

HDF CLEANER

Revision: 2024-10-22

Version: 01.1

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

1.1 Product identifier

Trade name: HDF CLEANER

1.2 Recommended use and restrictions on use

See product label.

For professional and industrial use only.

1.3 Details of the supplier of the safety data sheet

SOLENIS VIETNAM COMPANY LIMITED

Contact details

Level 4&5, M-Building, Lot C7B-02A, Block A, No.9 Street 8, Zone Saigon South New Urban Area, Tan Phu Ward, District 7, Ho Chi Minh City, VIETNAM

Tel. 0314996293

1.4 Emergency telephone number

In case of medical emergency, please seek professional medical advice.

SECTION 2: Composition/information on ingredients

2.1 Substances / Mixtures

Ingredient(s)	CAS number	EC number	Classification	Weight percent
Alcohols, C10-16, ethoxylated	68002-97-1	500-182-6	Serious eye damage, Category 1 (H318) Acute aquatic toxicity, Category 1 M=1 (H400) Chronic aquatic toxicity, Category 3 (H412)	10-20
2-butoxyethanol	111-76-2	203-905-0	Flammable liquids, Category 4 (H227) Acute toxicity - Oral, Category 4 (H302) Acute toxicity - Dermal, Category 4 (H312) Acute toxicity - Inhalation, Category 4 (H332) Skin irritation, Category 2 (H315) Eye irritation, Category 2A (H319)	3-10

Workplace exposure limit(s), if available, are listed in subsection 8.1.

ATE, if available, are listed in section 11.

SECTION 3: Hazards identification

3.1 Classification of the substance or mixture

Serious eye damage, Category 1

Acute aquatic toxicity, Category 2

3.2 Label elements



Signal word: Danger.

Hazard statements:

H318 - Causes serious eye damage.

H401 - Toxic to aquatic life.

Precautionary statements:

P280 - Wear eye or face protection.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTRE, doctor or physician.

HDF CLEANER**3.3 Other hazards**

No other hazards known. Exposure and appropriate engineering controls are specified in subsection 8.2 exposure controls.

3.4 Classification diluted product

Recommended maximum concentration (% w/w): 3

Acute aquatic toxicity, Category 3

3.5 Label elements diluted product**Hazard statements:**

H402 - Harmful to aquatic life.

SECTION 4: First aid measures**4.1 Description of first aid measures**

Inhalation:	Get medical attention or advice if you feel unwell.
Skin contact:	Wash skin with plenty of lukewarm, gently flowing water. If skin irritation occurs: Get medical advice or attention.
Eye contact:	Hold eyelids apart and flush eyes with plenty of lukewarm water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE, doctor or physician.
Ingestion:	Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Get medical attention or advice if you feel unwell.
Self-protection of first aider:	Consider personal protective equipment as indicated in subsection 8.2.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation:	No known effects or symptoms in normal use.
Skin contact:	No known effects or symptoms in normal use.
Eye contact:	Causes severe or permanent damage.
Ingestion:	No known effects or symptoms in normal use.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

No special hazards known.

5.3 Advice for firefighters

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear eye/face protection.

6.2 Environmental precautions

Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil. Dilute with plenty of water. Inform responsible authorities in case undiluted product reaches drainage system, surface or ground water or the ground/soil.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, universal binders).

6.4 Reference to other sections

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Measures to prevent fire and explosions:**

No special precautions required.

Measures required to protect the environment:

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For environmental exposure controls see subsection 8.2.

Advice on general occupational hygiene:

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless advised by Diversey. Wash hands before breaks and at the end of workday. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Use personal protective equipment as required. Avoid contact with eyes. Use only with adequate ventilation. See chapter 8.2, Exposure controls / Personal protection.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging. For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

7.3 Specific end use(s)

No specific advice for end use available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters**Workplace exposure limits**

Air limit values, if available:

Biological limit values, if available:

8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet. If available, please refer to the product information sheet for application and handling instructions. Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

Covering activities such as filling and transfer of product to application equipment, flasks or buckets

Appropriate engineering controls: If the product is diluted by using specific dosing systems with no risk of splashes or direct skin contact, the personal protection equipment as described in this section is not required.

Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

Personal protective equipment

Eye / face protection: Safety glasses or goggles (EN 16321 / EN 166).

Hand protection: No special requirements under normal use conditions.

Body protection: No special requirements under normal use conditions.

Respiratory protection: No special requirements under normal use conditions.

Environmental exposure controls: No special requirements under normal use conditions.

Recommended safety measures for handling the diluted product:

Recommended maximum concentration (% w/w): 3

Appropriate engineering controls: No special requirements under normal use conditions.

Appropriate organisational controls: No special requirements under normal use conditions.

Personal protective equipment

Eye / face protection: No special requirements under normal use conditions.

Hand protection: No special requirements under normal use conditions.

