

Material Safety Data Sheets

1. IDENTIFICATION

Product Name	HEPTANE
Other Names	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Uses	Uses in Coatings, Cleaning Agents, Lubricant, Metalworking fluid, Rolling oil, Blowing agents, Use as a fuel, Functional Fluids, Road and construction applications, Other Consumer Uses, Laboratory activities, Rubber production and processing, Mining chemicals, Food extraction. Restrictions on Use: Unknown
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	Naphtha (petroleum), hydrotreated light
Product Description	No Data Available
Company	Arman sina.co
Contact Information	info@armansina.com www.armansina.com

2. HAZARD IDENTIFICATION

Poisons Schedule Scheduled 5

Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories Flammable Liquids - Category 2
Skin Corrosion/Irritation - Category 2
Specific Target Organ Toxicity (Single Exposure) - Category 3
Aspiration Hazard - Category 1

Pictograms



Signal Word Danger

Hazard Statements	H225	Highly flammable liquid and vapour.
	H304	May be fatal if swallowed and enters airways.
	H315	Causes skin irritation.
	H336	May cause drowsiness or dizziness.
Precautionary Statements	Prevention	P233 Keep container tightly closed.
		P240 Ground and bond container and receiving equipment.
		P241 Use explosion-proof electrical/ventilating/lighting and all other equipment.
		P242 Use non-sparking tools.
		P243 Take action to prevent static discharges.
		P261 Avoid breathing fumes/gas/mist/vapours/spray.

	P271	Use only outdoors or in a well-ventilated area.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
	P304 + P340	IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
	P312	Call a POISON CENTER or doctor if you feel unwell.
	P331	Do NOT induce vomiting.
	P332 + P313	If skin irritation occurs: Get medical attention.
	P370 + P378	In case of fire: Use carbon dioxide (CO ₂), dry chemical or foam for extinction.
	P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
	P363	Wash contaminated clothing before reuse.
Storage	P405	Store locked up.
	P403 + P235	Store in a well-ventilated place. Keep cool.
Disposal	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Naphtha, petroleum, hydrotreated light	Unspecified	64742-49-0	100 %
Contains: Heptane	C ₇ H ₁₆	142-82-5	<14 %
Contains: n-Hexane	C ₆ H ₁₄	110-54-3	<2 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician for advice. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Do not rub your eyes. Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Get medical advice/attention.
Skin	IF ON SKIN (or hair): Remove contaminated clothing and shoes immediately. Flush skin and hair with running water for at least 15 minutes. In case of gross contamination, immediately rinse contaminated clothing and skin with plenty of water before removing clothes. Get medical advice/attention. Wash contaminated clothing and shoes before reuse. *Suitable emergency safety shower facility should be immediately available
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician for advice. Give artificial respiration if victim is not breathing. *Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.
Advice to Doctor	Keep victim calm and warm - Obtain immediate medical care. Ensure that attending medical personnel are aware of identity and nature of product(s) involved, and take precautions to protect themselves. *Most important symptoms and effects, both acute and delayed: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. Causes skin irritation. Symptoms may include irritation and redness. May be fatal if swallowed and enters airways. Symptoms may include nausea or vomiting, headache, drowsiness/fatigue, dizziness/vertigo, unconsciousness. *Indication of any immediate medical attention and special treatment needed: If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious pulmonary lesions (medical survey during 48 hours).

Medical Conditions Aggravated by No information available.

Exposure

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool container with water spray until well after fire is out. Avoid getting water inside containers. Large fire: Fight fire from protected position or use unmanned hose holders or monitor nozzles. When impossible, immediately withdraw from hazard area and let burn. Withdraw immediately in case of rising sound from venting safety devices or discolouration of tank. ALWAYS stay away from tank ends.
Flammability Conditions	HIGHLY FLAMMABLE LIQUID & VAPOUR: Low flashpoint - Will be easily ignited by heat, sparks or flames at ambient temperatures.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO ₂), normal foam or water spray for extinction - Do not use water jets. *Caution: Use of water spray when fighting fire may be inefficient.
Fire and Explosion Hazard	Risk of violent reaction or explosion! Vapours will form explosive mixtures with air. Vapours will travel to source of ignition and flash back. Containers may explode when heated. Many liquids are lighter than water. Many vapours are heavier than air and will collect in low or confined areas. May irritate or burn skin and eyes. Vapours may cause dizziness or drowsiness.
Hazardous Products of Combustion	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways; Vapours from runoff may create an explosion hazard.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical protective clothing. SCBA and structural firefighting uniform provide limited protection.
Flash Point	-13 ° C [ISO 13736]
Lower Explosion Limit	1%
Upper Explosion Limit	8%
Auto Ignition Temperature	>250 ° C
Hazchem Code	3YE

