SAFETY DATA SHEET

ProClean HD Industrial Degreaser

Version: 1.0
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according to Regulation (EC) No 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878

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

1.1. Product identifier

Trade name	ProClean HD Industrial Degreaser
Registration number (REACH)	Not relevant (mixture)
Product code	PC-HD-20
Unique formula identifier (UFI)	UU10-QU9N-S50M-H2GM

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

Relevant identified uses: Industrial degreaser for removing oil, grease and cutting fluids from metal parts in manufacturing and metal-processing operations (dip tanks, parts washers and wipe cleaning on production lines). Designed for use solely in manufacturing or processing activities.

Uses advised against: Not for consumer use (the product is not designed or assessed for consumer exposure). Not for general-purpose cleaning outside manufacturing or processing operations (not assessed). Do not use as a fuel or as a hand cleaner (the product is not intended for these uses).

1.3. Details of the supplier of the safety data sheet

Supplier	Example Industrial Products Europe Ltd.
Address	Unit 10, Sample Business Park, Dublin 12, Ireland
Telephone	+353 1 555 0100
E-mail address of the competent person responsible for the SDS	sds@example.com
Website	example.com

1.4. Emergency telephone number

Emergency telephone	+353 1 555 0199 (24 hours, 7 days a week; English)

Poison centre

Country	Name	Telephone	Hours
Ireland	National Poisons Information Centre (NPIC), Beaumont Hospital, Dublin	+353 1 809 2166	8 am – 10 pm, every day

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Section	Hazard class	Category	Hazard class and category	Hazard statement
2.6	flammable liquids	3	Flam. Liq. 3	H226
3.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
3.4	skin sensitisation	1B	Skin Sens. 1B	H317
3.8	specific target organ toxicity - single exposure (narcotic effects, drowsiness)	3	STOT SE 3 (narcotic effects)	H336
3.10	aspiration hazard	1	Asp. Tox. 1	H304

Full text of the hazard statements: see subsection 2.2 and section 16.

2.2. Label elements

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

Signal word	Danger
Hazard pictograms	GHS02, GHS05, GHS07, GHS08



GHS02 GHS05 GHS07 GHS08

Hazard statements

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H304	May be fatal if swallowed and enters airways.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing vapours/spray.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331	Do NOT induce vomiting.

Supplemental hazard information

14 % of the mixture consists of ingredient(s) of unknown acute toxicity (dermal).

9 % of the mixture consists of ingredient(s) of unknown acute toxicity (inhalation).

Hazardous components for labelling	Contains: Alcohols, C9-11, ethoxylated; d-Limonene; Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2 % aromatics

2.3. Other hazards

The mixture does not contain substances meeting the criteria for PBT or vPvB in accordance with REACH Annex XIII at 0.1 % or more.

The mixture does not contain substances identified as having endocrine disrupting properties at a concentration of 0.1 % or more.

The mixture is not classified for endocrine disruption (ED HH, ED ENV), PBT/vPvB or PMT/vPvM (CLP Annex I, sections 3.11, 4.2, 4.3 and 4.4, introduced by Delegated Regulation (EU) 2023/707).

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Mixture of the substances listed below.

Name of substance	Identifiers	Wt %	Classification (CLP)	Pictograms	Notes
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2 % aromatics	CAS: 64742-48-9 EC: 919-857-5 REACH: 01-2119463258-33-xxxx Also known as naphtha (petroleum), hydrotreated heavy (former EC 265-150-3)	≥ 68 – < 72	Flam. Liq. 3, H226 STOT SE 3 (narcotic effects), H336 Asp. Tox. 1, H304 EUH066		
2-Butoxyethanol	CAS: 111-76-2 EC: 203-905-0 Index: 603-014-00-0 REACH: 01-2119475108-36-xxxx	≥ 11 – < 13	Acute Tox. 3 (inhalation), H331 Acute Tox. 4 (oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319		GHS-HC IOELV
d-Limonene	CAS: 5989-27-5 EC: 227-813-5 Index: 601-096-00-2 REACH: 01-2119529223-47-xxxx	≥ 7 – < 9	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412		GHS-HC
Dipropylene glycol methyl ether	CAS: 34590-94-8 EC: 252-104-2 REACH: 01-2119450011-60-xxxx	≥ 5 – < 7	Not classified	–	IOELV
Alcohols, C9-11, ethoxylated	CAS: 68439-46-3 List No.: 614-482-0 (polymer, exempt from REACH registration)	≥ 3 – < 5	Acute Tox. 4 (oral), H302 Eye Dam. 1, H318		

