

 INDUSTRIJA NAFTE, d.d.	<b>SAFETY DATA SHEET</b>	Issue: 2/11/07
	Product: <b>INA Base Oil Light SN 150</b>	Page: 1 / 5

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

<b>Product name and code:</b>	INA Base Oil Light SN 150 - 1000154 and 2000151
<b>Product use:</b>	Base oil for production of engine oils, industrial oils and related products.
<b>Producer/supplier:</b>	INA-INDUSTRIJA NAFTE, d.d.
<b>Address:</b>	Avenija Većeslava Holjevca 10, p.p. 555, 10002 Zagreb, HRVATSKA Phone 00-385 1 64 50 842 / 385 1 64 51 075 (0 – 24 h) Fax 00-385 1 64 52 050
<b>Emergency Service Telephone Number:</b>	112

## 2. COMPOSITION / INFORMATION ABOUT INGREDIENTS

<b>Substance:</b>		<b>Preparation:</b>	X		
<b>Chemical name of substance:</b>	-				
<b>CAS No.:</b>	72623-87-1				
<b>Chemical composition of preparation (concentration / range):</b>	Paraffin based mineral oil without additives.				
<b>EEC index:</b>	649-483-00-5				
<b>Components contributing to product hazardousness:</b>					
<b>Component</b>	<b>% v/v (concentration)</b>	<b>EINECS/CAS</b>	<b>Hazard symbol</b>	<b>Risk label</b>	<b>Safety label</b>
Base oil – unspecified	< = 100	276-738-4/72623-87-1	-	-	-

Polycyclic aromatics in mineral oil: <3 % (DMSO extract, IP 346).

## 3. HAZARDS IDENTIFICATION

<b>The most important hazards and effects:</b>	
Human health hazards:	Oversensitive persons may experience skin/eye irritation during long-term or repeated exposure.
Environmental hazards:	No data available. Avoid release to the environment.
Physical/chemical hazards:	See items 9 and 10.
<b>Special hazards:</b>	No data available.
<b>Main symptoms of effects:</b>	
Inhalation:	Hot oil fumes may irritate respiratory passages.
Skin:	Sensitive persons may experience redness, dryness and/or dermatitis.
Eyes:	Sensitive persons may experience redness or stinging sensation.
Ingestion:	No data available; may have a laxative effect.
<b>Overview of special conditions:</b>	None.

## 4. FIRST-AID MEASURES

<b>First-aid procedures:</b>	
Inhalation:	Remove the person to fresh air. If the person has breathing difficulties, seek medical assistance.
Skin contact:	Rinse thoroughly with running water and soap.
Eye contact:	Hold the eyelids apart with clean hands and flush with running water for at least 15 minutes.
Ingestion:	DO NOT induce vomiting! Wash the mouth out with water. In case of nausea or any other symptoms seek medical assistance and show the label/container.
<b>Note to first-aiders/physician:</b>	See items 2 and 3.

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## 5. FIRE-FIGHTING MEASURES

<b>Extinguishing media:</b>	
Suitable:	Foam, dry chemical dust, water spray, CO <sub>2</sub> , sand.
Not suitable:	Water.
<b>Fire-fighting measures for special hazards:</b>	No special recommendations.
<b>Special fire-fighting measures:</b>	Use water spray for cooling of containers/tanks and protection of persons.
<b>Fire-fighting special safety equipment:</b>	Self-contained pressurised air breathing apparatus (HRN EN 135) and thermal insulation suit.
<b>Special exposure hazards:</b>	None.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Use personal protective equipment from item 8. Stand upwind from the release site.
<b>Environmental precautions:</b>	Avoid spilling into water, sewerage and drainage systems by digging a protective ditch and/or setting up partitions of dry sand, soil or similar absorbent material. Use floating dams for water spills.
<b>Methods for cleaning-up and recovery:</b>	Absorb the spilt product with absorbent or inert material. Store the waste material and contaminated surface layer of soil that was removed in closed containers in well-ventilated premises. Hand over for disposal to legal entities for hazardous waste disposal, authorised by the Ministry in charge of environmental protection.
<b>Additional warnings:</b>	In case of larger spills, notify the communication unit at 112.

