



SAFETY DATA SHEET

MD-4 Penetrating Fluid

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	MD-4 Penetrating Fluid
Product number	7733
Internal identification	GHS21670

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

Identified uses	Penetrating Fluid
Uses advised against	Non specified unless otherwise stated within this MSDS

1.3. Details of the supplier of the safety data sheet

Supplier	Morris Lubricants Castle Foregate Shrewsbury SY1 2EL
	08.45 - 17.00 GMT T: (+44)(0)1743 232200 F: (+44)(0)1743 353584 sds@morris-lubricants.co.uk

1.4. Emergency telephone number

Emergency telephone	+44(0)1743 232200 (08.45 - 17.00 GMT)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards	Flam. Liq. 3 - H226
Health hazards	Skin Irrit. 2 - H315 Asp. Tox. 1 - H304
Environmental hazards	Aquatic Chronic 2 - H411

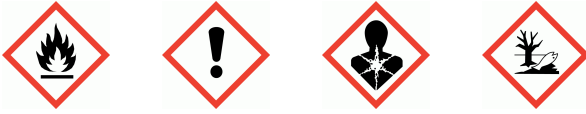
Classification (67/548/EEC or 1999/45/EC) -

Human health	Vapours and spray/mists in high concentrations are narcotic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Nausea, vomiting.
Environmental	The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.
Physicochemical	The product is highly flammable. Vapours may form explosive mixtures with air.

2.2. Label elements

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Pictogram



Signal word

Danger

Hazard statements

H226 Flammable liquid and vapour.
 H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P331 Do NOT induce vomiting.
 P405 Store locked up.
 P501a Dispose of contents/container to hazardous or special waste collection point.

Contains

KEROSINE (PETROLEUM),

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

KEROSINE (PETROLEUM),			30-60%
CAS number: 64742-81-0	EC number: 265-184-9	REACH registration number: 01-2119462828-25-XXXX	
Classification			
Flam. Liq. 3 - H226			
Skin Irrit. 2 - H315			
Asp. Tox. 1 - H304			
Aquatic Chronic 2 - H411			
Hydrotreated Heavy Naphthenic Distillate			30-60%
CAS number: 64742-52-5	EC number: 265-155-0	REACH registration number: 01-2119467170-45-XXXX	
Classification		Classification (67/548/EEC or 1999/45/EC)	
Not Classified		-	
Dipropyleneglycol n-butylether			1-5%
CAS number: 29911-28-2	EC number: 249-951-5		
Classification		Classification (67/548/EEC or 1999/45/EC)	
Not Classified		-	

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sulphonic acids, petroleum, sodium salts		1-5%
CAS number: 68608-26-4 EC number: 271-781-5		
Classification	Classification (67/548/EEC or 1999/45/EC)	
Eye Irrit. 2 - H319	Xi;R36.	
2-Methylbutylacetate		<1%
CAS number: 624-41-9 EC number: 210-843-8		
Classification	Classification (67/548/EEC or 1999/45/EC)	
Flam. Liq. 3 - H226	R10,R66.	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Never give anything by mouth to an unconscious person. Get medical attention if any discomfort continues.
Inhalation	Place unconscious person on their side in the recovery position and ensure breathing can take place. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Give plenty of water to drink. Give milk instead of water if readily available. Keep affected person under observation. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.
Skin contact	Immediately remove contaminated clothing. Rinse immediately with plenty of water. Remove contaminated clothing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	Irritating to respiratory system.
Ingestion	May be fatal if swallowed and enters airways.
Skin contact	Irritating to skin.
Eye contact	May irritate eyes and skin.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with the following media: Alcohol-resistant foam. Carbon dioxide (CO₂). Dry chemicals, sand, dolomite etc. Do not use water, if avoidable.

