

Diesel Fuel

SAFETY DATA SHEET (SDS)

1. Identification

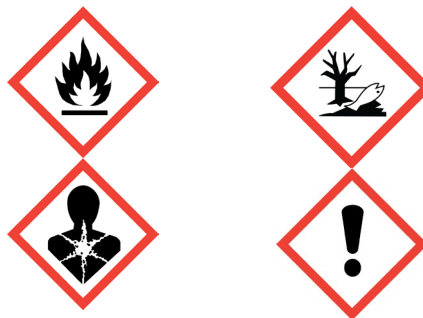
1.1. Product identifier	Diesel Fuels
1.2. Other means of identification	Diesel Fuel, Fuel Oil, Diesel 50, Diesel N° 2
1.3. Recommended use	Motor Fuel
1.4. Supplier information	
○ Supplier	Refinadora Costarricense de Petroleo, RECOPE S.A.
○ Address	Highway 108, Hernan Garron Salazar Building, route 32.
○ Telephone	2284-2700 / 2550-3627
○ E-Mail	presidencia@recope.go.cr
1.5. Telephone numbers.	
○ Emergency telephone	9-1-1
○ National Poison Center	2223-1028
○ National Commission for Risk Prevention and Emergency Response	2220-2020

2. Hazard identification

2.1. GHS classification of the substance:

Physical hazards	Flammable liquids	Category 3 (H226)
	Acute toxicity	Category 4 (H302, H312, H332)
Health hazards	Skin corrosion/irritation	Category 2 (H315)
	Carcinogenicity	Category 2 (H351)
	Reproductive toxicity	Category 2 (H341)
	Specific target organ toxicity, repeated exposure	Category 2 (H371)
	Aspiration hazard	Category 1 (H334)
Environmental hazards	Hazardous to the aquatic environment, long-term hazard.	Category 2 (H411)

2.2. GHS label elements, including precautionary statements:



Signal word: Attention

2.3. Precautionary statements:

Prevention	Response	Storage	Disposal
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/	If skin irritation occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If on skin (or hair): Take off immediately all contaminated clothing.	Store locked up. Store in a well-ventilated place. Keep cool.	Dispose of contents: send to a service station, collection center or RECOPE. Container: wash with plenty of soap and water, then

lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharges. Wash thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection /face protection. Use only outdoors or in a well-ventilated area	Rinse skin with water/shower. If exposed or concerned: Get medical advice/attention. If swallowed: Immediately call a poison center/doctor. Take off contaminated clothing and wash before reuse. In case of fire: Use foam, carbon dioxide, dry powder, or water fog for extinction.		discard as solid waste.
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2.4. Hazard(s) not otherwise classified (HNOC)

Keep away from open flames and hot surfaces. Do not smoke. Do not breathe vapors or aerosols.

3. Composition/information

Substance	Common name	CAS Number	Concentration
Diesel no.2	Diesel no.2	68476-34-6	100 %

4. First-aid measures

Exposure route	Symptom	Medical attention
4.1. Inhalation	Excessive inhalation of aerosol or mist may cause irritation of nose and respiratory tract, euphoria, cardiac arrhythmia, increased respiration, cyanosis, pulmonary edema, kidney damage, central nervous system toxicity depending on concentration and time of exposure.	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
4.2. Ingestion	Gastrointestinal irritation, vomiting, diarrhea and in severe cases central nervous system depression.	Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Do not give mouth-to-mouth resuscitation. If vomiting occurs, keep head low so that stomach content

Exposure route	Symptom	Medical attention
		does not get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately.
4.3. Eye Contact	Contact with liquid or concentrated vapors may cause irritation. May cause corneal damage.	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
4.4. Skin contact	Contact can cause irritation and blockage of the sebaceous glands resulting in allergies and acne mainly on hands and fingers.	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.

5. Fire-fighting measures

5.1. Suitable extinguishing media	Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). Water may not be effective in extinguishing the fire if used as a stream because it may scatter the flames, however water in the form of a mist or spray gives better results.
5.2. Specific hazards arising from 5.3. the chemical 5.4. Special protective equipment and precautions for firefighters	The product is flammable, and heating may generate vapors which may form explosive vapor/air mixtures. Thermal decomposition or combustion may liberate toxic gases or fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing, and face mask.
5.4. Fire-fighting equipment/instructions	Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

Notify safety and/or emergency personnel. Keep all ignition sources (flames, smoke, flares, etc.) and hot surfaces away. Keep unnecessary personnel away. Personnel involved should be protected against inhalation of vapors and direct contact with skin and eyes. Do not touch or walk through spilled material without appropriate protective equipment (non-skid safety shoes, protective clothing, neoprene gloves; and safety glasses are recommended). Keep downwind all the time. Ventilate enclosed areas before entering. Contain spill in the smallest area possible. Recover as much product as possible (e.g., by vacuuming). Stop leak if it can be done without risk.

6.2. Environmental precautions:

Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways.

6.3. Methods and materials for containment and cleaning up

Immediately absorb the product with non-combustible, inert material such as diatomaceous earth, sand, or soil, using anti-sparking tools. Place the material in appropriate containers with lids for later disposal. After the operation has been completed, ventilate the area, and wash the contaminated site. The use of absorbent booms is useful to contain the spill.

7. Handling and storage

7.1. Precautions for safe handling

Avoid breathing mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation.

