

Product	<b>GASOLINE COMPONENTS ISOMERISATE</b>	Date:	2017/7/20
		Edition:	3

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

### 1.1. Product identifier

- Trade name: **Gasoline components, isomerisate**
- Chemical name: Naphtha (petroleum), isomerization
- Index no.: 649-277-00-5
- EC no.: 265-073-5
- CAS no.: 64741-70-4
- Registration No.: 01-2119480399-24-0064
- Product code: 1900050

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

- Relevant identified uses: **Industrial:**  
Manufacture of Substances  
Formulation & (re) packing of substance and mixtures  
Use of substance as intermediate  
Distribution of substance
- Uses advised against: The uses that are in the list above are relevant. Other uses are not recommended unless an assessment that proves that the related risks are controlled has been conducted before starting that use.

### 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, HRVATSKA

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

**Fax:** 00-385-1-6452-050

**e-mail:** [sds@ina.hr](mailto:sds@ina.hr)

- Responsible person: **SD & HSE Sector**  
Mirela Mavrinac, B.Sc. Tel. 00-385-1-6450-803  
Hrvoje Raukar, B.Sc.

### 1.4. Emergency Telephone Number

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

## 2. HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

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

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Flam. Liq. 1; H224

Skin Irrit. 2; H315

Asp. Tox. 1; H304

Muta. 1B; H340

Carc. 1B; H350

STOT 3; H336

Aquatic Chronic 2; H411

Full text of H-phrases: see section 16.

## 2.2. Substance or mixture labelling

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

Hazard pictograms:



GHS02 GHS07 GHS08 GHS09

Signal word: Danger

Hazard statements (H):	H224	Extremely flammable liquid and vapour
	H304	May be fatal if swallowed and enters airways.
	H315	Causes skin irritation
	H336	May cause drowsiness or dizziness.
	H340	May cause genetic defects
	H350	May cause cancer
	H411	Toxic to aquatic life with long lasting effects.
Precautionary statements (P):	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P301+310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
	P331	Do NOT induce vomiting.
	P403+P233	Store in a well-ventilated place. Keep container tightly closed.

## 2.3. Other hazards

**OIN 6** – Classification as reproductive toxicity category 2 according to CLP is not required if it has been evidenced that n-hexane share is <3%.

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**3. COMPOSITION / INFORMATION ON INGREDIENTS**

<b>-Substance:</b>	<b>X</b>		<b>Mixture:</b>		
<b>- Components contributing to product hazardousness:</b>					
Substance name	Substance identification			[%]	Classification according to Regulation (EC) No 1272/2008 (CLP/GHS)
	CAS no.	EC no.	Registration no. (REACH)		
Naphtha (petroleum), isomerization	64741-70-4	265-073-5	01-2119480399-24-0064	≤ 100	Carc. 1B; H350 Muta. 1B; H340 Asp. Tox. 1; H304
n-hexane*	110-54-3	203-777-6	-	<0,5	Flam. Liq. 2; H225 Asp. Tox. 1; H304 Skin Irrit. 2; H315 STOT SE 3; H336 STOT RE 2*; H373 Aquatic Chronic 2; H411 Repr. 2; H361f
Benzene*	71-43-2	200-753-7	-	<0,1	Flam. Liq. 2; H225 Carc. 1A; H350 Muta. 1B; H340 STOT RE 1; H372 Asp. Tox. 1; H304 Eye Irrit. 2; H319 Skin Irrit. 2; H315

\* These components were not added on purpose but they are reported as important for classification

**4. FIRST AID MEASURES**
**- General information:**
**- First aid procedures**

- after inhalation: Remove the person from dangerous area to fresh air.  
In case of headache, dizziness, nausea and permanent complaints immediately seek medical attention.  
In case of fainting transport in lateral position to hospital, paying attention to the free passing of the air thorough the respiratory tract.  
In case of difficulty in breathing or respiratory arrest, open 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 10 - 15 minutes. In case of irritation, swelling and redness, immediately seek medical advice.
- after eye contact: Remove contact lenses (if present) 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 invoke vomiting! Do not give anything by mouth! Always assume aspiration into the lungs has occurred. If vomiting occurs, keep the head below the level of hips in order to prevent penetration into the lungs. Immediately seek medical attention.