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources - All equipment used in handling the product must be earthed. Do not touch or walk through spilled material. Avoid breathing vapours and contact with eyes, skin and clothing.
Clean Up Procedures	Move container to safe area. Absorb spill with earth, sand or other non-combustible material - Use clean, non-sparking tools to collect material and place it in suitable containers for later disposal (see SECTION 13).
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Vapour-suppressing foam may be used to control vapours. Water spray may be used to knock down or divert vapour clouds.
Decontamination	Following product recovery, flush area with water.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and waterways. Local authorities should be advised if significant spillages cannot be contained.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground. Large spill: Immediately contact Police or Fire Brigade; Consider initial downwind evacuation of areas within at least 300 m.
Personal Precautionary Measures	SCBA and gas-tight suits should be worn when dealing with damaged or leaking containers and where there is no risk of ignition. SCBA and structural firefighting uniform provide limited protection where there is a risk of ignition.

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation, especially in confined areas - Use only outdoors or in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapours and contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). FLAMMABLE LIQUID & VAPOUR: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-
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sparkling tools. Take action to prevent static discharges. Do not use compressed air for filling, discharging or handling. Do not allow splash loading and ensure that the product is poured slowly, particularly at the beginning of the operation. Do not spray at high pressure (> 3 bar).

Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed - Check regularly for leaks. Protect containers against physical damage. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). Store locked up.
Container	Keep only in the original container or in a suitable container for this kind of product (Stainless steel). Since emptied containers retain product residue (liquid, vapour), follow all SDS and label warnings even after container is emptied.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	COMPONENT: Heptane (CAS No. 142-82-5): - Safe Work Australia Exposure Standard: TWA = 400 ppm (1,640 mg/m ³); STEL = 500 ppm (2,050 mg/m ³). - New Zealand Workplace Exposure Standard: TWA = 400 ppm (1,640 mg/m ³); STEL = 500 ppm (2,050 mg/m ³); Ototoxin (oto). COMPONENT: n-Hexane (CAS No. 110-54-3): - Safe Work Australia Exposure Standard: TWA = 20 ppm (72 mg/m ³). - New Zealand Workplace Exposure Standard [Next review 2023]: TWA = 20 ppm (72 mg/m ³); Exposure can also be estimated by biological monitoring (bio); Ototoxin (oto).
Exposure Limits	No Data Available
Biological Limits	COMPONENT: n-Hexane (CAS No. 110-54-3): - Determinant: 2,5-hexanedione in urine - Sampling time: End of shift - BEI: 5 mg/litre
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Use explosion-proof electrical/ventilating/lighting equipment.
Personal Protection Equipment	- Respiratory protection: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Recommended: Respirator with combination filter for vapour/particulate, Type A/P2 (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side-shields. - Hand protection: Wear protective gloves. Recommended: Impermeable gloves, aliphatic hydrocarbon resistant. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Long sleeved clothing, Chemical resistant apron, Protective shoes or boots.
Special Hazards Precautions	When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of workday. Do not dry hands with rags that have been contaminated with product. Take off contaminated clothing and wash it before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Slight, characteristic
Colour	Colourless
pH	No Data Available
Vapour Pressure	<70 hPa (@ 20 ° C)
Relative Vapour Density	No Data Available
Boiling Point	89 - 95 ° C
Melting Point	No Data Available

Freezing Point	No Data Available
Solubility	No Data Available
Specific Gravity	No Data Available
Flash Point	-13 ° C [ISO 13736]
Auto Ignition Temp	>250 ° C
Evaporation Rate	3 (EtEt = 1) [DIN 53170]
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	695 kg/m ³ [ISO 12185]
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	<20.5 mm ² /s (@ 40 ° C)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	The material can accumulate static charge and can therefore cause electrical ignition.
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	Risk of violent reaction or explosion!
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	HIGHLY FLAMMABLE LIQUID & VAPOUR: Low flashpoint - Will be easily ignited by heat, sparks or flames at ambient temperatures.
Reactions That Release Gases or Vapours	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.
Release of Invisible Flammable Vapours and Gases	Vapours will form explosive mixtures with air. Cylinders exposed to fire may vent and release flammable gas.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Take action to prevent static discharges.
Materials to Avoid	Incompatible/reactive with strong acids, oxidising agents.
Hazardous Decomposition Products	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.
Hazardous Polymerisation	No information available.