Wear protective everywhere and appropriate clothing. Eliminate sources of heat and ignition. Ground all containers and equipment during transfers to prevent static electricity. Use non-sparking tools to open and close containers. Do not drink, eat, or smoke during handling. Avoid spillage on soil or receiving water bodies.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a cool, well-ventilated place. Do not handle or store near an open flame, heat, or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. The pressure in sealed containers can increase under the influence of heat. This product is stable in closed containers under normal conditions of storage, handling, room temperature, heat, and humid atmospheres. No polymerization hazards occur.

8. Exposure controls/personal protection

8.1. US. ACGIH Threshold limit values

Component: Diesel no.2

Type: TWA

Value: 100 mg/m³

Form: Vapor

8.2. US. ACGIH Threshold limit values: Skin

Can be absorbed through the skin

8.3. Biological limit values

No biological exposure limits are observed.

8.4. Recommended engineering controls

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.

8.5. Personal protective equipment

Eye/face protection	Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.
Skin and hand protection	Wear chemical-resistant, impervious gloves. The use of neoprene gloves is recommended. Frequent change is advisable. Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended.
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use.

9. Physical and chemical properties

Physical state	Liquid
Color:	Colorless-Yellowish
Odor:	Characteristic to petroleum
Melting point/freezing point	Not available
Boiling Point:	150 °C
Flammability:	Not available
Upper/lower flammability or explosive limits	Not available
Flash point:	>52 °C
Spontaneous ignition temperature	Not available
Decomposition temperature	Not available
pH:	Not available
Kinematic viscosity:	2-4.5 mm/s
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available
Vapor pressure	> 0.5 kPa at 40°C

Density and/or Relative density

~ 820kg/m³

Vapor density

Not available

Particle characteristics

Not available

10. Stability and reactivity

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| 10.1. Reactivity: | Stable at normal conditions. |
| 10.2. Chemical stability: | Stable under normal temperature conditions and recommended use |
| 10.3. Possibility of hazardous reactions: | Hazardous polymerization does not occur. |
| 10.4. Conditions to avoid: | Heat, flames, and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death. |
| 10.5. Incompatible materials: | Strong oxidizing agents. |
| 10.6. Hazardous decomposition products: | No hazardous decomposition products are known. |

11. Toxicological information

Information on likely routes of exposure	Effect
Ingestion	May be fatal if swallowed and enters airways.
Inhalation	Harmful if inhaled. In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness, and nausea.
Skin contact	Causes skin irritation.
Eye contact	May cause eye irritation.

11.1. Symptoms related to the physical, chemical, and toxicological characteristics

Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. Unconsciousness. Corneal damage. Narcosis. Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash. The toxicological properties of this product have not been thoroughly investigated. Use appropriate precautions.

11.2. Acute toxicity

Harmful if inhaled. Harmful: may cause lung damage if swallowed. The toxicological properties of this material have not been fully investigated.

LC50 by inhalation in rats of 4.1 g/L in 4 hours of exposure.

11.3. Carcinogenicity

Suspected of causing cancer. International Agency for Research on Cancer (IARC): Whole diesel engine exhaust – IARC Group 1. Exposure may cause lung cancer and noted a positive association with an increased risk of bladder cancer. Diesel exhaust has been reported to be an occupational hazard due to NIOSH-reported potential carcinogenic properties.

11.4. Immediate and delayed effects as well as chronic effects produced by short- and long-term exposure.

Contains organic solvents which in case of overexposure may depress the central nervous system causing dizziness and intoxication. Repeated exposure to naphthalene may cause cataracts, allergic skin rashes, destruction of red blood cells, and anemia, jaundice, kidney, and liver damage. Danger of serious damage to health by prolonged exposure. Prolonged or repeated overexposure may cause central nervous system, kidney, liver, and lung damage.

12. Ecotoxicological information

12.1. Ecotoxicity:

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

		Species	Test Results
Crustacea	EL50	Daphnia magna	68 mg/L, 48 hours
Fish	LL50	Oncorhynchus mykiss	65 mg/L, 96 hours

12.2. Persistence and degradability	Not available
12.3. Bio accumulative potential	Not available
12.4. Mobility in soil	Not available
12.5. Other adverse effects	Not available

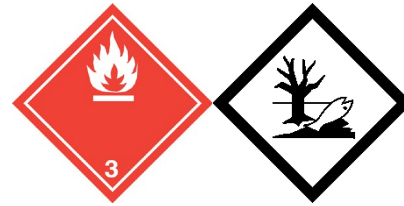
13. Disposal considerations

Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways, or ditches with chemical or used container.

14. Transport information

14.1. UN number	UN 1202
14.2. UN proper shipping name	Diesel fuel

14.3. Class



Combustible Liquid

III

14.4. Packing group

14.5. Environmental hazards

14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

This product is classified according to GHS as a product Hazardous in the short and long term: category 2. This substance and its mixtures are not intended to be transported in bulk (vessel) within Costa Rican territory.

15. Regulatory information

For the management of residues and wastes, it must contemplate the stipulations of the Regulation for the Management of Industrial Hazardous Wastes N°27001, the Regulation for the Classification and Management of Hazardous Wastes N°37788; and the Law for the Integral Management of Wastes N° 8839.

For further technical details on the product, please refer to INTE E3:2016 Fuels. Diesel and its blends with biodiesel. Specifications.

16. Other information

- **Version: 3**
- **Elaboration date: 2023-04-18**
- **Last update date: 2024-05-03**
- **Prepared by Oscar Camacho Moreira, N.I. 02676**
- **Modified by Adriana Valverde Ramírez, N.I. 02505**
- **Reviewed by: Róger Gurdíán López, N.I. 02507**

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