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- Note to person administering first aid/ physician:** Risk of pulmonary oedema due to aspiration into the lungs. Administering oxygen only by trained medical personnel.

## 5. FIRE FIGHTING MEASURES

- **Extinguishing media**
  - SUITABLE: Dry chemical powder, CO<sub>2</sub>, sand or soil.
  - NOT SUITABLE: Water jet.
- **Firefighting measures for special hazards:** No data available.
- **Special firefighting measures:** Only those who are trained in fire protection may use foam or water mist.
- **Special fire fighter protective equipment:** Protective clothing for firefighters (intervention suit) in accordance with HRN EN 469. Self-sustained open-circuit compressed-air breathing apparatus (HRN EN 137).
- **Special hazards of exposure:** Readily inflammable liquid and vapour. During a fire, a mixture of solid and liquid particles and gases is formed, including carbon monoxide and undefined organic and inorganic compounds.
- **Advice for firefighters:** Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Do not use direct water jets on the burning product as they could cause a spread of the fire.
- **Other information:** No data available.

## 6. ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** Stop the spilling of the product, if possible to do so in a safe manner. Isolate the place of accident and remove the persons who are not part of the intervention team. Eliminate all sources of ignition (electricity, sparks, fire). Stand upwind from the point of discharge.
- **Environmental precautions:** Prevent product leaks and spills into sewage, watercourses and drainage systems.
- **Methods for cleaning-up and recovery:** Enclose the released product using dry earth or sand, enclose the released product in water with floating booms. Cover with foam. Collect the product with non-flammable material and dispose of in accordance with the legislation.
- **Additional warnings:** No data available.

## 7. HANDLING AND STORAGE

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## - Handling

- safety precautions: Obtain special instructions before use. Possible creation of a flammable mixture of air and vapour. Store away from heat, hot surfaces, sparks, open flames and other sources of ignition. Do not smoke! Store in a properly ventilated area.
- safe handling advice: Take precautions against static electricity. Ground the container and product reception equipment. Use non-sparking tools. The vapours are heavier than air and can accumulate in enclosed spaces. Use protective equipment (see item 8) when handling the product. Prohibited smoking, eating, drinking during the work, as well as keeping food in areas where the product is handled.
- **Storage:** technical measures and storage conditions:
  - SUITABLE: Store in original, tightly closed and adequately marked containers. Protect against sunlight. Make sure that receiving tank farms are below self-supporting tanks.
  - TO BE AVOIDED: Storing with oxidants. Welding, soldering, drilling, cutting or filling empty containers.
- **Packaging materials**
  - RECOMMENDED: Original as made by the tank/container manufacturer.
  - NOT SUITABLE: Do not refill into other replacement, damaged or inadequate containers.
- **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 <sup>3</sup>	
benzene (71-43-2)	1/-	3,25/-	0,12 ppm (in extremely exhaled air – smoking increases the finding)
n-hexane (110-54-3)	20/-	72/-	150 µg/L (in blood) 40 ppm (in extremely exhaled air during exposure)

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

### 8.2. Exposure controls

- **Summary of risk management measures:** Ensure good ventilation /exhaust in work area.

#### 8.2.1. Occupational exposure controls

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- **Description of operating procedure and technological control:** Measurement of benzene vapours concentration in the air, in line with regulations.

- **Personal protective equipment:**

- respiratory tract protection: Full face mask (HRN EN 136) with filter, type A.
- hand protection: Protective gloves (HRN EN 374).
- eye protection: Protective goggles (HRN EN 166).
- skin and body protection: Protective clothing against liquid chemicals (HRN EN 14605).

- **Special hygienic and safety precautions:** When handling this product, smoking, eating and drinking are prohibited. After each interruption of work, washing of hands is obligatory. Take off the contaminated clothes and footwear.

