
Product	HEAVY VACUUM GAS OIL	Date:	2016/12/19
		Edition:	1

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1. Product identifier

- Trade name: **Heavy vacuum gas oil**
- Chemical name: **Gas oil (petroleum), heavy vacuum**
- Index no.: 649-009-00-7
- EC no.: 265-058-3
- CAS no.: 64741-57-7
- Registration No.: 01-2119487294-29-0091
- Product code: 1950093

1.2. Relevant identified uses of the substance or mixture and uses advised against

- Relevant identified uses: **Industrial:**
Manufacture of substances, use as intermediate, distribution of a substance, formulation and (re)packaging of substances and mixtures, use as fuel.
Professional:
Use as fuel, use in road building and construction.
- Uses advised against: The uses that are listed above are recommended. Other uses are advised against unless prior testing, that proves that risk control has been conducted, was performed.

1.3. Details of the supplier of the safety data sheet

- Manufacturer/supplier: **INA-Industrija nafte, d.d.**

Address: Av. Većeslava Holjevcica 10
pp 555, 10002 Zagreb, CROATIA

Phone: 00-385-1-6450-842 / 00-385-1-6451-075 (24 h)

Fax: 00-385-1-6452-050

e-mail: sds@ina.hr

- Responsible person:

Mirela Mavrinac, M.Sc. in
Engineering

Hrvoje Raukar, M.Sc. in
Engineering

SD & HSE Sector

Tel. 00-385-1-6450-803

1.4. Emergency Telephone Number

- Emergency Service Telephone Number: **112**
National Protection and Rescue Directorate 00-385-1-3650-011
Nehajaska 5, 10000 Zagreb 00-385-1-3650-084
e-mail: info@duzs.hr 00-385-1-3650-082
00-385-1-3650-083
- Medical Information Telephone Number: **00-385-1-23-48-342**

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2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

2.1.1. Classification according to Regulation (EC) No 1272/2008 (CLP/GHS):

Carc. 1B; H350

2.2. Substance or mixture labelling

2.2.1. Labelling according to Regulation (EC) No 1272/2008 (CLP/GHS)

Hazard pictograms:



GHS08

Signal word: **Hazard**

Hazard statements (H):	H350	May cause cancer.
	EUH066	Repeated exposure may cause skin dryness or cracking.
Precautionary statements (P):	P201	Obtain special instructions before use.
	P260	Do not inhale dust/fume/gas/mist/vapours/spray.
	P261	Avoid inhaling dust/fume/gas/mist/vapours/spray.
	P273	Avoid release into the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P308+	IF exposed or suspecting exposure: call the POISON
	P313	CONTROL CENTRE and/or a physician.

2.3. Other hazards

No data available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

-Substance:	<input checked="" type="checkbox"/>		Mixture:	<input type="checkbox"/>	
- Components contributing to product hazardousness:					
Substance name	Substance identification			[%]	Classification according to Regulation (EC) No 1272/2008 (CLP/GHS)
	CAS no.	EC no.	Registration no. (REACH)		
Gas oil (petroleum), heavy vacuum	64741-57-7	265-058-3	01-2119487294-29-0091	≤100	Carc. 1B; H350

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4. FIRST AID MEASURES

- General information:

- First aid procedures

- after inhalation: Remove the affected person from the hazardous area to fresh air. In case of headache, dizziness, nausea and permanent complaints, immediately seek medical attention.
In case of fainting, place the person in lateral position, paying attention to the free passage of the air through the respiratory tract. In case of difficulty in breathing or respiratory arrest, open the airways, initiate resuscitation (heart massage and artificial respiration) and immediately seek medical attention.
- after skin contact: Take off the contaminated clothes and footwear. Thoroughly rinse the afflicted skin surface with water and soap for 15-20 minutes. In case of redness, immediately seek medical advice.
- after eye contact: Remove contact lenses and flush the eyes with running water for at least 15 minutes. In case of irritation, blurred vision and swelling immediately seek medical attention.
- after ingestion: DO NOT induce vomiting! Do not give anything by mouth. If vomiting occurs, keep the head below the level of hips in order to prevent penetration into the lungs. Immediately seek medical attention.
- **Note to person administering first aid/physician:** Only qualified medical personnel should administer oxygen.

5. FIRE FIGHTING MEASURES

- Extinguishing media

- SUITABLE: Air foam, powder, water mist.
- NOT SUITABLE: Water jet.

- Firefighting measures for special hazards: Eliminate all sources and potentials for ignition. Notify the fire brigade.

