
SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1. 1. Product identifier

Product Name PatFluid®

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

Identified uses Fuel additive.

1.3. Details of the supplier of the safety data sheet

Supplier
CDTi
Clean Diesel Technologies Limited
The Beehive,
Beehive Ring Road,
Gatwick,
West Sussex,
RH6 0PA
United Kingdom
+44 (0) 1293 804 770

Contact Person safety@cdti.com

1.4. Emergency telephone number

National emergency telephone number Public: NHS 111, Medical Professional: NPIS 0344 892 0111
https://poisoncentres.echa.europa.eu/

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture Classification (EC 1272/2008)

Physical hazards Not Classified
Health hazards Repr. 2 - H361d, Asp. Tox. 1 - H304
Environmental hazards Aq. Chron. 3 - H412

2. 2. Label elements

Hazard Pictograms

Signal word	Danger
Hazard statements	H361d Suspected of damaging fertility or the unborn child. H304 May be fatal if swallowed and enters airways. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P331 Do NOT induce vomiting. P501 Dispose of contents/ container in accordance with local regulations.
Supplemental label information	EUH066 Repeated exposure may cause skin dryness or cracking.
Contains	Odourless kerosene. 2-Ethylhexanoic acid, cerium salt. 2-Ethylhexanoic acid. 2-Ethylhexanoic acid, iron salt.

2.3. Other hazards

The product does not contain any substance that is classified as PBT or vPvB.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Odourless kerosene **40-60%**

CAS number: 64742-48-9 EC number: 926-141-6

Classification

Asp. Tox. 1 - H304

2-Ethylhexanoic acid, iron salt **10-25%**

CAS number: 19583-54-1 EC number: 243-169-8

Classification

Acute Tox. 4 - H302, Repr. 2 - H361d

2-Ethylhexanoic acid, cerium salt **10-25%**
CAS number: 24593-34-8 EC number: 246-332-1
Classification
Repr. 2 - H361d, Aq. Chron. 3 - H412

2-Ethylhexanoic acid **1-5%**
CAS number: 149-57-5 EC number: 205-743-6
Classification
Repr. 2 - H361d

2-Methoxymethylethoxypropanol **1-5%**
CAS number: 34590-94-8 EC number: 252-104-2
Classification
Not Classified

2-Ethylhexan-1-ol **1-5%**
CAS number: 104-76-7 EC number: 203-234-3
Classification
Skin Irrit. 2 - H315, Eye Irrit. 2 - H319, Acute Tox. 4 - H332, STOT SE 3 - H335

The full text for all hazard statements is displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information Get medical attention if any discomfort continues.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.

Ingestion If medical attention is not immediately available, Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Get medical attention if any discomfort continues.

Skin contact	Remove contaminated clothing immediately and wash skin with soap and water.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Get medical attention if any discomfort continues.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Get medical attention promptly if symptoms occur after washing.
Inhalation	Vapours may cause drowsiness and dizziness.
Ingestion	Nausea, vomiting. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
Skin contact	Prolonged contact may cause redness, irritation and dry skin.
Eye contact	Symptoms following overexposure may include the following: Redness. Pain.

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

Notes for the doctor	No specific recommendations. Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. Do not use water, if avoidable.
Unsuitable extinguishing media	Water.

5.2. Special hazards arising from the substance or mixture

Specific hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting	No specific firefighting precautions known.
Special protective equipment for firefighting	Use protective equipment appropriate for surrounding materials.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions For personal protection, see Section 8.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Small Spillages: Absorb spillage with sand or other inert absorbent. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep separate from food, feedstuffs, fertilisers and other sensitive material. Store in closed original container at temperatures between 0°C and 40°C.