GHS-HC Substance with a harmonised classification (entry in Annex VI to Regulation (EC) No 1272/2008); hazard classes not covered by the entry are classified by the supplier or registrant

IOELV Substance with a Union indicative occupational exposure limit value

Specific concentration limits, M-factors and acute toxicity estimates

Name of substance	M-factors	ATE
2-Butoxyethanol	–	oral: 1200 mg/kg bw inhalation: 3 mg/l
d-Limonene	M (acute) = 1	–
Alcohols, C9-11, ethoxylated	–	oral: 1400 mg/kg bw

Remarks: all percentages are by weight unless stated otherwise. Full text of the H and EUH statements: see section 16.

REACH registration numbers are shown without the registrant-specific last four digits. The hydrocarbon solvent contains less than 0.1 % (w/w) benzene (EC 200-753-7): under Note P of CLP Annex VI (entry 649-327-00-6) it is not classified as carcinogenic or mutagenic.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information: Remove from exposure. If in doubt, or when symptoms persist, get medical attention. Never give anything by mouth to an unconscious person.

Following inhalation: Remove person to fresh air and keep comfortable for breathing. If the person feels unwell or drowsy, call a poison centre or doctor.

Following skin contact: Take off immediately all contaminated clothing. Wash skin with plenty of soap and water. If skin irritation or rash occurs, get medical advice. Wash contaminated clothing before reuse.

Following eye contact: Rinse immediately and cautiously with water for at least 15 minutes, holding the eyelids open. Remove contact lenses, if present and easy to do. Call an ophthalmologist immediately.

Following ingestion: Do NOT induce vomiting because of the risk of aspiration into the lungs. Rinse mouth. Call a poison centre or

doctor immediately.

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

Causes serious eye damage.

Skin irritation and redness. Repeated contact may cause dryness or cracking of the skin.

May cause an allergic skin reaction (rash, itching), which can appear after repeated contact.

Inhalation of high vapour concentrations may cause headache, drowsiness and dizziness.

If swallowed, aspiration into the lungs may cause chemical pneumonitis, which can be fatal.

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

Note to physician: aspiration hazard. Do not induce vomiting. If the product has been swallowed, monitor for signs of chemical pneumonitis.

Eye contact requires prompt ophthalmological examination. Otherwise treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, dry chemical powder, carbon dioxide (CO_2), water spray (fog).

Unsuitable extinguishing media: Full water jet (may spread the fire).

5.2. Special hazards arising from the substance or mixture

Flammable liquid and vapour. Vapours are heavier than air, may form explosive mixtures with air and may travel to sources of ignition and flash back. Containers may burst when heated.

In case of fire, hazardous combustion products such as carbon monoxide (CO) and carbon dioxide (CO_2) may be formed.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and chemical protective clothing. Cool endangered containers with water spray. Prevent fire-fighting water from entering drains or watercourses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Use non-sparking tools and explosion-proof equipment. Ensure adequate ventilation.

Avoid contact with skin and eyes and avoid breathing vapours. Wear personal protective equipment (see section 8). Keep unprotected persons away.

6.2. Environmental precautions

Do not allow to enter drains, surface water or ground water. Inform the relevant authorities if the product reaches drains or watercourses.

6.3. Methods and material for containment and cleaning up

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth, universal binder). Collect with non-sparking tools into suitable closed containers for disposal (see section 13). Ventilate the area.

6.4. Reference to other sections

For personal protective equipment see section 8. For disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep away from sources of ignition. No smoking. Ground and bond containers and receiving equipment, and take precautionary measures against static discharges. Use explosion-proof equipment and non-sparking tools.

Avoid contact with skin and eyes. Avoid breathing vapours; use only with local exhaust ventilation or in well-ventilated areas. Do not eat, drink or smoke in work areas. Wash hands after use. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, well-ventilated place away from heat and sources of ignition. Keep container tightly closed. Store locked up. Keep only in the original container.

Keep away from strong oxidising agents and strong acids. Keep containers closed when not in use: on prolonged contact with air, d-limonene forms oxidation products (hydroperoxides) that are stronger skin sensitisers.