- Special firefighting measures: Use of water mist and water spray for cooling the surfaces exposed to heat and for protection of persons. Only persons trained in fire-fighting may use the water spray (sprayed water).

- Special fire fighter protective equipment: Wear protective clothing for firefighters (intervention suit) in accordance with HRN EN 469 and a self-contained, open-circuit compressed air breathing apparatus in accordance with HRN EN 137.

- Special hazards arising from the substance or mixture: Vapours are heavier than air and may settle to ground level and in dents; they may spread away from the accident site and cause explosion and fire.

- Advice for firefighters: No data available.

- Additional information: No data available.

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6. ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** Thoroughly ventilate the premises. Display a visible sign prohibiting entrance, use of open flame and sparking devices. Do not smoke. Stand upwind from the release site. Use personal protective equipment listed in section 8.
- **Environmental precautions:** Mark out the contaminated area with signs and prevent leaks and spills into watercourses, channels, drainage systems and soil by digging a protective ditch, setting up partitions made of bags of dry sand, soil or clay. Ensure good ventilation. In case of larger spills notify the Emergency Service at the number 112.
- **Methods for cleaning-up and recovery:** Pump the product from the damaged tank into an empty tank - container with the safety performance pump designed for use in a potentially explosive atmosphere. Adsorb the remainders with adsorbents (sawdust, sand, mineral adsorbents or other inert materials). Store the waste material and contaminated surface layer of soil that was removed in tightly closed containers in well-ventilated premises until disposal. Hand over for disposal to legal entities for hazardous waste disposal, authorized by the Ministry in charge of environmental protection.
- **Additional warnings:** In order to protect the local sea area and port infrastructure against pollution, vessels shall be surrounded by a safety barrier. In case of major spills, notify the Port Authority and the National Protection and Rescue Directorate at the number 112.

7. HANDLING AND STORAGE

- **Handling**
- **safety precautions:** Handle the product in well-vented rooms, keep it far from food and drinks, as well as from heat. Remove all ignition sources. Never check levels in tanks in the presence of open flame, sparks or smoke. Never undertake welding operations in empty tanks without a prior risk assessment first and without taking precaution measures. Do not use open flame in the vicinity of the tank area. Do not use sparking equipment. Reload at reloading stations designed pursuant to relevant regulations. Pay special attention to connection points in order to avoid any possible release into the sea or river. Follow the measures of occupational safety and health and fire protection.
- **safe handling advice:** Do not smoke. Avoid inhalation of vapours, as well as contact with skin and eyes. Apply personal protective equipment referred to in Section 8.
- **Storage:** technical measures and storage conditions:

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- SUITABLE: Properly constructed and equipped containers. Storage containers on vessels have to be kept in a cold and well-vented space.
- TO BE AVOIDED: All other.
- **Packaging materials**
- RECOMMENDED: Prescribed for that purpose.
- NOT SUITABLE: All other.
- **Special use:** No data available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Exposure limit values

Hazardous substance (CAS No.)	Occupational exposure limit values/short term values (OEL/STEL)		Biological limit values
	ppm	mg/m ³	
-	-	-	-

- **Monitoring procedures:** No data available.

8.2. Exposure controls

- **Summary of risk management measures:** No data available.

8.2.1. Occupational exposure controls

- **Description of operating procedure and technological control:** Ensure good ventilation/air extraction in the work area.

- Personal protective equipment

- respiratory tract protection: If the concentration of hazardous substances is higher than permitted, concentration of hazardous substances is unknown or oxygen content is below the allowed limit, it is mandatory to use of protective half mask or full face mask (HRN E136/AC:2006) with a combined filter for organic gases/vapours (filter type A-P, boiling point >65 °C) with threaded connection complying with the HRN EN 14387 and HRN EN 143-1/A1:2007 standards (boiling point >65 °C). During the fire, use a self-sustained, open-circuit compressed-air breathing apparatus (HRN EN 137).
- hand protection: Protective gloves made of stable and impermeable material such as nitrile rubber or Viton (HRN EN 374-3) with breakthrough time >240 minutes. If there is a risk of ignition, use gloves as protection against thermal risks (HRN EN 407).
- eye protection: Protective goggles or a visor at lower concentrations, protective mask at higher concentrations.
- skin and body protection: Protective clothing and footwear, nitrile rubber apron, chemical suit.

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- Special hygienic and safety precautions:** Regularly maintain the prescribed hygiene standards for working with hazardous substances. Remove contaminated clothing and footwear. Inspect the equipment and devices regularly and maintain with running water. Smoking, eating, and drinking is prohibited when handling the product. Wash hands every time at the end of work.

