



Material Safety Data Sheet

Code: WI-30-01-F02

Ver: 3

Date ver: 2026/04/18

Product Name: Heavy Oil ,HEAVY AROMATIC ,OH12

Other important signs

"Warning"



Danger Diamond



1. Chemical specifications & Company:

This oil, which is made from a mixture of oils obtained from coal tar refining, is mainly used as feed for soot-making units

Company:

Address: NO.106, MohtashamKashani St., Isfahan, Iran

Telephone: 03136284341

Fax: +983136271160

Website: <https://www.ctr-co.com>

Email: Info@ctr-co.com

Factory:

Coal Tar Refining Co, North Of Isfahan steel Factory, 45th km of Isfahan-Shahrecord road, Isfahan, Iran

Telephone: 03152572184-87

Fax: +983152572285

2. Identification of risks:

This substance causes irritation, redness, dripping and itching of the eyes and temporary pain if splashed into the eyes. This substance causes irritation, dryness and redness of the skin and if left on the skin for a long time, it causes increased dryness of the skin. This substance causes dizziness, imbalance and headache by affecting the central nervous system. This substance may cause cancer.

3. Composition/information on ingredients

Chemical composition: Heavy Oil Tar, Wash Oil

CAS Number: 64742-47-8

4. First Aid:

Inhalation: If harmful effects occur, remove the person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen by a medical team. Then get medical attention.



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Skin: Wash the affected area with soap and water for 5 minutes. Skin contact causes photosensitivity for approximately 36-72 hours after contact. Therefore, avoid sun exposure for 2-3 days. Use sunscreen and consult a doctor if necessary.

Eyes: Rinse eyes for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing eyes and seek medical attention.

Ingestion: Never give anything to an unconscious person. Rinse the victim's mouth with water and do not induce vomiting unless directed by a doctor. Give the victim about two glasses of water to drink. If vomiting occurs spontaneously, keep the victim's head lower than the waist to prevent aspiration into the lungs. If signs of shortness of breath occur, perform artificial respiration. Seek medical attention immediately.

5. Fire and explosion information:

This material and its vapors are flammable.

Extinguishing media: Use carbon dioxide, foam, and dry chemical powder.

Avoid breathing combustion products or mixtures. When fighting a fire, stay upwind and away from low areas. Spray foam directly onto hot, burning materials. Foaming may occur. Keep unauthorized away. Isolate the area and do not allow entry. If you hear a noise or change the color of the containers, move away from the fire area.

Firefighter protective equipment:

All personal protective equipment includes fireproof clothing, heat-resistant gloves, helmets, shields, safety shoes, and air supply systems (AIR MASK)..

Flash point: 60°C ≤

6- Preventing accidental release:

Immediately seal the leak. Confine the area until the contamination is completely removed and cleanup of the contaminated area should only be carried out by trained personnel. These personnel should wear all required personal protective equipment.

Ventilate the area with spark-proof equipment. Work environment protection If the amount released is large, try to collect it using suitable spark-proof pumps.

If the amount is small, pour on it absorbent materials that do not react with the substance, such as sand or earth. Do not use combustible materials such as sawdust.

If the amount is small, pour on it absorbent materials that do not react with this material, such as sand or soil. Do not use combustible materials such as sawdust. Remove the collected materials from the work area and burn them in a suitable place. Strictly prevent from finding its way into underground canals and pipes.



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7- Transportation and storage:

Heavy oil is flammable and is suspected of being carcinogenic due to its benzene content. Before transporting by barrel or tanker, safety control measures should be taken for protection. The operator should be equipped with all required personal protective equipment and be familiar with the safe and secure handling of this product.

In case of contact with body parts and skin, wash with plenty of water. Store in a cool, dry environment away from direct sunlight. The storage environment should be free of all incompatible agents such as strong oxidizing agents.

Fixed metal tanks must be equipped with a ground wire and a nitrogen gas blanketing system or other suitable system (movable roof).

8- Contact control/personal protective equipment:

Use gloves, safety shoes, and appropriate work clothes (linen) to protect your skin.

Use chemical safety goggles or face shield. Safety showers and eye wash stations are mandatory in work environments.

Use of a suitable mask is recommended to prevent respiratory complications.

There should be adequate ventilation at the user's location. Since cyclic molecules have the potential to cause cancer, try not to breathe the vapors of this product.

If exposure to chemicals exceeds the permissible limit, use NIOSH-approved respirators with filters specifically for organic vapors.

Use a positive pressure air-supplied respirator if there is a possibility of uncontrolled release, exposure levels are unknown, or respirators do not provide complete protection.

9- Physical and chemical properties:

Density @ 25°C(gr/cm³): Min. 1.048

vapor pressure:< 0.001mmHg

10- Stability and reactivity:

Reactivity: This material is not reactive.

Stability: This material is stable under normal conditions.

Keep away from sources of ignition such as flame, heat and sparks. Avoid contact with incompatible materials. May cause explosion or foaming at high temperatures and in contact with water. Prevent entry into water sources and sewers.

Incompatible materials: Oxidizing agents.



