

SAFETY DATA SHEET

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

Product Name: ISOPAR™ H
Product Description: Isoparaffinic Hydrocarbon (Vial Liquid)

APPLICATIONS: For Stock No.

02320	600MM EXPERT OPTIVISION LEV	A	58976	167348	600MM H.D. LEVEL-P/S	A
02321	900MM EXPERT OPTIVISION LEV	A	58977	167349	900MM H.D.LEVEL-P/SI	A
02322	1200MM EXPERT OPTIVISION LE	A	58992	167350	1200MM H.D.LEVEL-P/S	A
16169	600MM OPTIVISION LEVEL MAGN	A	58993	167351	1800MM H.D.LEVEL-P/S	A
16170	900MM OPTIVISION LEVEL MAGN	A	75115	600MM BOX LEVEL MAG&SIDE	VI	A
16171	2000MM EXPERT OPTIVISION LE	A	75123	900MM BOX LEVEL MAG&SIDE	VI	A
16173	250MM CAST ALI MAG TORPEDO	A	75127	1200MM BOX LEVEL MAG&SIDE	V	A
29374	500151 POST LEVEL	A	75246	1800MM BOX LEVEL MAG&SIDE	V	A
41393	600MM I-BEAM LEVEL +SIDE	VI	79579	230MM SPIRIT LEVEL	A	
41394	900MM I-BEAM LEVEL +SIDE	VI	06996	1800MM EXPERT OPTIVISION	LE	A
41395	1200MM I-BEAM LEVEL +SIDE	V	69550	250MM EXP.CAST TORPEDO	LEV+	A
52146	8051062 1200MM EXP B/LEVEL-	A	69554	250MM EXPERT TORPEDO	LEVEL+	A
52147	8051063 1800MM EXP B/LEVEL-	A	69563	230MM SPIRIT LEVEL	A	

SUPPLIER: Draper Tools Ltd
 Hursley Road
 Chandlers Ford
 Eastleigh
 Hampshire
 SO53 1YF

Draper Helpline +44 (0) 2380 494344
 Opening hours 8:30-17:00 Monday – Friday.

SECTION 2

HAZARDS IDENTIFICATION

This material is hazardous according to regulatory guidelines (see (M)SDS Section 15).

CLASSIFICATION OF SUBSTANCE OR MIXTURE:

Flammable liquid: Category 3.
 Aspiration toxicant: Category 1.

LABEL ELEMENTS:

Pictograms:



Signal Word: Danger

Hazard Statements:

Physical: H226: Flammable liquid and vapour.
Health: H304: May be fatal if swallowed and enters airways.
Supplemental: EUH066: Repeated exposure may cause skin dryness or cracking.

Precautionary Statements:

Prevention: P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233: Keep container tightly closed. P240: Ground and bond container and receiving equipment. P241: Use explosion-proof electrical, ventilating and lighting equipment. P242: Use non-sparking tools. P243: Take action to prevent static discharges. P280: Wear protective gloves and eye / face protection.
Response: P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P331: Do NOT induce vomiting. P332 + P313: If skin irritation occurs: Get medical advice/attention. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish.
Storage: P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up.
Disposal: P501: Dispose of contents and container in accordance with local regulations.

Contains: ALKANES, C9-C12-ISO-

Other hazard information:

Physical / Chemical Hazards:

Material can accumulate static charges which may cause an ignition. Material can release vapours that readily form flammable mixtures. Vapour accumulation could flash and/or explode if ignited.

Health Hazards:

Repeated exposure may cause skin dryness or cracking. Mildly irritating to skin. May be irritating to the eyes, nose, throat, and lungs.

Environmental Hazards:

No significant hazards.

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a complex substance.

Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*	GHS Hazard Codes
ALKANES, C9-C12-ISO-	90622-57-4	100 %	H226, H304, H316

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

values may vary.

SECTION 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.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

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

Inappropriate Extinguishing Media: Straight streams of water

FIRE FIGHTING

Fire Fighting Instructions: 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.