7.3. Specific end use(s)

Industrial degreasing of metal parts (see section 1.2).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Notation	Source
EU	2-Butoxyethanol	111-76-2	IOELV	20	98	50	246	Skin	Directive 2000/39/EC as amended
IE	2-Butoxyethanol	111-76-2	OELV	20	98	50	246	Skin	HSA 2026 Code of Practice for the Chemical Agents Regulations
EU	Dipropylene glycol methyl ether	34590-94-8	IOELV	50	308	–	–	Skin	Directive 2000/39/EC as amended
IE	Dipropylene glycol methyl ether	34590-94-8	OELV	50	308	–	–	Skin	HSA 2026 Code of Practice for the Chemical Agents Regulations

TWA Time-weighted average (long-term exposure limit), measured or calculated for a reference period of 8 hours

STEL Short-term exposure limit: a limit value above which exposure should not occur, related to a 15-minute period unless otherwise specified

Relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2 % aromatics	64742-48-9	DNEL	1500 mg/m³	Human, inhalation	Workers	Long-term, systemic effects
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2 % aromatics	64742-48-9	DNEL	300 mg/kg bw/day	Human, dermal	Workers	Long-term, systemic effects
2-Butoxyethanol	111-76-2	DNEL	98 mg/m³	Human, inhalation	Workers	Long-term, systemic effects
2-Butoxyethanol	111-76-2	DNEL	1091 mg/m³	Human, inhalation	Workers	Short-term, systemic effects
2-Butoxyethanol	111-76-2	DNEL	246 mg/m³	Human, inhalation	Workers	Short-term, local effects
2-Butoxyethanol	111-76-2	DNEL	125 mg/kg bw/day	Human, dermal	Workers	Long-term, systemic effects
2-Butoxyethanol	111-76-2	DNEL	89 mg/kg bw/day	Human, dermal	Workers	Short-term, systemic effects
d-Limonene	5989-27-5	DNEL	66.7 mg/m³	Human, inhalation	Workers	Long-term, systemic effects
d-Limonene	5989-27-5	DNEL	9.5 mg/kg bw/day	Human, dermal	Workers	Long-term, systemic effects
Dipropylene glycol methyl ether	34590-94-8	DNEL	308 mg/m³	Human, inhalation	Workers	Long-term, systemic effects
Dipropylene glycol methyl ether	34590-94-8	DNEL	283 mg/kg bw/day	Human, dermal	Workers	Long-term, systemic effects

Relevant PNECs of components

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment
2-Butoxyethanol	111-76-2	PNEC	8.8 mg/l	Aquatic organisms	Freshwater
2-Butoxyethanol	111-76-2	PNEC	0.88 mg/l	Aquatic organisms	Marine water
2-Butoxyethanol	111-76-2	PNEC	34.6 mg/kg	Aquatic organisms	Freshwater sediment
2-Butoxyethanol	111-76-2	PNEC	3.46 mg/kg	Aquatic organisms	Marine sediment
2-Butoxyethanol	111-76-2	PNEC	2.33 mg/kg	Terrestrial organisms	Soil
2-Butoxyethanol	111-76-2	PNEC	463 mg/l	Microorganisms	Sewage treatment plant
d-Limonene	5989-27-5	PNEC	0.014 mg/l	Aquatic organisms	Freshwater
d-Limonene	5989-27-5	PNEC	0.0014 mg/l	Aquatic organisms	Marine water
d-Limonene	5989-27-5	PNEC	3.85 mg/kg	Aquatic organisms	Freshwater sediment
d-Limonene	5989-27-5	PNEC	0.385 mg/kg	Aquatic organisms	Marine sediment
d-Limonene	5989-27-5	PNEC	0.763 mg/kg	Terrestrial organisms	Soil
d-Limonene	5989-27-5	PNEC	1.8 mg/l	Microorganisms	Sewage treatment plant
Dipropylene glycol methyl ether	34590-94-8	PNEC	19 mg/l	Aquatic organisms	Freshwater
Dipropylene glycol methyl ether	34590-94-8	PNEC	1.9 mg/l	Aquatic organisms	Marine water
Dipropylene glycol methyl ether	34590-94-8	PNEC	70.2 mg/kg	Aquatic organisms	Freshwater sediment
Dipropylene glycol methyl ether	34590-94-8	PNEC	7.02 mg/kg	Aquatic organisms	Marine sediment
Dipropylene glycol methyl ether	34590-94-8	PNEC	2.74 mg/kg	Terrestrial organisms	Soil
Dipropylene glycol methyl ether	34590-94-8	PNEC	4168 mg/l	Microorganisms	Sewage treatment plant

No EU or Irish occupational exposure limit value is set for the hydrocarbon solvent or for d-limonene.