Storage class Chemical storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits

2-Methoxymethylethoxypropanol

Long-term exposure limit (8-hour TWA): WEL 50 ppm 308 mg/m3 (Sk)

Short-term exposure limit (15-minute): WEL 50 ppm (Sk) 250 mg/m3 (Sk)

2-Ethylhexanoic acid, iron salt
Long-term exposure limit (8-hour TWA): WEL 5 mg/m3 (Sk)
Short-term exposure limit (15-minute reference period) WEL 10 mg/m3 (Sk)

2-Ethylhexan-1-ol
Long-term exposure limit (8-hr TWA): WEL 1 ppm, 5.4 mg/m^3 (Sk)

WEL = Workplace Exposure Limit, Sk = Can be absorbed through the skin.

8.2. Exposure controls

Protective equipment

Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.
Hygiene measures	Wash contaminated clothing before reuse. Wash hands after handling.
Respiratory protection	No specific recommendations.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Clear, dark.
Odour	Almost odourless.
pH	Scientifically unjustified.
Melting Point	Not determined.
Initial boiling point and range	192 - 256°C @ 760 mm Hg
Flash point	> 60°C Closed cup.
Evaporation rate	Not determined.

Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 0.6 Upper flammable/explosive limit: 7.0
Vapour pressure	350 Pa @ 20°C
Vapour density	> 1 (Air = 1)
Relative density	0.84 - 0.89 @ 20°C
Solubility(ies)	Immiscible with water.
Auto-ignition temperature	225°C (Est)
Viscosity	Kinematic viscosity ≤ 20.5 mm^2/s. (3 - 8 mm^2/s @ 40°C)
Explosive properties	Scientifically unjustified.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Volatile organic compound	This product contains a maximum VOC content of 95 %.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Avoid the following conditions: Heat, sparks, flames.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not relevant. Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid	Avoid heat. Avoid contact with the following materials: Strong oxidising agents.

10.5. Incompatible materials

Materials to avoid	Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxicological effects	No information available.
Acute toxicity - oral	
ATE oral (mg/kg)	>5000
Acute toxicity – dermal	
ATE dermal (mg/kg)	>2000
Acute toxicity – inhalation	
ATE inhalation (vapours mg/l)	>20
Skin corrosion/irritation	Based on available data the classification criteria are not met.
Serious eye damage/irritation	Based on available data the classification criteria are not met.
Respiratory sensitisation	Based on available data the classification criteria are not met.
Skin sensitisation	Based on available data the classification criteria are not met.
Germ cell mutagenicity	Based on available data the classification criteria are not met.
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Based on available data the classification criteria are not met.
Carcinogenicity	Based on available data the classification criteria are not met.
Reproductive toxicity	Possible risk of adverse reproductive effects.
Specific target organ toxicity - single exposure	Based on available data the classification criteria are not met.
Specific target organ toxicity - repeated exposure	Based on available data the classification criteria are not met.
Aspiration hazard	May be fatal if swallowed and enters airways.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity	Low acute toxicity to aquatic organisms.

12.1. Toxicity

The product does not meet the classification criteria for acute aquatic toxicity

12.2. Persistence and degradability

The product is biodegradable.

12.3. Bioaccumulative potential

No data available on bioaccumulation.

12.4. Mobility in Soil

The product is insoluble in water and will spread on the surface of water.

12.5. Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: TRANSPORT INFORMATION

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group
Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant	No.

14.6. Special precautions for user
Not applicable.

14.7. 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	EH40 Workplace exposure limits 4th Edn. 2020 SI 2019 No 758 REACH etc. (Amendment etc.) (EU Exit) Regulations 2019.
EU legislation	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).
Authorisations (Annex XIV Regulation 1907/2006)	No specific authorisations are known for this product.
Restrictions (Annex XVII Regulation 1907/2006)	No specific restrictions on use are known for this product.

15.2. Chemical Safety Assessment
No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision date	15 April 2021
Revision	10

Supersedes date	04 November 2019
Hazard statements in full	H225 Highly flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H361d Suspected of damaging fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful 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/herself as to the suitability of such information for his/her own particular use.