Unusual Fire Hazards: Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

Hazardous Combustion Products: Incomplete combustion products, Oxides of carbon, Smoke, Fume

FLAMMABILITY PROPERTIES

Flash Point [Method]: 60°C (140°F) [ASTM D-93]

Flammable Limits (Approximate volume % in air): LEL: 0.6 UEL: 6.0

Autoignition Temperature: 241°C (466°F) [Extrapolated]

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES

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 fire fighting 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.

SPILL MANAGEMENT

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 handling 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. **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.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

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

SECTION 7 HANDLING AND STORAGE

HANDLING

Avoid contact with skin. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Loading/Unloading Temperature: [Ambient]

Transport Temperature: [Ambient]

Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive

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or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

STORAGE

The type of container used to store the material may affect 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 earthed and bonded to prevent accumulation of static charge.

Storage Temperature: [Ambient]

Suitable Containers/Packing: Tankers; Tank Trucks; Drums; Barges; Tank Cars; Railcars

Suitable Materials and Coatings (Chemical Compatibility): Carbon Steel; Stainless Steel; Amine Epoxy; Epoxy Phenolic; Polyamide Epoxy; Neoprene; Inorganic Zinc Coatings

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

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive):

Substance Name	Form	Limit/Standard			Note	Source
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Vapour.	RCP - TWA	1200 mg/m3	177 ppm	Total Hydrocarbons	ExxonMobil Middle East Marketing Corporation

Note: Information about recommended monitoring procedures can be obtained from the relevant agency(ies)/institute(s):

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

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

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

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., European Committee for Standardization (CEN) standards EN 136, 140 and 405 provide respirator masks and EN 149 and 143 provide filter

recommendations.

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:

Chemical resistant gloves are recommended. Nitrile, minimum 0.38 mm thickness or comparable protective barrier material with a high performance level for continuous contact use conditions, permeation breakthrough minimum 480 minutes in accordance with CEN standards EN 420 and EN 374.

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:
Chemical/oil resistant clothing is recommended.

Specific Hygiene Measures: 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. Practise good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Liquid
Form: Clear
Colour: Colourless
Odour: Faint
Odour Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 °C): 0.76 [With respect to water] [Calculated]
Density (at 15 °C): 760 kg/m³ (6.34 lbs/gal, 0.76 kg/dm³) [ISO 12185]
Flammability (Solid, Gas): N/A
Flash Point [Method]: 60°C (140°F) [ASTM D-93]
Flammable Limits (Approximate volume % in air): LEL: 0.6 UEL: 6.0
Autoignition Temperature: 241°C (466°F) [Extrapolated]

Boiling Point / Range: 179°C (354°F) - 191°C (376°F) [ASTM D86]
Decomposition Temperature: N/D
Vapour Density (Air = 1): 5.4 at 101 kPa [Calculated]
Vapour Pressure: 0.07 kPa (0.53 mm Hg) at 20 °C [In-house method]
Evaporation Rate (n-butyl acetate = 1): 0.07 [In-house method]
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): > 4 [Estimated]
Solubility in Water: Negligible
Viscosity: 1.1 cSt (1.1 mm²/sec) at 40°C [Calculated] | 1.5 cSt (1.5 mm²/sec) at 20°C [ASTM D7042]
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/A
Pour Point: < -114°C (-173°F) [ASTM D5950]
Molecular Weight: 158 G/MOLE [Calculated]
Hygroscopic: No
Coefficient of Thermal Expansion: 0.00099 per Deg C [Calculated] [In-house method]

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Open flames and high energy ignition sources.

