



Kimya Resin Arak

Chemical Industrial Co.

MATERIAL SAFETY DATA SHEET

Light Hydrocarbon

Tel: (+98) 86-3422-4515
(Company)

Tel: (+98) 86-3823-2049
(Factory)

1. Identification

Product Name	Light Naphtha
Synonyms	Petroleum Naphtha, Petroleum ether, Naphtha, Light Naphtha, Japan Open Spec Bonded Naphtha, SNG Naphtha, Light Cat Naphtha, Sweet Virgin Naphtha (SVN), Debutanized Naphtha, Atmospheric Naphtha (DAN), HCU Light Naphtha, Light CR Gasoline, Full Range Cracked Naphtha, Full Range Hydrocracked Naphtha, Full Range Reformed Naphtha, Light Chemical Treated Naphtha, Light Cracked Naphtha, Light Hydrocracked Naphtha, Light Hydrotreated Naphtha, Aviation Alkylate

Details of the supplier of the safety data sheet

Company

Kimya Resin Arak Company

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2. Hazard (s) identification

Hazard Pictograms (GHS-US/CA)



Signal Word (GHS-US/CA) : Danger

Hazard Statements (GHS-US/CA) : H225 - Highly flammable liquid and vapor.
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. Natural Gas Condensate Sweet.
H361 - Suspected of damaging fertility or the unborn child.
H372 - Causes damage to organs (liver, kidneys, blood, nervous system, skin)



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through prolonged or repeated exposure.
H411 - Toxic to aquatic life with long lasting effects.
H224 - Extremely flammable liquid and vapour

Precautionary Statements

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical, ventilating, and lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take action to prevent static discharges.
P260 - Do not breathe vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, and eye protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see Section 4 on this SDS).
P331 - Do NOT induce vomiting.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use appropriate media (see Section 5) to extinguish.
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, provincial, territorial and international regulations.

Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Contains benzene, a regulated human carcinogen. Benzene has the potential to cause anemia and other blood diseases, including leukemia, after repeated and prolonged exposure. Exposure to light hydrocarbons in the same boiling range as this product has been associated



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in animal studies with systemic toxicity.

3. Composition/Information on Ingredients

Component	CAS-No	Percent
Gasoline, motor fuel	86290-81-5	100
Toluene	108-88-3	1-25
Benzene	71-43-2	0.1-4.9
Butane	106-97-8	<10
Xylenes (o-, m-, p-isomers)	1330-20-7	1-15
Hexane	110-54-3	0.5-4

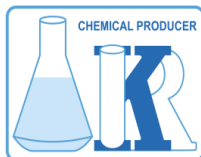
All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume

4. First-aid measures



Description of first aid procedures

General advice	Remove from exposure, lie down. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). When symptoms persist or in all cases of doubt, seek medical advice. Never give anything by mouth to an unconscious person. Take off all contaminated clothing immediately and thoroughly wash material from skin.
Eye Contact:	Remove contact lenses. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Contaminated leather, particularly footwear, must be discarded. Note that contaminated clothing may be a fire hazard. Seek medical advice if symptoms persist or develop.
Inhalation (Breathing):	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention immediately.
Ingestion (Swallowing):	If swallowed Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention immediately.
Notes to Physician	Symptoms: Dizziness, Discomfort, Headache, Nausea, Kidney disorders, Liver disorders.



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5. Fire-fighting measures

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Do not use a solid water stream as it may scatter and spread fire.

Unsuitable Extinguishing Media

None

Specific hazards during fire fighting

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO₂, water spray, fire fighting foam, or Halon. LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Special protective equipment for fire-fighters

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.



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Hazardous Combustion Products

Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Hydrogen sulfide and oxides of nitrogen and sulfur may also be formed.