Monitoring procedures: measure exposure by inhalation according to EN 689; for 2-butoxyethanol, for example NIOSH Method 1403.

8.2. Exposure controls

Appropriate engineering controls

Use local exhaust ventilation at dip tanks and parts washers, or good general ventilation, to keep vapour concentrations below the occupational exposure limits. Use explosion-proof ventilation equipment.

Individual protection measures (personal protective equipment)



Eye/face protection

Tightly fitting safety goggles (EN ISO 16321 / EN 166). Face shield where splashing is possible.

Skin protection: hand protection

Chemical-resistant gloves tested to EN ISO 374-1. Breakthrough time and thickness below are based on the main ingredients; confirm them with the glove manufacturer for the conditions of use.

- type of material

Nitrile rubber

- material thickness

≥ 0.4 mm

- breakthrough time

> 480 min

Skin protection: other

Chemical-resistant apron or coveralls; safety footwear.

Respiratory protection

If ventilation is insufficient: half- or full-face mask with gas filter type A (brown) (EN 14387).

Environmental exposure controls

Do not allow to enter drains or watercourses. Comply with the emission limits for volatile organic compounds that apply to the installation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Property	Value	Method / remarks
Physical state	Liquid	
Colour	Clear, colourless to pale yellow	
Odour	Citrus, solvent	
Melting point/freezing point	No data available.	
Boiling point or initial boiling point and boiling range	165 – 210 °C	
Flammability	Flammable liquid (Flam. Liq. 3); see flash point	
Lower and upper explosion limit	0.6 – 7.0 % (v/v)	Hydrocarbon component
Flash point	43 °C	Closed cup, ISO 2719
Auto-ignition temperature	> 230 °C	
Decomposition temperature	No data available.	
pH	Not applicable (non-aqueous product)	
Kinematic viscosity	1.4 mm²/s at 40 °C	
Solubility	Not miscible with water; miscible with most organic solvents	
Partition coefficient n-octanol/water (log value)	Not applicable (mixture)	
Vapour pressure	0.3 kPa at 20 °C	
Density and/or relative density	0.81 g/cm³ at 20 °C	
Relative vapour density	> 1 (air = 1)	
Particle characteristics	Not applicable (liquid)	

9.2. Other information

Volatile organic compound (VOC) content: about 96 % (w/w).

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is not reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under recommended storage and handling conditions.

10.3. Possibility of hazardous reactions

Vapours may form explosive mixtures with air. No hazardous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat, sparks, open flames, hot surfaces and other ignition sources. Static discharge.

10.5. Incompatible materials

Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

No hazardous decomposition products under normal conditions of storage and use. Fire produces carbon monoxide and carbon dioxide (see section 5.2).

SECTION 11: Toxicological information

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

Classification procedure: the classification of the mixture is based on its ingredients (calculation method of CLP Annex I).

Acute toxicity estimate (ATE) of the mixture

Exposure route	ATE (mixture)
Oral	6942 mg/kg bw
Inhalation (vapour)	23.1 mg/l

Acute toxicity estimate (ATE) of components

Name of substance	CAS No	Exposure route	ATE
2-Butoxyethanol	111-76-2	oral	1200 mg/kg bw
2-Butoxyethanol	111-76-2	inhalation: vapour	3 mg/l/4h
Alcohols, C9-11, ethoxylated	68439-46-3	oral	1400 mg/kg bw

Acute toxicity of components

Name of substance	CAS No	Exposure route	Endpoint	Value	Species	Exposure time	Source
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2 % aromatics	64742-48-9	oral	LD50	> 5000 mg/kg bw	Rat	–	OECD 401
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2 % aromatics	64742-48-9	dermal	LD50	3160 mg/kg bw	Rabbit	–	OECD 402
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2 % aromatics	64742-48-9	inhalation: vapour	LC50	> 4.95 mg/l (highest concentration tested)	Rat	4 h	–
2-Butoxyethanol	111-76-2	dermal	LD50	> 2000 mg/kg bw	Guinea pig	–	–
d-Limonene	5989-27-5	oral	LD50	> 2000 mg/kg bw	Rat	–	–
Dipropylene glycol methyl ether	34590-94-8	oral	LD50	> 5000 mg/kg bw	Rat	–	–
Dipropylene glycol methyl ether	34590-94-8	dermal	LD50	9510 mg/kg bw	Rabbit	–	–
Dipropylene glycol methyl ether	34590-94-8	inhalation: vapour	LC50	> 3.35 mg/l	Rat	7 h	–