## 7. HANDLING AND STORAGE

<b>Handling:</b>	
Safety precautions:	Use product in well ventilated premises. Keep away from sources of heat and ignition.
Safe handling advice:	Avoid contact with skin and eyes.
<b>Storage: technical measures and storage conditions:</b>	
Suitable:	It is recommended that base oil be stored in covered or closed area. Recommended storage temperature is 5-40 °C.
To be avoided:	Do not expose to direct sunlight or higher temperatures, avoid contact with water or strong oxidants.
<b>Packaging materials:</b>	
Recommended:	Material resistant to hydrocarbons.
Not suitable:	Anything else.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Technical measures for reducing exposure:</b>	Ensure good ventilation of premises.
<b>Control parameters:</b> See item 7.	

Hazardous substance	Maximum allowed concentration MAC ppm	Biological limit values ppm
mineral oils, aerosols	5 U (total dust) mg/m <sup>3</sup>	-

### Personal protective equipment:

Respiratory protection:	During regular work respiratory protective equipment is not required. In special cases (e.g. spills) use full face protective mask (HRN EN 136) and in case of fire self-contained pressurised air breathing apparatus (HRN EN 135).
Hand protection:	Gloves made of PVC or neoprene, resistant to oils, greases, alkali and acids (HRN EN 374-1).
Eye protection:	Protective goggles with side protection or protective visor.
Skin and body protection:	Protective clothes and footwear.
<b>Special hygienic and safety precautions:</b>	Smoking, eating and drinking is prohibited during handling this product. Wash hands before each work break.

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<b>Additional warnings:</b>	Immediately remove contaminated clothes and footwear.
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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical properties

<b>State:</b>	liquid	<b>Colour:</b>	yellow to dark brown	<b>Odour:</b>	faint
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### Chemical properties

Characteristics	Unit	Values	Method	Note
<b>pH value:</b>				not applicable
<b>Boiling point/Boiling range:</b>	°C			not known
<b>Flash point:</b>	°C	> = 200	HRN EN ISO 2592	
<b>Flammability:</b>	°C			not applicable
<b>Auto-ignition temperature:</b>	°C	> 300	DIN 51794	
<b>Explosive properties:</b>	v/v vol. %			product is not explosive
<b>Oxidizing properties:</b>				not applicable
<b>Vapour pressure:</b>	kPa			not applicable
<b>Density (15 °C):</b>	kg/m <sup>3</sup>	865 – 875	HRN EN ISO 12185	
<b>Solubility in water:</b>	g/L			no data available
<b>Solubility in organic solvents or oils:</b>	g/L			not applicable
<b>Distribution coefficient n-octanol / water:</b>	- log Pow			not applicable
<b>Pour point, maximum:</b>	°C	- 8	HRN ISO 3016	
<b>Viscosity (at 40 °C):</b>	mm <sup>2</sup> /s	25.0 – 34.0	HRN EN ISO 3104	
<b>Vapour density:</b>	kg/m <sup>3</sup>			not applicable
<b>Volatility:</b>	kPa			not applicable
<b>Miscibility with other substances:</b>				not applicable
<b>Conductivity:</b>				not applicable
<b>Melting point/Melting range:</b>	°C			not applicable
<b>Gas group:</b>				not applicable

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stabile at normal conditions.
<b>Conditions to avoid:</b>	High temperature and direct sunlight.
<b>Materials to avoid:</b>	Avoid contact with water and strong oxidants.
<b>Hazardous decomposition products:</b>	Forming of dangerous products not expected at normal storage conditions.

## 11. TOXICOLOGICAL INFORMATION

<b>Acute toxicity:</b>	
Oral (LD <sub>50</sub> ):	> 5000 mg/kg (rat) from literature
Inhalation (LD <sub>50</sub> ):	> 2500 mg/m <sup>3</sup> (4h; rat) from literature
Skin contact (LD <sub>50</sub> ):	> 2000 mg/kg (rabbit) from literature
<b>Local effects:</b>	
Skin irritation:	No data available.
Eye irritation:	No data available
Dermal sensitivity:	No data available.
<b>Chronic poisoning or long exposure:</b>	Sensitive persons may experience skin and/or eye irritation and dermatitis and/or redness.
<b>Exposure effects:</b>	
Single-term:	None.

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Recurrent:	No data available.
Long-term:	See chronic poisoning or long-term exposure.
<b>Momentary effects:</b>	None.
<b>Delayed:</b>	No data available.
<b>Special:</b>	No data available.