Diamond	Hazard	Value	Description
	Health	1	Can cause significant irritation
	Flammability	3	Liquids and solid that can be ignited under almost all ambient temperature conditions, Materials produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions.
	Instability	0	Materials that themselves are normally stable, even under fire conditions.
	Special		

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

For non-emergency personnel

: Evacuate personnel to a safe area. Stay upwind/keep distance from source. Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Avoid contact with skin and eyes. Do not breathe vapour/aerosol. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ensure equipment is adequately earthed. Use explosion-proof equipment. Use only non-sparking tools.

For emergency responders

For emergency responders

Ensure procedures and training for emergency decontamination and disposal are in place. Concerning personal protective equipment to use

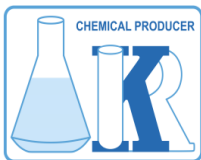
Environmental precautions

Do not allow to enter into surface water or drains.

Methods and material for containment and cleaning up

Methods for cleaning up

Stop leak if safe to do so. Dam up. Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite or powdered limestone. Collect in closed and suitable containers for disposal. Recover large spills by pumping (use an explosion proof or hand pump). Dispose of as special waste in compliance with local and national regulations. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.



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7. Handling and Storage



Handling

Keep away from fire, sparks and heated surfaces. No smoking near areas where material is stored or handled. The product should only be stored and handled in areas with intrinsically safe electrical classification.

Advice on protection against fire and explosion

Hydrocarbon liquids including this product can act as a non-conductive flammable liquid (or static accumulators), and may form ignitable vapor-air mixtures in storage tanks or other containers. Precautions to prevent static-initiated fire or explosion during transfer, storage or handling, include but are not limited to these examples: (1) Ground and bond containers during product transfers. Grounding and bonding may not be adequate protection to prevent ignition or explosion of hydrocarbon liquids and vapors that are static accumulators. (2) Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such as gasoline or naphtha). (3) Storage tank level floats must be effectively bonded. For more information on precautions to prevent static-initiated fire or explosion, see NFPA 77, Recommended Practice on Static Electricity (2007), and API Recommended Practice 2003, Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents (2008).

Dust explosion class

Not applicable

Requirements for storage areas and containers

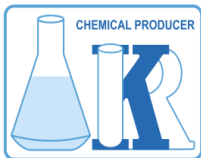
Keep away from flame, sparks, excessive temperatures and open flame. Use approved containers. Keep containers closed and clearly labeled. Empty or partially full product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose containers to sources of ignition. Store in a well-ventilated area. The storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

Advice on common storage

Keep away from food, drink and animal feed. Incompatible with oxidizing agents. Incompatible with acids.

Other data

No decomposition if stored and applied as directed.



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8. Physical & Chemical Properties

Appearance	Liquid
Colour	colourless
Odour	petroleum hydrocarbon odour
Initial boiling point and boiling range	34°C (93.2°F) / 44°C (111.2°F)
Flash point (ASTM D93)	Free (Closed Cup)
Final boiling point and boiling range	168°C (334.4°F) / 220°C (428°F)
PH	No applicable
Density at 15°C (ASTM D4052/D1298/D7042)	690 $\frac{kg}{m^3}$ / 725 $\frac{kg}{m^3}$
Flash Point Close Cup (ASTM D93)	Free
Sulphur Content Range (ASTM D5453/ D4294)	0.3 Wt% / 0.39 Wt%
Mercaptan Content Range (ASTM D3227 UOP.163)	1200 ppm / 3100 ppm

9. Stability & Reactivity

<u>Reactivity</u>	Extremely flammable liquid and vapour.
<u>Chemical stability</u>	The product is stable under storage at normal ambient temperatures.
<u>Possibility of hazardous reactions</u>	Vapours may form explosive mixture with air.
<u>Conditions to avoid</u>	Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.
<u>Incompatible materials</u>	oxidising substances.
<u>Hazardous decomposition products</u>	Carbon oxides. As appropriate : Hydrogen sulfide (H ₂ S). SO _x . Sulphuric acid.



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10. Toxicological Information

Acute Toxicity

Not classified (Based on available data, the classification criteria are not met.)

General Product Information

Harmful if swallowed.