Hazard class	Conclusion
Acute toxicity	Shall not be classified. Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Skin Irrit. 2 (calculation method)
Serious eye damage/irritation	Eye Dam. 1 (calculation method)
Respiratory or skin sensitisation	Skin Sens. 1B (calculation method)
Germ cell mutagenicity	Shall not be classified. Based on available data, the classification criteria are not met.
Carcinogenicity	Shall not be classified. Based on available data, the classification criteria are not met.
Reproductive toxicity	Shall not be classified. Based on available data, the classification criteria are not met.
STOT-single exposure	STOT SE 3 (narcotic effects) (calculation method)
STOT-repeated exposure	Shall not be classified. Based on available data, the classification criteria are not met.
Aspiration hazard	Asp. Tox. 1 (calculation method)

Information on ingredients

d-Limonene Skin sensitiser (local lymph node assay, positive).

Information on likely routes of exposure Skin and eye contact; inhalation; ingestion.

Symptoms related to the physical, chemical and toxicological characteristics	See section 4.2.
Delayed and immediate effects as well as chronic effects from short and long-term exposure	Immediate effects: skin irritation and redness; serious eye damage; drowsiness and dizziness at high vapour concentrations; chemical pneumonitis if the liquid is aspirated into the lungs after swallowing or vomiting. Delayed effects: allergic skin reaction (rash, itching), usually after repeated contact. Chronic effects: repeated skin contact may cause dryness or cracking of the skin (defatting).

Acute toxicity data: alcohols, C9-11, ethoxylated has a negligible vapour pressure, so acute toxicity by inhalation of vapour is not relevant for this ingredient. No acute dermal or inhalation data are available for d-limonene, and no acute dermal data for the ethoxylated alcohol (see the statement on unknown acute toxicity in section 2.2). The ATE of 2-butoxyethanol is the value set in CLP Annex VI.

11.2. Information on other hazards

11.2.1 Endocrine disrupting properties: The mixture does not contain substances identified as having endocrine disrupting properties at a concentration of 0.1 % or more.

11.2.2 Other information: No data available.

SECTION 12: Ecological information

12.1. Toxicity

Based on available data, the classification criteria for hazards to the aquatic environment are not met.

Aquatic toxicity (acute) of components

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2 % aromatics	64742-48-9	LL50 (WAF)	> 1000 mg/l	Oncorhynchus mykiss	96 h
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2 % aromatics	64742-48-9	EL50 (WAF)	> 1000 mg/l	Daphnia magna	48 h
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2 % aromatics	64742-48-9	ErL50 (WAF)	> 1000 mg/l	Desmodesmus subspicatus	72 h
2-Butoxyethanol	111-76-2	LC50	1474 mg/l	Oncorhynchus mykiss	96 h
d-Limonene	5989-27-5	LC50	0.72 mg/l	Fish	96 h
d-Limonene	5989-27-5	ErC50	0.32 mg/l	Algae	72 h

12.2. Persistence and degradability

Degradability of components

Name of substance	CAS No	Process	Degradation rate	Time	Method
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2 % aromatics	64742-48-9	Biodegradation	Readily biodegradable	28 d	OECD 301F
2-Butoxyethanol	111-76-2	Biodegradation	Readily biodegradable	28 d	OECD 301
d-Limonene	5989-27-5	Biodegradation	Readily biodegradable	28 d	OECD 301

The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

12.3. Bioaccumulative potential

Bioaccumulative potential of components

Name of substance	CAS No	Log KOW	Remarks
d-Limonene	5989-27-5	4.38	Log Kow ≥ 4: potential to bioaccumulate.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The mixture does not contain substances meeting the criteria for PBT or vPvB in accordance with REACH Annex XIII at 0.1 % or more.

12.6. Endocrine disrupting properties

The mixture does not contain substances identified as having endocrine disrupting properties at a concentration of 0.1 % or more.