8.2.2. Environmental exposure controls

- Summary of risk management measures:** No data available.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information:

- state: Solid at room temperature.
- colour: Amber, brown.
- odour: Specific for hydrocarbons.
- odour threshold: No data available.

9.2. Important health, safety and environmental information:

- pH value (indicate conc. and temp.): Not applicable.
- boiling point/boiling range: °C 307 – 566
- flash point: °C 175 – 227
- flammability (solid, gas): No information available.
- explosive properties: vol. % No information available.
- oxidizing properties: No information available.
- vapour pressure: kPa 0.02 – 0.79 at 120°C (from literature)
0.063 – 0.861 at 150°C (from literature)
- density at 15 °C: kg/m³ 885.0 -927.0
- relative density: No information available.
- solubility (indicate solvent): g/L No information available.
- Solubility in water: g/L No information available.
- partition coefficient n-octanol / water logPow No information available.
- viscosity (kinematic) at xx °C: mm²/s 21.71– 42.27
- vapour density at 15°C: kg/m³ No information available.
- volatility: No information available.

9.3. Other data:

- melting point/freezing point: °C <30 (from literature)
- disintegration temperature: °C No information available.
- auto ignition temperature: °C 220 – 550 (from literature).
- conductivity: pS/m No information available.

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10. STABILITY AND REACTIVITY

- **Reactivity:** Stable under prescribed handling and storage conditions.
- **Chemical stability:** Stable under prescribed handling and storage conditions.
- **Possibility of hazardous reactions:** No information available.
- **Conditions to avoid:** Sources of heat, open flame, sparking.
- **Incompatible materials:** Strong oxidants.
- **Hazardous decomposition products:** Carbon oxides (CO, CO₂), sulphur dioxide (SO₂).

11. TOXICOLOGICAL INFORMATION

- **Information on toxicological effects:**
- **Acute toxicity**
 - oral (LD₅₀): >5000 mg/kg_{body mass} (rat)
 - inhalation (LC₅₀): 4 mg/l (rat)
 - dermal (LD₅₀): >2000 mg/kg_{body mass} (rabbit)
- **Irritation/Corrosion**
 - skin: Repeated exposure may cause skin dryness or cracking (EUH066).
 - eyes: Short-term eye irritation.
 - respiratory tract: No information available.
- **Sensitisation**
 - skin: No information available.
 - respiratory tract: No information available.
- **Aspiration hazard:** No information available.
- **Other classic effects: (e.g. unconsciousness, particularly toxic metabolites, etc.):** No information available.
- **Permanent effects due to acute or chronic exposure:** No information available.
- **Special effects**
 - mutagenicity: No information available.
 - carcinogenicity: May cause cancer (H350).
 - fertility decrease: No information available.
 - harmful effect on unborn child: No information available.
 - toxicity to reproduction: No information available.
 - other (e.g. endocrine disruptors): No information available.
 - STOT (SE): No information available.

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- STOT (RE): No information available.
- **Prohibitions and restrictions:** No information available.
- **Other:** No information available.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

- to aquatic organisms: LL₅₀= > 95 mg/L (96h, *Oncorhynchus mykiss*)
NOEL=0.1 mg/L (28 days, *Oncorhynchus mykiss*)
EL₅₀= > 99 mg/L (48h, *Daphnia magna*)
NOEL= 0.27 mg/L (21 days, *Daphnia magna*)
- to ground organisms: No information available.
- to plants and land animals: NOAEL= 12 mg/kg (28 days, *Anas platyrhynchos*)

12.2. Persistence and degradability

- biodegradation: No information available.
- other degradation processes: No information available.
- degradation in wastewater: No information available.

12.3. Bioaccumulative potential

- bio-concentration factor (BCF): No information available.

12.4. Mobility in soil

- Known or predicted distribution in environmental compartments: **Method:** PETRORISK Model
4.55% in air, 0.01% in water, 27.63% in sediment and 67.81% in ground.
- surface tension: No information available.
- absorption/desorption: No information available.
- other physical and chemical properties: See Section 9.

12.5. Results of PBT and vPvB assessment

- data from chemical safety report: No information available.

12.6. Other adverse effects:

No information available.

13. DISPOSAL CONSIDERATIONS

- **Waste codes:** 13 07 01*
- **Waste treatment methods:** Thermal treatment of contaminated residues is provided for.
- **Waste from residues:** There is no classic waste from this product, except in case of unintentional release. For such cases see Section 6. Thermal treatment of contaminated residues is provided for.
- **Contaminated packaging:** Not applicable.
- **Relevant provisions:** Act on Sustainable Waste Management, Ordinance on the waste catalogue, Ordinance on waste management.

