Cutterstock
Other means of identification	
SDS number	EJ-401-GHS
Synonyms	Fuel oil diluent; fuel oil blendstock; cutterstock; Fuel Oil, no. 4
Recommended use	Used in furnaces and boilers of utility plants, industrial power plants, ships, locomotives and metallurgical operations. Under some climate conditions, the lighter grade may be handled and burned without preheating.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer	Enjet, LLC
Address	5373 W. Alabama, Suite 502 Houston, Texas 77056
Telephone	
Emergency phone number	CHEMTREC USA +1 - (800) 424-9300 Enjet, LLC +1 - (713) 552-1559

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 3
Health hazards	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Carcinogenicity	Category 2
	Specific target organ toxicity, repeated exposure	Category 2 (Thymus, Liver, Blood)
	Aspiration hazard	Category 1
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	Flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. Harmful if inhaled. Suspected of causing cancer. May cause damage to organs (Thymus, Liver, Blood) through prolonged or repeated exposure.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage	Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Static accumulating flammable liquid. Gas may evolve and accumulate in confined spaces.
Supplemental information	None.

3. Composition/information on ingredients

Chemical name	CAS number	%
Distillates (petroleum), Hydrotreated Light	64742-47-8	0-100
Distillates (petroleum), heavy catalytic cracked	64741-61-3	0-100
Distillates (petroleum), hydrotreated middle	64742-46-7	0-100
Fuel oil, no. 4	68476-31-3	0-100
Fuels, diesel	68334-30-5	0-100
Hydrogen sulfide	7783-06-4	0-1
1,2,4-Trimethylbenzene	95-63-6	0-0.6
Naphthalene	91-20-3	0-0.6

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain. Jaundice. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Keep container tightly closed. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	PEL	5 mg/m ³	Mist.
Naphthalene (CAS 91-20-3)	PEL	50 mg/m ³ 10 ppm	

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Hydrogen sulfide (CAS 7783-06-4)	Ceiling	20 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Distillates (petroleum), heavy catalytic cracked (CAS 64741-61-3)	TWA	5 mg/m ³	Inhalable fraction.
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	TWA	5 mg/m ³	Inhalable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Fuel oil, no. -4 (CAS 68476-31-3)	TWA	100 mg/m ³	Inhalable fraction and vapor.
Fuels, diesel (CAS 68334-30-5)	TWA	100 mg/m ³	Inhalable fraction and vapor.
Hydrogen sulfide (CAS 7783-06-4)	STEL	5 ppm	
	TWA	1 ppm	
Naphthalene (CAS 91-20-3)	TWA	10 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)	TWA	100 mg/m ³	
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	Mist.
Hydrogen sulfide (CAS 7783-06-4)	Ceiling	15 mg/m ³	
		10 ppm	
Naphthalene (CAS 91-20-3)	STEL	75 mg/m ³	
		15 ppm	
	TWA	50 mg/m ³	
		10 ppm	

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation

Naphthalene (CAS 91-20-3) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Fuel oil, no. -4 (CAS 68476-31-3) Can be absorbed through the skin.

Fuels, diesel (CAS 68334-30-5) Can be absorbed through the skin.

Naphthalene (CAS 91-20-3) Can be absorbed through the skin.

Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear appropriate chemical resistant clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Not available.

Color Colorless to Pale yellow, green.

Odor	Petroleum.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	> 100.0 °F (> 37.8 °C)
Evaporation rate	Very slow
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	0.77 - 1
Relative density temperature	60.8 °F (16 °C)
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity Chemical stability	The product is stable and non-reactive under normal conditions of use, storage and transport.
Possibility of hazardous reactions	Material is stable under normal conditions. No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure by inhalation.
Skin contact	Causes skin irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics Aspiration may cause pulmonary edema and pneumonitis. Skin irritation. May cause redness and pain. Jaundice.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Harmful if inhaled.