5.2. Special hazards arising from the substance or mixture

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Specific hazards The product is flammable. Heating may generate flammable vapours. Closed containers can burst violently when heated, due to excess pressure build-up. Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Keep combustible materials away from spillage. Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Keep away from heat, sparks and open flame. Do not wear contact lenses. Avoid spilling. Eye wash facilities and emergency shower must be available when handling this product. Do not breathe vapours.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry and cool place. Store under well-ventilated conditions at a temperature below 25°C.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

KEROSINE (PETROLEUM),

Long-term exposure limit (8-hour TWA): ACGIH 5 mg/m³

Short-term exposure limit (15-minute): ACGIH 10 mg/m³

Hydrotreated Heavy Naphthenic Distillate

Long-term exposure limit (8-hour TWA): ACGIH 5 mg/m³

Short-term exposure limit (15-minute): ACGIH 10 mg/m³

Dipropyleneglycol n-butylether

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Long-term exposure limit (8-hour TWA): OES 10 mg/m³

2-Methylbutylacetate

Long-term exposure limit (8-hour TWA): 270 mg/m³ respirable dust

Short-term exposure limit (15-minute): 270 mg/m³ respirable dust

ACGIH = American Conference of Governmental Industrial Hygienists.

Ingredient comments WEL = Workplace Exposure Limits

Hydrotreated Heavy Naphthenic Distillate (CAS: 64742-52-5)

DNEL

Industry - Inhalation; Long term local effects: 5.4 mg/m³

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Contact lenses should not be worn when working with this chemical. The following protection should be worn: Chemical splash goggles.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

Other skin and body protection

Use engineering controls to reduce air contamination to permissible exposure level. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Provide eyewash station and safety shower.

Hygiene measures

Provide eyewash station. Wash promptly if skin becomes contaminated. Promptly remove non-impervious clothing that becomes contaminated. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Green.
Odour	Solvent.
Melting point	<-20°C
Initial boiling point and range	>130°C @ 760 mm Hg
Flash point	50°C PMCC (Pensky-Martens closed cup).
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 0.5 % Upper flammable/explosive limit: 5 %
Relative density	0.845 @ 15°C
Solubility(ies)	Immiscible with water. Soluble in the following materials: Organic solvents.
Viscosity	2.25 cSt @ 40°C

9.2. Other information

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SECTION 10: Stability and reactivity

10.1. Reactivity

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Under normal conditions of storage and use, no hazardous reactions will occur.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products In case of fire, toxic gases (CO, CO₂, NO_x) may be formed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

General information Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.

Inhalation Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.

Ingestion Gastrointestinal symptoms, including upset stomach. May be fatal if swallowed and enters airways.

Skin contact Repeated exposure may cause skin dryness or cracking. Causes skin irritation.

Eye contact Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain.

SECTION 12: Ecological Information

Ecotoxicity The product contains substances which are toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

12.2. Persistence and degradability

Persistence and degradability The product is not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

12.4. Mobility in soil

Mobility The product is immiscible with water and will spread on the water surface. The product contains volatile substances which may spread in the atmosphere.

12.5. Results of PBT and vPvB assessment

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Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. This material and its container must be disposed of as hazardous waste.
Disposal methods	Absorb in vermiculite, dry sand or earth and place into containers. Dispose of waste via a licensed waste disposal contractor. The packaging must be empty (drop-free when inverted).
Waste class	European Waste Catalogue (EWC) number = 13 08 99* (waste not otherwise specified)

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	1268
UN No. (IMDG)	1268
UN No. (ICAO)	1268
UN No. (ADN)	1268

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	PETROLEUM DISTILLATES, N.O.S., or PETROLEUM PRODUCTS, N.O.S.
Proper shipping name (IMDG)	PETROLEUM DISTILLATES, N.O.S., or PETROLEUM PRODUCTS, N.O.S.
Proper shipping name (ICAO)	PETROLEUM DISTILLATES, N.O.S., or PETROLEUM PRODUCTS, N.O.S.
Proper shipping name (ADN)	PETROLEUM DISTILLATES, N.O.S., or PETROLEUM PRODUCTS, N.O.S.

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III

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ADN packing group III

ICAO packing group III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS F-E, S-E

ADR transport category 3

Emergency Action Code 3Y

Hazard Identification Number (ADR/RID) 30

Tunnel restriction code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
EH40/2005 Workplace exposure limits.

EU legislation Dangerous Substances Directive 67/548/EEC.
Dangerous Preparations Directive 1999/45/EC.
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 (as amended).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Guidance Workplace Exposure Limits EH40.
Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date 23/11/2015

Revision 1

SDS number 21670

MD-4 Penetrating Fluid

Hazard statements in full

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.