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14. TRANSPORT INFORMATION

- **UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUIDS, N.O.S. (heavy vacuum gas oil)

- **UN number:** 3082

- **Transport hazard class(es)**

ADR/RID/ADN/ICAO/IATA: 9

IMDG: 9

- **Packing group**

ADR/RID/ADN/IMDG/ICAO/IATA: III

- **Environmental hazards**

ADR, RID, ADN, ICAO/IATA: Yes.

IMDG: Yes, maritime pollutant.

- **Special precautions for user**

ADR

Transport category: 3

Vehicle for tank carriage: AT

Tank code: LGBV

Tunnel restriction code: (E)

Label: 9

Classification code: M6

Hazard identification: 90

Special provisions: 274,335,375,601,V12, CV13.

ADN

Label: 9

Additional requirements/Remarks: 22, 27
*See 3.2.3.3.

Dangers: 9+ (N1,N2,CMR,F or S)

Equipment required: * ; PP

Classification code: M6

Carriage permitted: yes

Type of tank vessel: *;N /*;3

Anti-explosion protection required: no

Maximum degree of filling in %:* ; 97.

ICAO

Label: 9 + label "Environmentally hazardous"

RID

Transport category: 3

Tank code: LGBV

Label: 9

Classification code: M6

Hazard identification: 90

Special provisions: 274,335,601, V12, CV13, CV31.

IMDG

Subsidiary risk: Yes, maritime pollutant

Group of the cargo: Category A

Special provisions: 274,335,T4,TP2, TP29

EmS: F-A, S-F

Segregation group: Category A

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Cargo IMP code: RMD

Passenger and cargo aircraft: LQ- 30KG G
(PI Y964); 450L (PI 964)

Cargo aircraft only: 450L (PI 964)

ERG code: 9L

Transport in liquid/bulk condition according to MARPOL Convention, Annex II and IBC Codex

Trade name: Not applicable.

Pollution category (according to MARPOL, Annex II): Not applicable.

Vessel type (according to IBC Code): Not applicable.

Special and operative requirements (according to IBC Code): Not applicable.

15. REGULATORY INFORMATION

- Applicable EU regulations: Regulation (EC) No 1907/2006 and No 1272/2008 of the European Parliament and of the Council; Commission Regulation (EC) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 (REACH); Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer; Regulation (EC) No 689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals; Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants; Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.

- Applicable national regulations: Chemicals Act, Ordinance on limit values of exposure to hazardous substances at work and biological limit values, Act on Sustainable Waste Management, Ordinance on the waste catalogue, Ordinance on waste management.

- Chemical Safety Assessment carried out (CSA): YES X NO

- Authorization information:-

- Restriction information:-

16. OTHER INFORMATION

Revision indicators

Section: **Subject of change:**

- -

Full text of H- phrases, EUH- and P-phrases:

H350 May cause cancer.

P201 Obtain special instructions before use.

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P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release into the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or suspecting exposure: call the POISON CONTROL CENTRE and/or a physician.

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS number	Chemical Abstract Service number
CLP	Classification, Labelling and Packaging of substances and mixtures
CSA	Chemical Safety Assessment
CSR	Chemical Safety Report
EC number	European Community number for identification of chemical substances commercially available in the EU
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code transport
LC50	Lethal concentration for 50% of tested organisms
LD50	Lethal concentration for 50% of tested organisms (medium lethal concentration)
OIN	Oil industry notes
PBT	Persistent, bioaccumulative and toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
STOT (SE)	Specific Target Organ Toxicity (Single Exposure)
STOT (RE)	Specific Target Organ Toxicity (Repeated Exposure)
UVCB	Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials
vPvB	Very persistent and very bioaccumulative

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Statement:

This SDS is in compliance with the EU Regulation No. 1907/2006 and No. 1272/2008 of the European Parliament and the Council. It contains important user health and safety and environmental protection information. The information provided herein is not a substitute for any specification of quality and should not be deemed as a guarantee of the adequacy and applicability of this product for any purpose whatsoever. All information provided herein is based on our current knowledge and compliant with applicable legal regulations. The user is responsible for adherence to relevant legal regulations.

Data source:

1. www.hzt.hr
2. <http://echa.europa.eu/hr>
3. Hazard classification and labelling of petroleum substances in the EEA, Concawe 2015.

APPENDIX: EXPOSURE SCENARIOS ACCORDING TO CHEMICAL SAFETY REPORT