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of contents and container as hazardous waste in accordance with national and local regulations. Do not allow to enter drains or watercourses. Empty containers retain product residue and flammable vapour: do not cut, weld, drill or expose them to heat. Dispose of uncleaned packaging in the same way as the product.

Hazardous waste properties (Regulation (EU) No 1357/2014 and Regulation (EU) 2017/997) — Waste of the product as supplied is hazardous waste (hazard properties: HP3, HP4, HP5, HP6). Assign the waste code from the European List of Waste (Decision 2000/532/EC) according to the use; a mirror entry must take the hazardous code.

Assessment: HP3 flammable (flash point 43 °C < 60 °C); HP4 irritant: Σ H315/H319 22 % ≥ 20 %; HP5 STOT/aspiration: Σ H304 81 % ≥ 10 % (kinematic viscosity 1.4 mm²/s ≤ 20.5 mm²/s at 40 °C); HP6 acute toxicity: Acute Tox. 3 inhal Σ 13 % ≥ 3.5 %.

SECTION 14: Transport information

14.1. UN number or ID number

Mode	UN number or ID number
ADR/RID	UN1993
IMDG	UN1993
IATA	UN1993

14.2. UN proper shipping name

Mode	UN proper shipping name
ADR/RID	FLAMMABLE LIQUID, N.O.S. (hydrocarbons, C9-C11, d-limonene)
IMDG	FLAMMABLE LIQUID, N.O.S. (hydrocarbons, C9-C11, d-limonene)
IATA	Flammable liquid, n.o.s. (hydrocarbons, C9-C11, d-limonene)

14.3. Transport hazard class(es)

Mode	Transport hazard class(es)
ADR/RID	3
IMDG	3
IATA	3

14.4. Packing group

Mode	Packing group
ADR/RID	III
IMDG	III
IATA	III

14.5. Environmental hazards

Environmentally hazardous: no. Marine pollutant (IMDG): no.

14.6. Special precautions for user

Additional information for each of the UN Model Regulations

ADR/RID

Classification code	F1
Danger label(s)	3
Special provisions	274, 601
Excepted quantities	E1
Limited quantities	5 L
Transport category	3
Tunnel restriction code	D/E
Hazard identification No	30

IMDG

Marine pollutant	No
Danger label(s)	3
Special provisions	223, 274, 955
Excepted quantities	E1
Limited quantities	5 L
EmS	F-E, S-E
Stowage category	A

IATA

Danger label(s)	3 (Flammable liquid)
Special provisions	A3
Excepted quantities	E1
Limited quantities	Y344 / 10 L
Passenger aircraft: packing instruction / max. net quantity	355 / 60 L
Cargo aircraft only: packing instruction / max. net quantity	366 / 220 L

14.7. Maritime transport in bulk according to IMO instruments

Not relevant.

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Name of substance	Entry	Conditions
ProClean HD Industrial Degreaser	3	Liquid mixture meeting the criteria for one of the hazard classes or categories listed in entry 3 (use in ornamental articles, tricks and jokes, games; lamp oils and grill lighter fluids).

List	Ingredients listed
Candidate List of substances of very high concern for authorisation (REACH Article 59)	None of the ingredients are listed.
List of substances subject to authorisation (REACH Annex XIV)	None of the ingredients are listed.
Seveso III Directive 2012/18/EU, Annex I Part 2 (named dangerous substances)	None of the ingredients are listed.

List	Ingredients listed
European Pollutant Release and Transfer Register (Regulation (EC) No 166/2006; replaced by Regulation (EU) 2024/1244 from 1 January 2028)	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2 % aromatics (NMVOC); 2-Butoxyethanol (NMVOC); d-Limonene (NMVOC); Dipropylene glycol methyl ether (NMVOC)
Water Framework Directive 2000/60/EC (list of pollutants / priority substances)	None of the ingredients are listed.
Persistent organic pollutants (Regulation (EU) 2019/1021)	None of the ingredients are listed.
Explosives precursors (Regulation (EU) 2019/1148)	None of the ingredients are listed.
Drug precursors (Regulation (EC) No 273/2004)	None of the ingredients are listed.
Substances that deplete the ozone layer (Regulation (EU) 2024/590)	None of the ingredients are listed.
Export and import of hazardous chemicals (PIC, Regulation (EU) No 649/2012)	None of the ingredients are listed.