11. TOXICOLOGICAL INFORMATION

General Information	<p>Information on toxicological effects:</p> <ul style="list-style-type: none">- Acute toxicity: Not classified based on available data. If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious pulmonary lesions (Aspiration hazard). Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.- Skin corrosion/irritation: Irritating to skin.- Eye damage/irritation: Not classified based on available data. Contact with eyes may cause irritation.- Respiratory/skin sensitisation: Not classified as a sensitiser.- Germ cell mutagenicity: Genetic toxicity: negative.- Carcinogenicity: The current toxicological knowledge allows to not classify the product as a carcinogen.- Reproductive toxicity: Study in rats with the substance did not show any effects on reproductive performance. Results of guideline developmental toxicity studies on the substance and OECD developmental toxicity screening studies showed no evidence of developmental toxicity in rats.- STOT (single exposure): The inhalation of vapours or aerosols may be irritating for the respiratory tract and for mucous membranes. Vapours inhaled in strong concentration have a narcotic effect on the central nervous system; Nausea, loss of consciousness.- STOT (repeated exposure): Not classified based on available data.- Aspiration toxicity: May be fatal if swallowed and enters airways. The fluid can enter the lungs and cause damage (chemical pneumonitis, potentially fatal). <p>Information on likely routes of exposure:</p> <ul style="list-style-type: none">- Ingestion: Adverse symptoms may include nausea or vomiting.- Eye contact: Adverse symptoms may include pain or irritation, watering, redness.- Skin contact: Adverse symptoms may include irritation, redness.- Inhalation: Adverse symptoms may include, nausea or vomiting, headache, drowsiness/fatigue, dizziness/vertigo, unconsciousness- Chronic effects: Unknown
Acute	
Ingestion	<p>Acute toxicity (Oral):</p> <ul style="list-style-type: none">- LD50, Rat: >5,840 mg/kg bw. (Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics). <p>Source: 3rd Party SDS</p>
Other	<p>Acute toxicity (Dermal):</p> <ul style="list-style-type: none">- LD50, Rat: >2,920 mg/kg bw. (Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics). <p>Source: 3rd Party SDS</p>
Inhalation	<p>Acute toxicity (Inhalation):</p> <ul style="list-style-type: none">- LC50, Rat: >23,300 mg/m3 (4h) vapour (Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics) [OECD 403]. <p>Source: 3rd Party SDS</p>
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Not classified based on available data.
Persistence/Degradability	Readily biodegradable (98 % after 28 days) [OECD 301 F].
Mobility	Given its physical and chemical characteristics, the product generally shows low soil mobility. The product evaporates readily. The product is insoluble and floats on water.
Environmental Fate	Should not be released into the environment.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Where possible, recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in accordance with all applicable national environmental laws and regulations.
Special Precautions for Land Fill	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

Land Transport

ADG Code

Proper Shipping Name	HEPTANES
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
EPG	128 Flammable Liquids (Water-Immiscible)
UN Number	1206
Hazchem	3YE
Pack Group	II
Special Provision	No Data Available

Sea Transport

Proper Shipping Name	HEPTANES
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	1206
Hazchem	3YE
Pack Group	II
Special Provision	No Data Available
EMS	F-E, S-D
Marine Pollutant	Yes

Air Transport

Proper Shipping Name	HEPTANES
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	1206
Hazchem	3YE
Pack Group	II
Special Provision	No Data Available

15. OTHER INFORMATION

Revision	2
Key/Legend	< Less Than > Greater Than AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm ² Square Centimetres CO ₂ Carbon Dioxide COD Chemical Oxygen Demand deg C (° C) Degrees Celcius deg F (° F) Degrees Farenheit g Grams g/cm ³ Grams per Cubic Centimetre g/l Grams per Litre HSNO Hazardous Substance and New Organism IDLH Immediately Dangerous to Life and Health immiscible Liquids are insoluable in each other. inHg Inch of Mercury inH ₂ O Inch of Water K Kelvin kg Kilogram kg/m ³ Kilograms per Cubic Metre lb Pound LC ₅₀ LC stands for lethal concentration. LC ₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. LD ₅₀ LD stands for Lethal Dose. LD ₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. ltr or L Litre m ³ Cubic Metre mbar Millibar mg Milligram mg/24H Milligrams per 24 Hours mg/kg Milligrams per Kilogram mg/m ³ Milligrams per Cubic Metre Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present. mm Millimetre mmH ₂ O Millimetres of Water mPa.s Millipascals per Second N/A Not Applicable NIOSH National Institute for Occupational Safety and Health NOHSC National Occupational Heath and Safety Commission OECD Organisation for Economic Co-operation and Development Oz Ounce PEL Permissible Exposure Limit Pa Pascal ppb Parts per Billion ppm Parts per Million ppm/2h Parts per Million per 2 Hours ppm/6h Parts per Million per 6 Hours psi Pounds per Square Inch R Rankine RCP Reciprocal Calculation Procedure STEL Short Term Exposure Limit TLV Threshold Limit Value tne Tonne TWA Time Weighted Average ug/24H Micrograms per 24 Hours UN United Nations wt Weight