บริษัท โมเดอนเคมีเคิล จำกัด (สำนักงานใหญ่) **(MODERN CHEMICAL CO.,LTD. (Head Office))**
82/80 ซอยเอกมัย 22(นวลน้อย) ถ.สุขุมวิท 63 แขวงคลองตันเหนือ เขตวัฒนา กรุงเทพมหานคร 10110 โทร.0-2715-0897-9 แฟกซ์.0-2-391-1571
82/80 Soi Eakmai 22(nuan-noi) 63 Sukhumvit Rd, North Klong Ton, Wattana, Bangkok 10110 E-mail : service@modernchemical.co.th

SAFETY DATA SHEET

ISOPAR L

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name:	ISOPAR L
Recommended use:	Chemical for industry
Manufacturer/Supplier:	**MODERN CHEMICAL Co.Ltd.**
	82/80 Soi Eakamai 22 (Nuan-noi) Sukhumvit Road 63,
	North Klong Ton, Wattana, Bangkok 10110
Telephone No:	0-2715-0897-9, 0-2392-3410-3
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Emergency Telephone No:	0-2715-0897-9, 0-2392-3410-3

2. HAZARDS IDENTIFICATION

Label elements

Pictogram

Signal word Danger

Hazard statement(s):

1.) H227 - Combustible liquid.

2.) H304 - May be fatal if swallowed and enters airways.

3.) H315 - Causes skin irritation.

4.) H320 - Causes eye irritation.

5.) H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

6.) H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s):

1.) P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

2.) P240 - Ground/bond container and receiving equipment.

3.) P241 - Use explosion-proof electrical, ventilating, and lighting equipment.

4.) P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

5.) P273 - Avoid release to the environment.

6.) P280 - Wear protective gloves/protective clothing/eye protection/face protection.

7.) P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

8.) P303+P361+P353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

9.) P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

10.) P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

11.) P403+P235 - Store in a well-ventilated place. Keep cool.

12.) P501 - Dispose of contents/container in accordance with local regulation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonym: N/A

Ingredients	% (w/w)	CAS NO.
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY	100	64742-48-9

4. FIRST AID MEASURES

Inhalation: Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Skin contact: Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

Eye contact: Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion: Seek immediate medical attention. **Do not induce vomiting**. If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Unsuitable Extinguishing Media:

Straight streams of water.

Specific hazards arising from Chemicals:

Incomplete combustion products, Oxides of carbon, Smoke, Fume.

Special protective equipment for fire-fighters:

Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. See Section 5 for firefighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for Advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

Environmental precautions: Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

Methods and Material for Containment and Clean Up:

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. All equipment used when handing the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapour-suppressing foam may be used to reduce vapour. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapour, but may not prevent ignition in enclosed spaces. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

7. HANDING AND STORAGE

Precautions for Safe Handling & Product Transfer:

Avoid contact with skin. Small metal particles from machining may cause abrasion of the skin and may predispose to dermatitis. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures. However, bonding and earthing may not eliminate the hazard from static accumulation.

Conditions for Safe Storage & Unsuitable Materials:

The type of container used to store the material may effect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be earthed and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.

Suitable Materials and Coatings (chemical Compatibility): Carbon Steel; Stainless Steel; Polyester; Teflon; Polyethylene; Polypropylene

Unsuitable Materials and Coatings: Butyl Rubber; Polystyrene; Ethylene-proplyene-diene monomer (EPDM); Natural Rubber

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: TWA 171 ppm

Appropriate Engineering Controls: Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment.

Individual Protection Measures

Respiratory protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance

with regulatory requirements, if applicable. Types of respirators to be considered for this material include: Half-face filter respirator Type A filter material

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.

Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include: If prolonged or repeated contact is likely, chemical-resistant gloves are recommended. If contact with forearms is likely, wear gauntlet-style gloves. Nitrile.

Eye protection: If contact is likely, safety glasses with side shields are recommended.

Skin and body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include: If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Hygiene measure: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form, Color and Odor: liquid, colourless, Faint	**Evaporation rate:** 0.04 (n-butyl acetate = 1)
Melting Point: N/A	**Specific gravity:** 0.760 kg/dm^3 at 15 °C
pH: N/A	**Solubility in water:** Negligible
Boiling: 185-198 °C	**Viscosity:** 1.26 cSt at 40 °C
Vapour pressure: 0.05 kPa at 20 °C	**Vapour density:** 5.9 at 101 kPa
Lower explosion limits: 0.6%Vol	**Upper explosive limit:** 6.0 %Vol

Auto-ignition temperature: 222°C	**Flash point:** 66°C
Odour threshold: N/A	**Flammability (solid, gas):** N/A
Decomposition temperature: N/A	**Solubility in other solvents:** N/A
n-octanol/water partition coefficient (log P_{ow}): >4	

10. STABILITY AND REACTIVITY

Chemical Stability: Material is stable under normal conditions.

Reactions: No data available.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to avoid: Open flames and high energy ignition source.

Materials to be avoided: Strong oxidizers.

Hazardous Decomposition Products: Material does not decompose at ambient temperatures.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: LD50 (Oral, rat): > 5000 mg/kg

LC50 (Inhalation, rat): >5000 mg/m^3

LD50 (Skin, rabbit): >5000 mg/kg

Sensitization: Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Chronic toxicity: Anticipated health effects from sub-chronic, chronic, respiratory or skin sensitization, mutagenicity, reproductive toxicity, carcinogenicity, target organ toxicity (single exposure or repeated exposure), aspiration toxicity and other effects based on human experience and/or experimental data.

Further toxicological information: No data available.

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish:	Not expected to be harmful to aquatic organisms.
Toxicity to daphnia and other aquatic invertebrates:	Not expected to demonstrate chronic toxicity to aquatic organisms.
Toxicity to algae:	No data available.
Toxicity to bacteria:	No data available.
Biodegradability Remarks:	Expected to be inherently biodegradable. Expected to degrade rapidly in air.
Bioaccumulative Potential:	No data available.
Mobility:	Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.
Affected in any other way:	No data available.

13. DISPOSAL CONSIDERATIONS

Material Disposal: Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

Container Disposal: Empty Container warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. Do not pressurise, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death.

14. TRANSPORT INFORMATION

LAND

Not Regulated for Land Transport

SEA (IMDG)

Not Regulated for Sea Transport according to IMDG-Code

Marine Pollutant: No

SEA (MARPOL 73/78 Convention – Annex II)

Product Name: NOXIOUS LIQUID, N.F.,(7) N.O.S., (ISOPAR L , contains Iso- and cycloalkanes (C12+))

Ship Type: 3

Pollution category: Y

AIR (IATA)

Not Regulated for Air Transport

15. REGURATORY INFORMATION

This material is considered hazardous according to the classification criteria of the Hazard Classification and Communication System for Hazardous Material BE 2555.

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Hazardous Substance Act BE2535: Not Regulated

Listed or exempt from listing / notification on the following chemical inventories: AICS, DSL, ENCS, IECSC, KECI, PICCS, TCSI, TSCA

16. OTHER INFORMATION

Modern Chemical Co., Ltd. provides the information contained herein in good faith but makes no representation as to its comprehensive or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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