### 8.2.2. Environmental exposure controls

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. General information:

- state: liquid
- colour: colourless
- odour: characteristic of gasoline
- 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 30-168
- flash point: °C < 0 (from literature)
- flammability (solid, gas): extremely flammable
- explosive properties: vol. % Not explosive.
- oxidizing properties: Not oxidizing.
- vapour pressure: kPa <120
- density at 15 °C: kg/m<sup>3</sup> 630-680
- relative density: No data available.
- solubility (indicate solvent): g/L No data available.
- Solubility in water: g/L Not applicable.
- partition coefficient n-octanol / water logPow Not applicable.
- viscosity (kinematic) at 40 °C: mm<sup>2</sup>/s < 7 (from literature)
- vapour density at 15°C: kg/m<sup>3</sup> No data available.
- volatility: No data available.

### 9.3. Other data:

- melting point/freezing point: °C No data available.
- disintegration temperature: °C No data available.

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- |                              |      |                             |
|------------------------------|------|-----------------------------|
| - auto ignition temperature: | °C   | 280 – 470 (from literature) |
| - conductivity:              | pS/m | No data available.          |

## 10. STABILITY AND REACTIVITY

- **Reactivity:** It may oxidize in the presence of air.
- **Chemical stability:** Stable when the prescribed storage and use requirements are met.
- **Possibility of hazardous reactions:** It may oxidize in the presence of air.
- **Conditions to avoid:** Remove all sources of ignition.
- **Incompatible materials:** Strong oxidants.
- **Hazardous decomposition products:** Incomplete burning results in a mixture of solid and liquid particulates and gases, as well as undefined organic and inorganic compounds.

## 11. TOXICOLOGICAL INFORMATION

- **Information on toxicological effects:**
- **Acute toxicity**
  - oral (LD<sub>50</sub>): > 5000 mg/kg (rat)
  - inhalation (LC<sub>50</sub>): > 5610 mg/m<sup>3</sup> (rat)
  - dermal (LD<sub>50</sub>): > 2000 mg/kg (rabbit)
- **Irritation/Corrosion**
  - skin: Causes skin irritation (H315).
  - eyes: Not irritating.
  - respiratory tract: Causes irritation.
- **Sensitisation**
  - skin: No data on sensitisation.
  - respiratory tract: Causes respiratory tract hypersensitivity.
- **Aspiration hazard:** May be fatal if swallowed and enters airways. (H304).
- **Other classic effects (e.g. unconsciousness, particularly toxic metabolites, etc.):** Frequent exposure may cause redness and irritation of the skin and slight eye irritation. In case of ingestion, nausea, vomiting, diarrhea, altered consciousness and loss of coordination may occur.
- **Permanent effects due to acute or chronic exposure:** No data available.
- **Special effects**
  - mutagenicity: May cause heritable genetic damage (H340).
  - carcinogenicity: May cause cancer (H350).
  - fertility decrease: No data available.
  - harmful effect on unborn child: No data available.
  - toxicity to reproduction: No data available.

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- other (e.g. endocrine disruptors): No data available.
- STOT (SE): May cause drowsiness or dizziness (H336).
- STOT (RE): Based on the available data, the classification criteria were not met.
- **Prohibitions and restrictions:** No data available.
- **Other:** No data available.

## 12. ECOLOGICAL INFORMATION

### 12.1. Toxicity

- to aquatic organisms: LL<sub>50</sub>=8,2 mg/l (96h), *Pimephales promelas*  
EL<sub>50</sub>=4,5 mg/l (48h), *Daphnia magna*  
EL<sub>50</sub>= 3,1 mg/l (72h), *Selenastrum capricornutum*
- to ground organisms: No data available.
- to plants and land animals: No data available.

### 12.2. Persistence and degradability

- biodegradation: No data available.
- other degradation processes: No data available.
- degradation in wastewater: Insoluble in water. Forms surface film that quickly evaporates, but if large quantities are spilled, may have harmful effect on aquatic organisms due to lack of oxygen.