## 12. ECOLOGICAL INFORMATION

<b>Mobility:</b>	
Known or predicted distribution to environmental compartments:	Floats on water surface.
Surface tension:	No data available.
Soil absorption/desorption:	No data available.
Other physical/chemical properties:	See item 9.
<b>Persistence/degradability:</b>	
Biotic or abiotic degradation:	Potentially biodegradable.
Aerobic or anaerobic degradation:	No data available.
Persistence:	No data available.
<b>Bioaccumulation:</b>	
Bioaccumulative potential:	No data available.
Bio-enhancement:	No data available.
<b>Possible environmental impact:</b>	
Water:	No data available.
Air:	No data available.
Soil:	No data available.
<b>Ecotoxicity:</b>	
For aquatic organisms (EC 50):	> 1000 mg/L (48 h; Daphnia magna; similar substance)
For algae (EC 50):	No data available.
For ground organisms:	No data available.
For plants and land animals:	No data available.
<b>Other harmful effects:</b>	No data available.

## 13. DISPOSAL CONSIDERATIONS

<b>Preferred disposal considerations:</b>	
Waste from residues:	Waste oil is hazardous waste and must not be spilt into sewerage or released into the environment. Thermal processing of residues is foreseen. See item 6.
Contaminated packaging:	Dispose into containers intended for oily waste in accordance with valid legislation. Barrels can be regenerated.
<b>Local disposal considerations:</b>	Regulations on Waste Oil Management (OG 124/06); Regulations on Waste Types (OG 27/96); Waste Act (OG 178/04, OG 111/06); Decree on Amendments to Waste Act (OG 153/05); Decree on Conditions for Hazardous Waste Management (OG 32/98); Decree on Waste Categories, Types and Classification with Waste Catalogue and Hazardous Waste List (OG 50/05).

## 14. TRANSPORT INFORMATION

<b>Transport classification signs:</b>	
Road (ADR):	not classified as hazardous for transport
Rail (RID):	not classified as hazardous for transport
Water (ADNR):	not classified as hazardous for transport
Sea (IMDG):	not classified as hazardous for transport
Air (IATA –ICAO):	no transport data available
<b>UN classification number:</b>	-
<b>Additional regulations :</b>	Hazardous Substances Transport Act (OG 79/07).
<b>Special precautions and conditions:</b>	-

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## 15. REGULATORY INFORMATION

<b>Applicable regulations:</b>	Act on Chemicals (OG 150/05); INA N 12-000
<b>Information on hazards and safety measures:</b>	
<b>Hazard symbol:</b>	-
<b>Risk label:</b> (for final product)	-
<b>Safety label:</b> (for final product)	-

## 16. OTHER INFORMATION

<b>Risk labels:</b> (for components)	-
<b>Safety labels:</b> (for components)	-
<b>Literature:</b>	<ol style="list-style-type: none"> <li>1. <a href="http://ecb.jrc.it/esis/">http://ecb.jrc.it/esis/</a></li> <li>2. <a href="http://www.concawe.org/Content/Default.asp?PageID=35">http://www.concawe.org/Content/Default.asp?PageID=35</a> (report no. 01/54)</li> <li>3. <a href="http://www.online.petro-canada.ca/datasheets/en_us/spray10.pdf">http://www.online.petro-canada.ca/datasheets/en_us/spray10.pdf</a></li> <li>4. <a href="http://www.dugganpetro.com/778581.pdf">http://www.dugganpetro.com/778581.pdf</a></li> <li>5. <a href="http://www.dalube.net/MSDS/Torque%20Fluid%20SS.pdf">http://www.dalube.net/MSDS/Torque%20Fluid%20SS.pdf</a></li> </ol>
<b>Revisions:</b>	Compared to Issue 1, the Issue 2 of this Safety Data Sheet (SDS) is a completely new issue conformed to the requirements of Regulations on the Manner of Filling Out the Safety Data Sheet, OG 111/2006 and EU Directive 2001/58/EC.
<b>Note:</b>	Safety Data Sheet (SDS) is drawn up on the basis of present knowledge and legislation in force at the moment of launching the product onto the market. Product is described on the basis of its safety data. The use of product for purposes other than those indicated above as well as its use with other materials during treatment process may cause hazards that are not described in this SDS.