MATERIALS TO AVOID: Strong oxidisers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: (Rat) 8 hour(s) LC50 > 5000 mg/m ³ (Vapour)	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 403
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
Ingestion	
Acute Toxicity (Rat): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 401
Skin	
Acute Toxicity (Rabbit): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 402
Skin Corrosion/Irritation: Data available.	Mildly irritating to skin with prolonged exposure. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 404
Eye	

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Serious Eye Damage/Irritation: Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 405
Sensitisation	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: Data available.	Not expected to be a skin sensitizer. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 406
Aspiration: Data available.	May be fatal if swallowed and enters airways. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: Data available.	Not expected to be a germ cell mutagen. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 471 473 474 476 478 479
Carcinogenicity: Data available.	Not expected to cause cancer. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 453
Reproductive Toxicity: Data available.	Not expected to be a reproductive toxicant. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 413 414 415
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure.
Repeated Exposure: Data available.	Not expected to cause organ damage from prolonged or repeated exposure. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 408 413

OTHER INFORMATION

For the product itself:

Vapour/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anaesthesia, drowsiness, unconsciousness and other central nervous system effects including death. 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.

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.

MOBILITY

Material -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

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Material -- Expected to be inherently biodegradable

Hydrolysis: Material -- Transformation due to hydrolysis not expected to be significant.

Photolysis: Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation: Material -- Expected to degrade rapidly in air

ECOLOGICAL DATA

Ecotoxicity

Test	Duration	Organism Type	Test Results
Aquatic - Acute Toxicity	48 hour(s)	Daphnia magna	EL0 1000 mg/l: data for similar materials
Aquatic - Acute Toxicity	96 hour(s)	Oncorhynchus mykiss	LL0 1000 mg/l: data for similar materials
Aquatic - Acute Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	EL0 1000 mg/l: data for similar materials
Aquatic - Acute Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	NOELR 1000 mg/l: data for similar materials
Aquatic - Chronic Toxicity	21 day(s)	Daphnia magna	NOELR >=1 mg/l: data for the material

Persistence, Degradability and Bioaccumulation Potential

Media	Test Type	Duration	Test Results
Water	Ready Biodegradability	28 day(s)	Percent Degraded 31.3 : similar material

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

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.

Empty Container Warning 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.

SECTION 14 TRANSPORT INFORMATION

LAND (ADR/RID)

Proper Shipping Name: HYDROCARBONS, LIQUID, N.O.S.
Hazard Class: 3
Classification Code: F1
UN Number: 3295
Packing Group: III
Label(s) / Mark(s): 3
Hazard ID Number: 30
Hazchem EAC: 3Y

SEA (IMDG)

Proper Shipping Name: HYDROCARBONS, LIQUID, N.O.S.
Hazard Class & Division: 3
EMS Number: F-E, S-D
UN Number: 3295
Packing Group: III
Marine Pollutant: No
Label(s): 3
Transport Document Name: UN3295, HYDROCARBONS, LIQUID, N.O.S., 3, PG III, (56°C c.c.)

SEA (MARPOL 73/78 Convention - Annex II)

Product Name: NOXIOUS LIQUID, N.F.,(7) N.O.S., (ISOPAR H, contains iso-and cycloalkanes (C10-C11))
Ship type: 3
Pollution category: Y

AIR (IATA)

Proper Shipping Name: HYDROCARBONS, LIQUID, N.O.S.
Hazard Class & Division: 3
UN Number: 3295
Packing Group: III
Label(s) / Mark(s): 3
Transport Document Name: UN3295, HYDROCARBONS, LIQUID, N.O.S., 3, PG III

SECTION 15 REGULATORY INFORMATION

This material is considered hazardous according to the Classification of Chemicals based on Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Listed or exempt from listing/notification on the following chemical inventories (May contain substance(s) subject to notification to the EPA Active TSCA inventory prior to import to USA): AICS, DSL, ENCS, IECSC, KECI, PICCS, TCSI, TSCA

The national inventory listings are based on the CAS number or numbers listed below.

CAS
90622-57-4
64742-48-9

SECTION 16 OTHER INFORMATION

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N/D = Not determined, N/A = Not applicable

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

H226: Flammable liquid and vapour; Flammable Liquid, Cat 3

H304: May be fatal if swallowed and enters airways; Aspiration, Cat 1

H316: Causes mild skin irritation; Skin Corr/Irritation, Cat 3

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Updates made in accordance with implementation of GHS requirements.

Internal Use Only

MHC: 1A, 0, 0, 0, 2, 0

DGN: 4402588HAA (1025172)