### 12.3. Bioaccumulative potential

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

### 12.4. Mobility in soil

- Known or predicted distribution in environmental compartments: **Method:** No data available.  
No data available.
- surface tension: No data available.
- absorption/desorption: No data available.
- other physical and chemical properties: See item 9.

### 12.5. Results of PBT and vPvB assessment

- data from chemical safety report: Product does not fulfill PBT and vPvB criteria for classification defined by Annex XIII of REACH Regulation.

### 12.6. Other adverse effects:

No data available.

## 13. DISPOSAL CONSIDERATIONS

- **Waste codes:** **13 07 03\***
- **Waste treatment methods:** If possible, the waste shall be recovered. Otherwise, waste shall be disposed of in accordance with current legislation for waste disposal.



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- **Waste from residues:** Product has no classic waste except in case of accidental release/ discharging in which case see item 6.
- **Contaminated packaging:** Not applicable.
- **Relevant provisions:** Act on sustainable waste management, Ordinance on Waste Catalogue, Ordinance on waste management.

## 14. TRANSPORT INFORMATION

- **UN proper shipping name:** GASOLINE or PETROL
- **UN number:** 1203
- **Transport hazard class(es)**
  - ADR/RID/ADN/ICAO/IATA: 3
  - IMDG: 3
- **Packing group**
  - ADR/RID/ADN/IMDG/ICAO/IATA: II
- **Environmental hazards**
  - ADR, RID, ADN, ICAO/IATA: Dangerous to the environment.
  - IMDG: Dangerous to the environment.
- **Special precautions for user**

<p><b>ADR</b></p> <p>Transport category: 2</p> <p>Vehicle for tank carriage: FL</p> <p>Tank code: LGBF</p> <p>Tunnel restriction code: (D/E)</p> <p>Label: 3</p> <p>Classification code: F1</p> <p>Hazard identification: 33</p> <p>Special provisions: 243, 534, 363, 664, BB2, TP1, TU9, S2, S20.</p>	<p><b>RID</b></p> <p>Transport category: 2</p> <p>Tank code: LGBF</p> <p>Label: 3</p> <p>Classification code: F1</p> <p>Hazard identification: 33</p> <p>Special provisions: 243, 534, TU9.</p>
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- **ADN**
  - Label: 3
  - Additional requirements/Remarks: none
  - Dangers: 3+N2+CMR+F
  - Equipment required: PP, EP, EX, TOX, A.
  - Classification code: F1
  - Carriage permitted: T
  - Type of tank vessel: N/3
  - Anti-explosion protection required: yes
  - Maximum degree of filling in %: 97
- **IMDG**
  - Subsidiary risk: maritime pollutant
  - Group of the cargo: E
  - Special provisions: 243, 363, TP1.
  - EmS: F-E, S-E
  - Segregation group: E

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**ICAO**

Label: 3  
 Cargo IMP code: 3H  
 Passenger and cargo aircraft: yes  
 EQ: E2  
 Max Net Qty/Pkg: LQ 1L, UN PACKAGE 5L  
 Cargo aircraft only: 60L  
 Pkg Inst: Y341/353/364

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

Trade name: -  
 Pollution category (according to MARPOL, Annex II): -  
 Vessel type (according to IBC Code): -  
 Special and operative requirements (according to IBC Code): -

**15. REGULATORY INFORMATION**

- **Applicable EU regulations:** EU Regulation No. 1906/2007 and No. 1272/2008 of the European Parliament and the Council; Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
- **Applicable national regulations:** Chemicals Act; Regulations on Hazardous Substance Exposure Limit Values during Work and Biological Limit Values; Act on Sustainable Waste Management, Ordinance on 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:
14	Special precautionary measures for the user
15	Changes in EU and national regulations

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

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H224	Extremely flammable liquid and vapour
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H350	May cause cancer
H411	Toxic to aquatic life with long lasting effects
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	DO NOT induce vomiting.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

#### 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)

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UVCB                      Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials

vPvB                      Very persistent and very bioaccumulative

**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:**

**APPENDIX: EXPOSURE SCENARIOS ACCORDING TO CHEMICAL SAFETY REPORT**

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