B: Component Analysis - LD50/LC50

Gasoline, motor fuel (86290-81-5)

Inhalation LC50 Rat >5.2 mg/L 4 h; Oral LD50 Rat 14000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Toluene (108-88-3)

Inhalation LC50 Rat 12.5 mg/L 4 h; Inhalation LC50 Rat >26700 ppm 1 h; Oral LD50 Rat 636 mg/kg; Dermal LD50 Rabbit 8390 mg/kg; Dermal LD50 Rat 12124 mg/kg

Butane (106-97-8)

Inhalation LC50 Rat 658 mg/L 4 h

Xylenes (o-, m-, p- isomers) (1330-20-7)

Inhalation LC50 Rat 5000 ppm 4 h; Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg; Dermal LD50 Rabbit >1700 mg/kg

Hexane (110-54-3)

Inhalation LC50 Rat 48000 ppm 4 h; Oral LD50 Rat 25 g/kg; Dermal LD50 Rabbit 3000 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Moderate irritant. Contact with liquid or vapor may cause irritation.

Potential Health Effects: Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

Potential Health Effects: Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

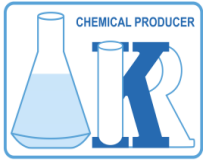
WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This product may cause genetic defects.



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Carcinogenicity

General Product Information

May cause cancer.

Material Name: Gasoline All Grades

IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain. This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

11. Ecological Information

Ecotoxicity

A: General Product Information

Very toxic to aquatic life with long lasting effects. Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Gasoline, motor fuel (86290-81-5)

Test & Species

96 Hr LC50 *Alburnus alburnus*
96 Hr LC50 *Cyprinodon variegatus*
72 Hr EC50 *Pseudokirchneriella subcapitata*
24 Hr EC50 *Daphnia magna*

Conditions

119 mg/L [static]
82 mg/L [static]
56 mg/L
170 mg/L

Toluene (108-88-3)

Test & Species

96 Hr LC50 *Pimephales promelas*
96 Hr LC50 *Pimephales promelas*
96 Hr LC50 *Oncorhynchus mykiss*
96 Hr LC50 *Oncorhynchus mykiss*
96 Hr LC50 *Oncorhynchus mykiss*
96 Hr LC50 *Lepomis macrochirus*
96 Hr LC50 *Oryzias latipes*
96 Hr LC50 *Poecilia reticulata*
96 Hr LC50 *Poecilia reticulata*
96 Hr EC50 *Pseudokirchneriella subcapitata*
72 Hr EC50 *Pseudokirchneriella subcapitata*
48 Hr EC50 *Daphnia magna*
48 Hr EC50 *Daphnia magna*

Conditions

15.22-19.05 mg/L 1 day old
[flow-through]
12.6 mg/L [static]
5.89-7.81 mg/L
[flow-through]
14.1-17.16 mg/L
[static]
5.8 mg/L
[semistatic]
11.0-15.0 mg/L
[static]
54 mg/L
[static]
28.2 mg/L
[semistatic]
50.87-70.34 mg/L
[static]
>433 mg/L
12.5 mg/L [static]
5.46 - 9.83 mg/L
[Static]
11.5 mg/L



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12. Disposal Considerations

Waste treatment methods

Product/Packaging disposal recommendations

Handle with care. Safe handling: see section 7. Handling and storage. Dispose of contaminated materials in accordance with current regulations. Refer to manufacturer/supplier for information on recovery/recycling. Collect and dispose of waste product at an authorised disposal facility.

Further ecological information

Do not allow to enter into surface water or drains.

European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC)

Classified as hazardous waste according to European Union regulations. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. The following Waste Codes are only suggestions: 130702 - petrol 150110 - packaging containing residues of or contaminated by dangerous substances

13. Transportation Information

Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Component	CAS #	DOT regulated marine pollutant
Gasoline, motor fuel, Light Naphtha	86290-81-5	

DOT Information

Shipping Name: Gasoline
UN #: 1203 Hazard Class: 3
Packing Group: II
Placard:



14. Other Information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as 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.

End of MSDS