Body protection: No special requirements under normal use conditions.

Respiratory protection: No special requirements under normal use conditions.

Environmental exposure controls: No special requirements under normal use conditions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

	Method / remark
Physical state: Liquid	
Colour: Clear , Light , Green	
Odour: Product specific	
Odour threshold: Not applicable	
pH: ≈ 10 (neat)	ISO 4316
Melting point/freezing point (°C): Not determined	Not relevant to classification of this product
Initial boiling point and boiling range (°C): Not determined	

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Flammability (liquid): Not flammable.
Flash point (°C): Not applicable.
Sustained combustion: Not applicable.
 (UN Manual of Tests and Criteria, section 32, L.2)

Evaporation rate: Not determined
Flammability (solid, gas): Not applicable to liquids
Lower and upper explosion limit/flammability limit (%): Not determined
Vapour pressure: Not determined
Relative density: ≈ 0.99 (20 °C)
Relative vapour density: Not determined.
Particle characteristics: No data available.
Solubility in / Miscibility with water: Fully miscible
Partition coefficient: n-octanol/water No information available.

Not relevant to classification of this product

OECD 109 (EU A.3)
 Not relevant to classification of this product
 Not applicable to liquids.

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

Autoignition temperature: Not determined
Decomposition temperature: Not applicable.
Kinematic viscosity: Not determined
Explosive properties: Not explosive.
Oxidising properties: Not oxidising.

9.2 Other information

Surface tension (N/m): Not determined
Corrosion to metals: Not corrosive

SECTION 10: Stability and reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal storage and use conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known under normal storage and use conditions.

10.4 Conditions to avoid

None known under normal storage and use conditions.

10.5 Incompatible materials

Reacts with acids.

10.6 Hazardous decomposition products

None known under normal storage and use conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture data: .

Relevant calculated ATE(s):

ATE - Oral (mg/kg): >5000
 ATE - Dermal (mg/kg): >5000
 ATE - Inhalatory, vapours (mg/l): 290

Substance data, where relevant and available, are listed below:.

Acute toxicity

Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
Alcohols, C10-16, ethoxylated	LD ₅₀	> 300	Rat		
2-butoxyethanol	LD ₅₀	1746	Rat	ATE - Acute Toxicity	

				Estimate	
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Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
Alcohols, C10-16, ethoxylated	LD ₅₀	> 2000	Rabbit		
2-butoxyethanol	LD ₅₀	6411		Method not given	

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
Alcohols, C10-16, ethoxylated		No data available			
2-butoxyethanol	LC ₅₀	> 2 (mist) No mortality observed	Rat	Method not given	4

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
Alcohols, C10-16, ethoxylated	No data available			
2-butoxyethanol	Irritant	Rabbit	OECD 404 (EU B.4)	24; 48; 72 hour(s)

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
Alcohols, C10-16, ethoxylated	No data available			
2-butoxyethanol	Irritant	Rabbit	OECD 405 (EU B.5)	24; 48; 72 hour(s)

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
Alcohols, C10-16, ethoxylated	No data available			
2-butoxyethanol	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
Alcohols, C10-16, ethoxylated	No data available			
2-butoxyethanol	Not sensitising	Guinea pig	OECD 406 (EU B.6) / GPMT	

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
Alcohols, C10-16, ethoxylated	No data available			
2-butoxyethanol	No data available			

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
Alcohols, C10-16, ethoxylated	No data available		No data available	
2-butoxyethanol	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) OECD 476 (Chinese Hamster Ovary)	No evidence for mutagenicity, negative test results	OECD 474 (EU B.12)

Carcinogenicity

Ingredient(s)	Effect
Alcohols, C10-16, ethoxylated	No data available
2-butoxyethanol	No evidence for carcinogenicity, negative test results

Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
Alcohols, C10-16, ethoxylated			No data available				
2-butoxyethanol			No data available				

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Repeated dose toxicity

Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
Alcohols, C10-16, ethoxylated		No data available				
2-butoxyethanol		No data available				

Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
Alcohols, C10-16, ethoxylated		No data available				
2-butoxyethanol		No data available				

Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
Alcohols, C10-16, ethoxylated		No data available				
2-butoxyethanol		No data available				

Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
Alcohols, C10-16, ethoxylated			No data available					
2-butoxyethanol			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
Alcohols, C10-16, ethoxylated	No data available
2-butoxyethanol	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
Alcohols, C10-16, ethoxylated	No data available
2-butoxyethanol	No data available

Aspiration hazard

Substances with an aspiration hazard (H304), if any, are listed in section 3. If relevant, see section 9 for dynamic viscosity and relative density of the product.

Potential adverse health effects and symptoms

Effects and symptoms related to the product, if any, are listed in subsection 4.2.

SECTION 12: Ecological information**12.1 Toxicity**

No data is available on the mixture.