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11- Toxicological information:

The physiological effects of heavy oil appear to be similar to the actions of aromatic molecules, such as gasoline.

Respiratory toxicity: Kidney damage has been observed in male rats exposed to concentrations below 30 ppm. This effect has not been observed in related species such as monkeys, dogs, or female rats.

Food poisoning: 136 grams of food poisoning per kilogram of rat weight causes death in 50 out of 100 cases.

Dermal exposure: Subcutaneous injection of 5 grams per kilogram of rabbit weight of this substance causes skin irritation after 24 hours. However, injection of 5.76 grams per kilogram of rabbit weight for 10 days has been shown to cause weight loss, severe skin irritation, and kidney and liver effects.

Eye exposure: No eye irritation was observed in laboratory studies on rabbits.

Acute effects: Studies conducted on the vapor of this substance have shown carcinogenic effects in some species, such as male rats.

12- Environmental information:

Because this material is a fraction of heavy cyclic aromatics, each material has specific effects on the environment.

When this material enters the soil, its light molecules gradually evaporate. This material turns into vapor in the air, and the evaporation of its light molecules occurs in both moist and dry soil. The biological decomposition of this material in water is negligible and can be ignored.

This substance is harmful to aquatic life and their environment. By covering the water surface, it prevents oxygen from reaching aquatic animals.

13- Disposal considerations:

Heavy aromatic cuttings (mixture of aromatics or various heavy rings) spilled waste of this material should be collected and reused as much as possible using spark-proof equipment.

14- Transportation regulations:

UN Number:1268

Carrying out any road transportation operation of hazardous materials from one point to another within the country requires compliance with the regulations and rules contained in the Road Transportation of Hazardous Materials Regulations.

The driver of a vehicle carrying hazardous materials must always have this regulation in his possession during transportation operations and present it to the competent authorities upon request. Vehicles carrying hazardous materials, regardless of the weight and volume of the



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cargo, are only allowed to travel on the country's roads during daylight hours and must stop in a suitable parking lot before the end of the day and refrain from moving until the beginning of the next day.

Parking and stopping of vehicles carrying hazardous materials and products along roads is only possible under the following conditions:

a. It is mandatory to install at least 2 wedges, proportional to the number of wheels of vehicles carrying hazardous materials and products, while stopping.

b. The engine of a vehicle carrying hazardous materials and products must be turned off while stopped.

c. Vehicles carrying hazardous materials and products must not have any leaks or overflows.

d. Vehicles carrying hazardous materials and products must stop at low-slope points and refrain from parking and stopping vehicles on uphill or downhill slopes that are marked by signs by the Ministry of Roads and Transport.

e. In cases where the driver of a vehicle carrying hazardous materials is forced to stop in an emergency, she must stop the vehicle as far as possible to the right of the road in an open area, away from bridges, tunnels, and roadside amenities.

f. During stopovers and emergency stops, the driver or co-driver must remain in or around the vehicle and take care of it. In addition, 24-volt yellow electric lights must be installed at 10-meter positions at the beginning and end of the stopped vehicle, and their power supply is independent of the vehicle.

Drivers of vehicles carrying hazardous materials must observe the following when refueling:

a. Refueling should be done at pumps far from cities and population centers, if possible.

b. No other vehicle is refueling or waiting in front or behind the vehicle carrying hazardous materials.

c. The engine of a vehicle carrying hazardous materials must be turned off during refueling.

d. The driver or co-driver of the vehicle should not move away from it.

It is prohibited to transport hazardous materials in self-propelled trailers.

Dangerous goods from class 4 and rows 3-4 must be transported in roofed and moisture-resistant cargo holds.

If a vehicle carrying hazardous materials is forced to stop for a long time (based on the opinion of the Transportation Organization and the country's terminals) due to a technical



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defect, the driver is obliged to inform the transport operator of the matter, and the transport operator is also obliged to dispatch an appropriate vehicle, along with the necessary factors to unload the defective vehicle and load the dispatched vehicle, to the parking lot.

The transportation company is required to provide the driver with a travel schedule before dispatching the vehicle to load and transport dangerous cargo, and the driver is also required to carefully follow the schedule set by the transportation company.

If a convoy of vehicles carrying hazardous materials is following each other, drivers are required to maintain a distance of 80 meters from each other.

Vehicles carrying hazardous materials must, in addition to a valid technical inspection, have a certificate of approval issued by a valid institution. The validity period of this certificate is one year and the vehicle owner is required to renew it within one month before the expiration date. If a vehicle carrying hazardous materials consists of two independent parts, the towing and loading parts, each must have a separate certificate of qualification.

If a vehicle carrying hazardous materials consists of a tractor and a semi-trailer, and the semi-trailer has an independent license plate number, the license plate number of the semi-trailer must also be included in Section 7 of the qualification certificate.

Tanker vehicles with semi-trailers carrying containers of hazardous materials or vehicles carrying hazardous materials and products in bulk must use warning triangles on both sides of the container or tank.

The following information must be legibly displayed on the loading body of tanker vehicles carrying dangerous goods.

