



Putoline Octane Booster

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 25-10-2019 Revision date: 6-1-2023 Supersedes version of: 15-11-2022 Version: 5.2

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

1.1. Product identifier

Product form : Mixture
Trade name : Putoline Octane Booster
UFI : MF4Y-C8EC-X00G-MT3D
Product code : PW.40.18
Type of product : Additive
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 : 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	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+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 Cardiff	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]

Acute toxicity (inhal.), Category 4 H332
Specific target organ toxicity – Repeated exposure, Category 2 H373
Aspiration hazard, Category 1 H304
Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May cause damage to organs through prolonged or repeated exposure. Harmful if inhaled. May be fatal if swallowed and enters airways. Harmful to aquatic life with long lasting effects.

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2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

GHS08

Signal word (CLP)

: Danger

Contains

: Hydrocarbons, C11-C13, isoalkanes, <2% aromatics, Tricarbonyl(methylcyclopentadienyl)manganese, Solvent naphtha (petroleum), heavy arom.

Hazard statements (CLP)

: H304 - May be fatal if swallowed and enters airways.
H332 - Harmful if inhaled.
H373 - May cause damage to organs through prolonged or repeated exposure.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P261 - Avoid breathing mist, vapours.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P301+P310+P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
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.

EUH-statements

: EUH066 - Repeated exposure may cause skin dryness or cracking.

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/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

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 is 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, C11-C13, isoalkanes, <2% aromatics	CAS-No.: 246538-78-3 EC-No.: 920-901-0 REACH-no: 01-2119456810-40	≥ 80	Asp. Tox. 1, H304 EUH066
2-ethylhexan-1-ol substance with national workplace exposure limit(s) (GB, IE); substance with a Community workplace exposure limit	CAS-No.: 104-76-7 EC-No.: 203-234-3 REACH-no: 01-2119487289-20	5 – 10	Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tricarbonyl(methylcyclopentadienyl)manganese substance with national workplace exposure limit(s) (IE)	CAS-No.: 12108-13-3 EC-No.: 235-166-5 REACH-no: 01-2119495971-23	1 – 2,5	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Dermal), H310 Acute Tox. 1 (Inhalation:dust,mist), H330 Skin Irrit. 2, H315 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Solvent naphtha (petroleum), heavy arom.	CAS-No.: 64742-94-5 EC-No.: 265-198-5 EC Index-No.: 649-424-00-3 REACH-no: 01-2119510128-50	1 – 2,5	STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066
naphthalene substance with national workplace exposure limit(s) (GB, IE); substance with a Community workplace exposure limit	CAS-No.: 91-20-3 EC-No.: 202-049-5 EC Index-No.: 601-052-00-2 REACH-no: 01-2119561346-37	< 0,3	Carc. 2, H351 Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	CAS-No.: 246538-78-3 EC-No.: 920-901-0 REACH-no: 01-2119456810-40	(25 ≤C < 100) EUH066
Solvent naphtha (petroleum), heavy arom.	CAS-No.: 64742-94-5 EC-No.: 265-198-5 EC Index-No.: 649-424-00-3 REACH-no: 01-2119510128-50	(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	: Symptoms may be delayed. 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. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Remove contaminated clothing and shoes. After contact with skin, wash immediately and thoroughly with water and soap. Wash skin with plenty of water.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Rinse eyes with water as a precaution.
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 skin contact	: Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after ingestion	: Risk of lung oedema.

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

Treat symptomatically. Aspiration of this material may cause chemical pneumonia.

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 : Combustible liquid.
Hazardous decomposition products in case of fire : Toxic fumes may be released. Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

5.3. Advice for firefighters

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

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Do not breathe mist, vapours.

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".

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

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

Precautions for safe handling : Wear personal protective equipment. Do not breathe mist, vapours. Use only outdoors or in a well-ventilated area.
Hygiene measures : 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

Storage conditions : Keep only in the original container in a cool well ventilated place. Protect from sunlight. Store locked up. Store in a well-ventilated place. Keep cool.
Incompatible products : Strong acids. Strong bases. Strong oxidizing agents.
Storage temperature : < 40 °C

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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

Putoline Octane Booster	
EU - Indicative Occupational Exposure Limit (IOEL)	
Exposure limits/standards for materials that can be formed when handling this product. When mists/aerosols can occur the following is recommended	5 mg/m ³ - ACGIH TLV (inhalable fraction).
Tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
Ireland - Occupational Exposure Limits	
Local name	Tricarbonyl (methylcyclo-pentadienyl) manganese (as Mn) [Methylcyclopentadienyl manganese, tricarbonyl (as Mn)]
OEL TWA [1]	0,2 mg/m ³
Remark	Sk (Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body)
Regulatory reference	Chemical Agents Code of Practice 2021
naphthalene (91-20-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Naphthalene
IOEL TWA	50 mg/m ³
Remark	(Year of adoption 2010)
Regulatory reference	COMMISSION DIRECTIVE 91/322/EEC; SCOEL Recommendations
Ireland - Occupational Exposure Limits	
Local name	Naphthalene
OEL TWA [1]	50 mg/m ³
OEL TWA [2]	10 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	50 mg/m ³
2-ethylhexan-1-ol (104-76-7)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-ethylhexan-1-ol
IOEL TWA	5,4 mg/m ³ 5,4 mg/m ³
IOEL TWA [ppm]	1 ppm

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2-ethylhexan-1-ol (104-76-7)	
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164 COMMISSION DIRECTIVE (EU) 2017/164
Ireland - Occupational Exposure Limits	
Local name	2-Ethylhexan-1-ol
OEL TWA [1]	5,4 mg/m ³
OEL TWA [2]	1 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	2-ethylhexan-1-ol
WEL TWA (OEL TWA) [1]	5,4 mg/m ³
WEL TWA (OEL TWA) [2]	1 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

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:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

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

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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 inadequate ventilation] wear respiratory protection.