Substance data, where relevant and available, are listed below:

Aquatic short-term toxicity

Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
Alcohols, C10-16, ethoxylated	LC ₅₀	0.876	Fish	Method not given	96
2-butoxyethanol	LC ₅₀	> 100	<i>Oncorhynchus mykiss</i>	OECD 203, static	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
Alcohols, C10-16, ethoxylated	LC ₅₀	0.39	<i>Daphnia</i>	Read across	48

2-butoxyethanol	EC ₅₀	> 100	<i>Daphnia magna</i> Straus	OECD 202, static	48
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Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
Alcohols, C10-16, ethoxylated	EC ₅₀	1			72
2-butoxyethanol	EC ₅₀	> 100	<i>Pseudokirchneriella subcapitata</i>	OECD 201, static	72

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
Alcohols, C10-16, ethoxylated		No data available			
2-butoxyethanol		No data available			

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
Alcohols, C10-16, ethoxylated		No data available			
2-butoxyethanol	EC ₀	700	<i>Pseudomonas putida</i>	Method not given	16 hour(s)

Aquatic long-term toxicity

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
Alcohols, C10-16, ethoxylated		No data available				
2-butoxyethanol	NOEC	> 100	<i>Danio rerio</i>	OECD 204	21 day(s)	

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
Alcohols, C10-16, ethoxylated		No data available				
2-butoxyethanol	NOEC	100	<i>Daphnia magna</i>	OECD 211	21 day(s)	

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw sediment)	Species	Method	Exposure time (days)	Effects observed
Alcohols, C10-16, ethoxylated		No data available				

Terrestrial toxicity

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Terrestrial toxicity - plants, if available:

Terrestrial toxicity - birds, if available:

Terrestrial toxicity - beneficial insects, if available:

Terrestrial toxicity - soil bacteria, if available:

12.2 Persistence and degradability

Abiotic degradation

Abiotic degradation - photodegradation in air, if available:

Abiotic degradation - hydrolysis, if available:

Abiotic degradation - other processes, if available:

Biodegradation

Ready biodegradability - aerobic conditions

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Ingredient(s)	Inoculum	Analytical method	DT ₅₀	Method	Evaluation
Alcohols, C10-16, ethoxylated			> 60% in 28 day(s)	OECD 301B	Readily biodegradable
2-butoxyethanol		CO ₂ production	90.4 % in 28 day(s)	OECD 301B	Readily biodegradable

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
Alcohols, C10-16, ethoxylated	5.03	QSAR		
2-butoxyethanol	0.81	OECD 107	Low potential for bioaccumulation	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
Alcohols, C10-16, ethoxylated	No data available				
2-butoxyethanol	No data available				

12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log Koc	Desorption coefficient Log Koc(des)	Method	Soil/sediment type	Evaluation
Alcohols, C10-16, ethoxylated	No data available				
2-butoxyethanol	No data available				Potential for mobility in soil, soluble in water

12.5 Other adverse effects

No other adverse effects known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused products:

The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

Empty packaging

Recommendation:

Dispose of observing national or local regulations.

Suitable cleaning agents:

Water, if necessary with cleaning agent.

SECTION 14: Transport information

Land transport, Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)

14.1 UN number: Non-dangerous goods

14.2 UN proper shipping name: Non-dangerous goods

14.3 Transport hazard class(es): Non-dangerous goods

14.4 Packing group: Non-dangerous goods

14.5 Environmental hazards: Non-dangerous goods

14.6 Special precautions for user: Non-dangerous goods

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: The product is not transported in bulk tankers. Non-dangerous goods

Other relevant information:

Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

SECTION 15: Regulatory information

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

National regulations

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- Decree 108/2008/NP-CP Circular No.: 04/2012/TT-BCT Regulations on the Classification and Labeling of Chemicals

SECTION 16: Other information

The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract

SDS code: MS4800120

Version: 01.1

Revision: 2024-10-22

Reason for revision:

1, Not applicable

Abbreviations and acronyms:

- DNEL - Derived No Effect Limit
- PNEC - Predicted No Effect Concentration
- ATE - Acute Toxicity Estimate
- LD50 - Lethal Dose, 50% / Median Lethal dose
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- EC50 - effective concentration, 50%
- NOEL - No observed effect level
- NOAEL - No observed adverse effect level
- STOT-RE - Specific target organ toxicity (repeated exposure)
- STOT-SE - Specific target organ toxicity (single exposure)
- OECD - Organisation for Economic Cooperation and Development
- H227 - Combustible liquid.
- H302 - Harmful if swallowed.
- H312 - Harmful in contact with skin.
- H315 - Causes skin irritation.
- H318 - Causes serious eye damage.
- H319 - Causes serious eye irritation.
- H332 - Harmful if inhaled.
- H400 - Very toxic to aquatic life.
- H412 - Harmful to aquatic life with long lasting effects.

End of Safety Data Sheet