1. Name of the transportation company or institution
2. Tanker capacity
3. Tanker empty weight
4. Maximum weight of tanker with cargo
5. Inspection date and validity period

The following information must be legibly marked on the tank of containers carrying hazardous materials:

1. Tank container registration number
2. Name of the company manufacturing the tank container
3. Serial number declared by the tank container manufacturer
4. The numerical value of the cargo pressure in megapascals or bar.
5. Year of production of the tank container
6. Container tank capacity in liters

The maximum life of tankers used as cargo for the transport of dangerous goods of Class 3 shall not exceed years.



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Vehicles carrying hazardous materials must have an orange triangle on the rear vertical surface with a base length of 40 cm and a height of 30 cm with a black border line 15 mm thick.

Drivers of vehicles carrying hazardous materials must have a valid license appropriate to the type of vehicle they are driving and at least 3 years must have passed since the date of issuance of the license.

The minimum age for drivers who intend to work in the field of transporting hazardous materials is 26 years old.

The maximum age limit for drivers of vehicles carrying hazardous materials is 50 years. However, if there are no violations by the driver, taking into account the driver's violation rating, the transport operator may, with the approval of the organization, use drivers over 50 years of age and under 60 years of age.

Drivers who transport dangerous substances in fixed or portable tankers with a capacity exceeding 1,000 liters or tank containers with a capacity exceeding 3,000 liters, as well as drivers who transport these substances in vehicles with a weight exceeding

Those who operate vehicles with a gross vehicle weight exceeding 3,500 kilograms must, in addition to a license appropriate for driving the vehicle, have a special certificate confirming familiarity with the subject of transporting hazardous materials, the provisions of the Road Transport Regulations **Hazardous materials, precautions to avoid accidents arising from the transportation of hazardous materials, and preventive measures to prevent accidents arising from the road transportation of these materials.**

To issue a special approval, transportation companies and institutions that transport hazardous materials are required to hold training courses and provide special approval to drivers based on the rules and guidelines provided by the country's transportation and terminal organizations.

It is mandatory to use a driver who meets all the requirements of the main driver with a vehicle carrying hazardous materials.

Compliance with the Basel Convention and its related agreements is mandatory in road transport.

Vehicles carrying dangerous goods must not under any circumstances tow or be towed by another vehicle. The carriage of passengers and occupants, with the exception of the driver and co-driver or other personnel who, at the discretion of the carrier, must accompany the cargo and vehicle during the transportation of dangerous goods, is prohibited.

Smoking or using any lighting or incendiary devices inside the vehicle or within 50 meters of it while transporting hazardous materials is prohibited.

If, for any reason, during unloading or loading operations, a number of vehicles carrying chemicals must be stopped in an area, or if a number of vehicles carrying such substances are stopped at a suitable stop, they must be at least 20 meters apart from each other.



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If the dangerous goods discharge pump is not powered by the vehicle's engine, the vehicle's engine must be turned off during the discharge. In the event of an accident that results in the release of materials into the environment, the transport operator is required to immediately notify the rescue organizations.

Vehicles carrying hazardous materials must be equipped with fire extinguishers appropriate to the type of vehicle and the flammability of the goods being transported. Vehicle drivers are required to carry the following equipment and supplies before commencing transportation operations and use them if necessary.

(Yellow safety vest, safety glasses, respirator, chemical resistant gloves, bib and brace, hand flashlight, eye wash solution, water bottle,

Any type of land motor vehicle designed to transport chemicals must have the driver's cabin separated from the cargo area by strong walls. The engine of the vehicle carrying chemicals must be turned off when stopped. The vehicle carrying chemicals must stop in areas with a slight slope, if possible, and must avoid parking and stopping on slopes.

The use of any flammable lighting or heating device inside or within 50 meters of a vehicle carrying chemicals is prohibited.

15.Regulatory information

National legislation

Producers, importers, and exporters of chemicals must, before importing, exporting, and supplying any chemical, declare their specifications to the Ministry of Health, Treatment, and Medical Education for review and issuance of a national label.

All chemical producers, both public and private, are required to comply with the provisions of the National Chemical Classification and Labeling Guidelines.

Supervision of chemical materials and products in terms of having a national chemical label in industrial and production centers, workshops, warehouses, and sales centers is the responsibility of labor and occupational health inspectors.

The label of all exported chemicals covered by this regulation, in addition to being in Persian, can also be in the language of the destination country upon request.

All importers of chemicals under the Rotterdam, Stockholm, and Basel Conventions are required to comply with the provisions of these conventions, in addition to affixing the label subject to this regulation.

The properties and specifications of each chemical must match the national label on its container.

The Ministry of Health, Treatment and Medical Education, in partnership with the Ministry of Labor and Social Affairs, will prepare and implement educational programs to familiarize employees with chemical labels.



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The principles and procedures for determining and attaching labels are based on the GHS system guidelines.
International legislation

16. Other Information:

The information provided in the safety correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a 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:

Resources:

- ❖ Executive Regulations for Road Transportation of Hazardous Materials
- ❖ NFPA
- ❖ GHS
- ❖ Chemical Classification and Labeling Regulations