



Putoline E10 Fuel Fighter

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 9-7-2018 Revision date: 5-3-2024 Supersedes version of: 6-1-2023 Version: 4.0

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

1.1. Product identifier

Product form : Mixture
Trade name : Putoline E10 Fuel Fighter
UFI : 5T40-39C8-R004-2DSX
Product code : PW.40.14
Product group : Trade product

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

1.2.1. Relevant identified uses

Intended for general public
Main use category : Industrial use, Professional use, Consumer use
Use of the substance/mixture : Additive for fuel engines
Use of the substance/mixture : Fuel additives
Function or use category : Fuel additives

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Putoline Oil
Dollegoorweg 15
NL 7602 EC Almelo
Netherlands
T 0031 (0)546 81 81 65
vib@putoline.com

1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 1 H318
Aspiration hazard, Category 1 H304
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Causes damage to organs through prolonged or repeated exposure. Causes skin irritation. Causes serious eye damage. May be fatal if swallowed and enters airways.

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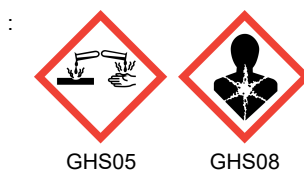
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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS05

GHS08

Signal word (CLP)

: Danger

Contains

: Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics; Potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate; Hydrocarbons, C10-C13, n-alkanes; Distillates (petroleum), hydrotreated light

Hazard statements (CLP)

: H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.

Precautionary statements (CLP)

: P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P280 - Wear eye protection, protective gloves, protective clothing.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Distillates (petroleum), hydrotreated light (64742-47-8)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Distillates (petroleum), hydrotreated light (64742-47-8)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics substance with national workplace exposure limit(s) (GB)	CAS-No.: 1174522-09-8 EC-No.: 918-481-9 REACH-no: 01-2119457273-39	50 – 80	Asp. Tox. 1, H304 EUH066

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1-propene, 2-methyl-, homopolymer, hydroformylation products, reactionproducts with ammonia	CAS-No.: 337367-30-3 EC-No.: 694-933-6	10 – 20	Skin Irrit. 2, H315 Aquatic Chronic 3, H412
Potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate	CAS-No.: 7491-09-0 EC-No.: 231-308-5 REACH-no: 01-2119919740-39	5 – 10	Skin Irrit. 2, H315 Eye Dam. 1, H318
Hydrocarbons, C10-C13, n-alkanes	CAS-No.: 129813-66-7 EC-No.: 929-018-5 REACH-no: 01-2119475608-26	5 – 10	Asp. Tox. 1, H304 EUH066
Distillates (petroleum), hydrotreated light substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	CAS-No.: 64742-47-8 EC-No.: 265-149-8 EC Index-No.: 649-422-00-2 REACH-no: 01-2119484819-18	2,5 – 5	Flam. Liq. 3, H226 Asp. Tox. 1, H304

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	CAS-No.: 1174522-09-8 EC-No.: 918-481-9 REACH-no: 01-2119457273-39	(25 ≤ C < 100) EUH066

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If possible, show the doctor this safety data sheet. Failing this, show the doctor the packaging or label. Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: After contact with skin, wash immediately and thoroughly with water and soap. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water, also under the eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Call a physician immediately.
First-aid measures after ingestion	: Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects	: Headache.
Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Risk of lung oedema.

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

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.
Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Do not breathe mist, vapours. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling : Ensure good ventilation of the work station. Do not breathe mist, vapours. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

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Storage conditions	: Store in dry, cool, well-ventilated area. Protect from sunlight. Store locked up.
Incompatible products	: Strong acids. Strong bases. Strong oxidizing agents.
Special rules on packaging	: Keep only in original container.
Packaging materials	: Store always product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Distillates (petroleum), hydrotreated light (64742-47-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	200 mg/m ³
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	500 mg/m ³
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics (1174522-09-8)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	1200 mg/m ³
	184 ppm

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

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Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	≥0.35		EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: 160 °C
Flammability	: Not applicable
Lower explosion limit	: 0,6 vol %
Upper explosion limit	: 7 vol %
Flash point	: > 61 °C
Auto-ignition temperature	: > 200 °C
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 7 mm ² /s (40 °C) - ASTM D7042
Solubility	: Water: Insoluble
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 100 Pa
Vapour pressure at 50°C	: Not available
Density	: 0,8172 g/cm ³ @20°C
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

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9.2. Other information

9.2.1. Information with regard to physical hazard classes

Critical temperature : > 200 °C

9.2.2. Other safety characteristics

VOC content : 758,5 g/l

Refractive index : 1,465

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Strong reducing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate (7491-09-0)

LD50 oral rat	> 2100 mg/kg bodyweight
LD50 dermal rabbit	> 10000 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Hydrocarbons, C10-C13, n-alkanes (129813-66-7)

LD50 oral rat	> 15000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 oral	> 15000 mg/kg bodyweight Animal:
LD50 dermal rabbit	≥ 3160 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Distillates (petroleum), hydrotreated light (64742-47-8)

LD50 oral rat	> 5000 mg/kg bodyweight
LD50 dermal rabbit	> 2000 mg/kg bodyweight
LC50 Inhalation - Rat (Dust/Mist)	> 5,28 mg/l/4h

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Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics (1174522-09-8)	
LD50 oral rat	> 5000 mg/kg (OESO 401)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	≥ 3160 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 4,951 g/m ³ (4h, OESO 403)

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

Potassium 1,2-bis(2-ethylhexyloxy)ethanesulphonate (7491-09-0)	
NOAEL (oral, rat, 90 days)	> 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Hydrocarbons, C10-C13, n-alkanes (129813-66-7)	
NOAEC (inhalation, rat, vapour, 90 days)	> 10,4 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

Aspiration hazard : May be fatal if swallowed and enters airways.