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	: amber.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: > 160 °C
Flammability	: Not applicable
Explosive properties	: Not applicable.
Oxidising properties	: Not applicable.
Explosive limits	: Not available
Lower explosion limit	: 0,6 vol %
Upper explosion limit	: 7 vol %
Flash point	: > 62 °C
Auto-ignition temperature	: Not self-igniting
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: < 20,5 mm ² /s at 40 °C
Solubility	: Water: Insoluble
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 1 hPa @20°C
Vapour pressure at 50°C	: Not available
Density	: 0,7994 g/cm ³ @20°C
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Critical temperature : > 200 °C

9.2.2. Other safety characteristics

No additional information available

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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. Reacts violently with (strong) oxidizers.

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 (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

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ATE CLP (gases)	4500 ppmv/4h
ATE CLP (vapours)	11 mg/l/4h
ATE CLP (dust,mist)	1,5 mg/l/4h
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics (246538-78-3)	
LD50 oral rat	> 5000 mg/kg [Test(s) equivalent or similar to OECD Guideline 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 (Vapours)	5 mg/l/4h
Solvent naphtha (petroleum), heavy arom. (64742-94-5)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: EPA OTS 798.1100 (Acute Dermal Toxicity)
LC50 Inhalation - Rat (Vapours)	> 2,7 mg/l/4h
Tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
LD50 oral rat	51,8 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Remarks on results: other:

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Tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
LD50 dermal rabbit	140 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 122 - 159
naphthalene (91-20-3)	
LD50 oral rat	> 533 mg/kg
LD50 dermal rat	> 2000 mg/kg
2-ethylhexan-1-ol (104-76-7)	
LD50 oral rat	≈ 2047 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
Skin corrosion/irritation	: Not classified.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
Solvent naphtha (petroleum), heavy arom. (64742-94-5)	
STOT-single exposure	May cause drowsiness or dizziness.
2-ethylhexan-1-ol (104-76-7)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
2-ethylhexan-1-ol (104-76-7)	
NOAEL (oral, rat, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, gas, 90 days)	120 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
Aspiration hazard	: May be fatal if swallowed and enters airways.
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Viscosity, kinematic	< 20,5 mm ² /s at 40 °C
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics (246538-78-3)	
Viscosity, kinematic	1,77 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	: Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

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Not rapidly degradable

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics (246538-78-3)	
NOEC (acute)	1000 mg/l (Pseudokirchneriella subcapitata, 72h)
EC0, acute, daphnia	= 1000 mg/l (48 Hours)
EC0, acute, Pseudokirchneriella subcapitata	= 1000 mg/l (72 Hours)
LC0, acute, Oncorhynchus mykiss	= 1000 mg/l (96 Hours)
Solvent naphtha (petroleum), heavy arom. (64742-94-5)	
EC50 - Crustacea [1]	1,2 mg/l Test organisms (species): Daphnia magna
Tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
LC50 - Fish [1]	0,21 mg/l Test organisms (species): Cyprinus carpio
EC50 - Crustacea [1]	0,83 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	> 0,46 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	1,7 mg/l algae
naphthalene (91-20-3)	
LC50 - Fish [1]	0,51 mg/l 96h
EC50 - Crustacea [1]	3,4 mg/l Daphnia magna - 48h
2-ethylhexan-1-ol (104-76-7)	
LC50 - Fish [1]	17,1 mg/l Test organisms (species): Leuciscus idus melanotus
LC50 - Fish [2]	28,2 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	39 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	11,5 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	16,6 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
12.2. Persistence and degradability	
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics (246538-78-3)	
Persistence and degradability	Readily biodegradable.
Biodegradation	31,3 % 28d [similar material]
Tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
Biodegradation	4 % 56days
12.3. Bioaccumulative potential	
Tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
Partition coefficient n-octanol/water (Log Pow)	3,7 (26°C ; pH 6)
naphthalene (91-20-3)	
Partition coefficient n-octanol/water (Log Pow)	3,01
2-ethylhexan-1-ol (104-76-7)	
Partition coefficient n-octanol/water (Log Pow)	2,9

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12.4. Mobility in soil

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics (246538-78-3)

Ecology - soil

Extremely volatile.

12.5. Results of PBT and vPvB assessment

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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

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Other adverse effects : Harmful to aquatic life.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

: Do not dispose of with domestic waste. Do not allow into drains or water courses. Dispose of contents/container in accordance with licensed collector's sorting instructions.

European List of Waste (LoW) code

: 13 07 03* - other fuels (including mixtures)

HP Code

: HP5 - "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.

HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.

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	Not regulated	Not regulated	Not regulated	Not regulated
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				

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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

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)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

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)

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

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SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.2	EUH-statements	Added	
2.2	Hazard statements (CLP)	Modified	
2.2	Precautionary statements (CLP)	Modified	
3	Composition/information on ingredients	Modified	
6.1	Emergency procedures	Modified	
7.1	Precautions for safe handling	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
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

Putoline Octane Booster

Safety Data Sheet

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

Abbreviations and acronyms:

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:

Acute Tox. 1 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 1
Acute Tox. 2 (Dermal)	Acute toxicity (dermal), Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
EUH066	Repeated exposure may cause skin dryness or cracking.
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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Full text of H- and EUH-statements:

H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

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.