Components	Species	Test Results
Distillates (petroleum), heavy catalytic cracked (CAS 64741-61-3)		
Acute		
<i>Inhalation</i>		
LC50	Rat	> 320 mg/m3, 4 Hours
Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, bw
<i>Inhalation</i>		
LD50	Rat	> 5.28 mg/l, 4 hours
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, bw
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 hours
<i>Inhalation</i>		
LC50	Rat	1.72 mg/l, 4 hours
Hydrogen sulfide (CAS 7783-06-4)		
Acute		
<i>Inhalation</i>		
LC50	Rat	> 0.38 mg/l, 960 Minutes
Naphthalene (CAS 91-20-3)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2 g/kg
<i>Oral</i>		
LD50	Rat	490 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Suspected of causing cancer.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Distillates (petroleum), heavy catalytic cracked (CAS 64741-61-3)	2B	Possibly carcinogenic to humans.
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	1	Carcinogenic to humans.
Fuel oil, no. -4 (CAS 68476-31-3)	2B	Possibly carcinogenic to humans.
Naphthalene (CAS 91-20-3)	2B	Possibly carcinogenic to humans.
NTP Report on Carcinogens		
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)	Known To Be Human Carcinogen.	
Naphthalene (CAS 91-20-3)	Reasonably Anticipated to be a Human Carcinogen.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	

Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	May cause damage to organs (Thymus, Liver, Blood) through prolonged or repeated exposure.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Distillates (petroleum), heavy catalytic cracked (CAS 64741-61-3)		
Aquatic		
<i>Chronic</i>		
Fish	NOAEL	Oncorhynchus mykiss 0.1 mg/l, 28 days
Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)		
Aquatic		
<i>Acute</i>		
Fish	LL50	Oncorhynchus mykiss 2 - 5 mg/l, 96 hours
	NOEC	Oncorhynchus mykiss 2 mg/l, 96 hours
Hydrogen sulfide (CAS 7783-06-4)		
Aquatic		
Fish	LC50	Lake whitefish (Coregonus clupeaformis) 0.002 mg/l, 96 hours
Naphthalene (CAS 91-20-3)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna) 1.09 - 3.4 mg/l, 48 hours
Fish	LC50	Pink salmon (Oncorhynchus gorbuscha) 0.95 - 1.62 mg/l, 96 hours

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazardous waste code	Not regulated.
Waste from residues / unused products	Not available.
Contaminated packaging	Not available.

14. Transport information

DOT

UN number	UN1202
UN proper shipping name	Gas oil
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Special precautions for user	Not available.
Special provisions	144, B1, IB3, T2, TP1
Packaging exceptions	150
Packaging non bulk	203
Packaging bulk	242

IATA

UN number UN1202
UN proper shipping name Gas oil
Transport hazard class(es)
Class 3
Subsidiary risk - III
Packing group No.
Environmental hazards 3L
ERG Code
Special precautions for user Not available.

IMDG

UN number UN1202
UN proper shipping name Gas oil
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group III
Environmental hazards
Marine pollutant No.
EmS F-E, S-E
Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Hydrogen sulfide (CAS 7783-06-4) LISTED
Naphthalene (CAS 91-20-3) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Hydrogen sulfide	7783-06-4	100	500		

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Naphthalene	91-20-3	0-0.6

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Naphthalene (CAS 91-20-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Hydrogen sulfide (CAS 7783-06-4)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)
Hydrogen sulfide (CAS 7783-06-4)
Naphthalene (CAS 91-20-3)

US. New Jersey Worker and Community Right-to-Know Act

Distillates (petroleum), heavy catalytic cracked (CAS 64741-61-3)
Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)
Hydrogen sulfide (CAS 7783-06-4)
Naphthalene (CAS 91-20-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Distillates (petroleum), heavy catalytic cracked (CAS 64741-61-3)
Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)
Distillates (petroleum), hydrotreated middle (CAS 64742-46-7)
Fuel oil, no. -4 (CAS 68476-31-3)
Fuels, diesel (CAS 68334-30-5)
Hydrogen sulfide (CAS 7783-06-4)
Naphthalene (CAS 91-20-3)

US. Rhode Island RTK

Hydrogen sulfide (CAS 7783-06-4)
Naphthalene (CAS 91-20-3)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Distillates (petroleum), heavy catalytic cracked (CAS 64741-61-3)
Fuel oil, no. -4 (CAS 68476-31-3)
Naphthalene (CAS 91-20-3)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	12-August-2015
Revision date	18-November-2015
Version #	03
HMIS® ratings	Health: 2* Flammability: 2 Physical hazard: 0

NFPA ratings



Disclaimer

Enjet, LLC cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.