Putoline E10 Fuel Fighter	
Viscosity, kinematic	7 mm ² /s (40 °C) - ASTM D7042

Hydrocarbons, C10-C13, n-alkanes (129813-66-7)	
Viscosity, kinematic	1,66 mm ² /s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm ² /s)'

Distillates (petroleum), hydrotreated light (64742-47-8)	
Viscosity, kinematic	1 – 2,4 mm ² /s at 40°C

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics (1174522-09-8)	
Viscosity, kinematic	1,8 mm ² /s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm ² /s)'

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Putoline E10 Fuel Fighter	
LC50 - Fish [1]	15,1 mg/l (calculated value)

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Potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate (7491-09-0)	
LC50 - Fish [1]	49 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	6,6 mg/l Test organisms (species): Daphnia magna
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics (1174522-09-8)	
LC50 - Fish [1]	> 1001 mg/l (OECD 203 method)
EC50 - Crustacea [1]	> 1000 mg/l (OECD 202 method)
EC50 72h - Algae [1]	W 1000 mg/l (OECD 201 method)
ErC50 algae	1000 mg/l (Pseudokirchneriella subcapitata, EL0, 72h)

12.2. Persistence and degradability

Putoline E10 Fuel Fighter	
Persistence and degradability	Not rapidly degradable
1-propene, 2-methyl-, homopolymer, hydroformylation products, reactionproducts with ammonia (337367-30-3)	
Persistence and degradability	Not rapidly degradable
Potassium 1,2-bis(2-ethylhexyloxycarbonyl)ethanesulphonate (7491-09-0)	
Persistence and degradability	Rapidly degradable
Hydrocarbons, C10-C13, n-alkanes (129813-66-7)	
Persistence and degradability	Not rapidly degradable
Distillates (petroleum), hydrotreated light (64742-47-8)	
Persistence and degradability	Not rapidly degradable
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics (1174522-09-8)	
Persistence and degradability	Readily biodegradable.
Biodegradation	80 % (28d)

12.3. Bioaccumulative potential

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics (1174522-09-8)	
Partition coefficient n-octanol/water (Log Pow)	5,57 – 6,62

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Putoline E10 Fuel Fighter	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	
Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Distillates (petroleum), hydrotreated light (64742-47-8)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Distillates (petroleum), hydrotreated light (64742-47-8)

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12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
HP Code	: HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

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14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
3(a)	Distillates (petroleum), hydrotreated light	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	Putoline E10 Fuel Fighter ; 1-propene, 2-methyl-, homopolymer, hydroformylation products, reactionproducts with ammonia ; Hydrocarbons, C10-C13, n-alkanes ; Distillates (petroleum), hydrotreated light ; Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	1-propene, 2-methyl-, homopolymer, hydroformylation products, reactionproducts with ammonia	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

VOC Directive (2004/42)

VOC content : 758,5 g/l

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Biocide Regulation (528/2012)

Child-resistant fastening : Applicable

Tactile warning : Applicable

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Revision date	Modified	
	Supersedes	Modified	
1.1	Trade name	Modified	
1.2	Use of the substance/mixture	Added	
2.1	Adverse physicochemical, human health and environmental effects	Modified	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.2	Precautionary statements (CLP)	Modified	
2.2	Hazard pictograms (CLP)	Modified	
2.2	Hazard statements (CLP)	Modified	
3	Composition/information on ingredients	Modified	
4.1	First-aid measures after skin contact	Modified	
4.1	First-aid measures after eye contact	Modified	
4.1	First-aid measures general	Modified	
4.2	Symptoms/effects after inhalation	Added	
4.2	Symptoms/effects after eye contact	Added	
5.2	Hazardous decomposition products in case of fire	Modified	
5.2	Fire hazard	Modified	
5.2	Explosion hazard	Added	
5.3	Firefighting instructions	Added	
6.1	General measures	Added	
6.1	Protective equipment	Added	
6.1	Emergency procedures	Added	

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Indication of changes			
Section	Changed item	Change	Comments
6.3	For containment	Added	
7.1	Additional hazards when processed	Added	
7.2	Storage conditions	Modified	
7.2	Storage temperature	Removed	
7.2	Technical measures	Added	
7.2	Packaging materials	Added	
8	Generic OEL data	Removed	
8.2	Personal protective equipment	Added	
9.1	Boiling point	Modified	
9.1	Viscosity, kinematic	Modified	
9.2	VOC content	Modified	
10.3	Possibility of hazardous reactions	Modified	
12.1	Ecology - general	Modified	
13.1	Regional waste regulation	Added	
13.1	Additional information	Added	
13.1	Sewage disposal recommendations	Added	
13.1	Waste disposal recommendations	Added	
15.1	VOC content	Modified	

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level

Putoline E10 Fuel Fighter

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms:	
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
EUH066	Repeated exposure may cause skin dryness or cracking.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H412	Harmful to aquatic life with long lasting effects.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.