Seveso Directive 2012/18/EU (Seveso III)

No.	Dangerous substances / hazard categories (Annex I, Part 1)	Qualifying quantity, lower-tier (t)	Qualifying quantity, upper-tier (t)
P5c	FLAMMABLE LIQUIDS Categories 2 or 3 not covered by P5a and P5b	5000	50000

Category P5a or P5b applies instead of P5c where the liquid is kept above its boiling point or under particular processing conditions, such as high pressure or high temperature.

Restrictions of occupation Directive 94/33/EC on the protection of young people at work: observe national rules on the protection of young people at work.

Labelling of contents (Regulation (EC) No 648/2004, Annex VII A): 30 % and more: aliphatic hydrocarbons; less than 5 %: non-ionic surfactants; limonene.

Directive 2010/75/EU (industrial emissions), Chapter V and Annex VII: installations that use organic solvents for surface cleaning above the consumption thresholds must meet the VOC emission limits.

Ireland: Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 (S.I. No. 619 of 2001), as amended, and the 2026 Code of Practice for the Chemical Agents Regulations; Chemicals Act (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 (S.I. No. 209 of 2015).

Poison centre notification: the mixture is notified to the appointed bodies under Article 45 and Annex VIII of CLP through the ECHA poison centres notification portal; UFI UU10-QU9N-S50M-H2GM (section 1.1).

Detergents Regulation (EC) No 648/2004: industrial and institutional detergents not available to the general public may give the Annex VII A content information in the technical or safety data sheet; surfactants must meet the biodegradability criteria of Annex III. Regulation (EU) 2026/405 replaces it from 23 September 2029.

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out for this mixture.

SECTION 16: Other information

Indication of changes First issue.

Classification procedure (Article 9 of Regulation (EC) No 1272/2008)

Classification	Procedure
Flam. Liq. 3	test data / expert judgement
Skin Irrit. 2	calculation method
Eye Dam. 1	calculation method
Skin Sens. 1B	calculation method
STOT SE 3 (narcotic effects)	calculation method
Asp. Tox. 1	calculation method

List of relevant phrases (code and full text as stated in sections 2 and 3)

EUH066	Repeated exposure may cause skin dryness or cracking.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
bw	Body weight
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DNEL	Derived No-Effect Level
EC No	European Community number (EINECS, ELINCS, NLP)
ECHA	European Chemicals Agency
ED	Endocrine disruptor
ED HH/ED ENV	Endocrine disruption for human health / for the environment
EmS	Emergency Schedule
EN	European Standard
ErC50	Concentration causing a 50 % reduction in growth rate
EUH	Supplemental hazard statement (CLP)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
GHS-HC	Harmonised classification (CLP Annex VI)
HP	Hazardous property of waste (Directive 2008/98/EC, Annex III)
HSA	Health and Safety Authority (Ireland)
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods Code
IOELV	Indicative Occupational Exposure Limit Value
ISO	International Organization for Standardization
LC50/LD50	Lethal concentration/dose 50 %
LL50/EL50/ErL50	Loading rate causing 50 % lethality / effect / growth-rate reduction (water-accommodated fraction)
log Kow	n-octanol/water partition coefficient
N.O.S.	Not otherwise specified
NIOSH	National Institute for Occupational Safety and Health (USA)
NMVOC	Non-methane volatile organic compounds
OECD	Organisation for Economic Co-operation and Development
OELV	Occupational exposure limit value
PBT	Persistent, Bioaccumulative and Toxic
PMT/vPvM	Persistent, Mobile and Toxic / very Persistent and very Mobile

PNEC	Predicted No-Effect Concentration
REACH	Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety data sheet
STEL	Short-Term Exposure Limit
STOT	Specific Target Organ Toxicity
TWA	Time-Weighted Average
UFI	Unique Formula Identifier
UN	United Nations
VOC	Volatile organic compound
vPvB	very Persistent and very Bioaccumulative
WAF	Water-accommodated fraction

Key literature and sources of data Supplier safety data sheets of the ingredients; ECHA C&L Inventory; ECHA Guidance on the compilation of safety data sheets, version 4.0, December 2020.

Training advice: workers must be trained in the hazards of this product and in the safe handling, storage and emergency measures described in this safety data sheet (Chemical Agents Directive 98/24/EC, Article 8).