

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier****Trade name**

CleanSeam.Fluid

REACH-Registration no.

01-2119485924-24-XXXX

Use of the substance/mixture

Intermediate, Laboratory chemicals, Descaling compound/ Scale solvent, Corrosion inhibitors, pH-corrective agent, Processing aid, Degreasing agent, Metal surface treatment, Industrial use

1.3. Details of the supplier of the safety data sheet**Address**

CleanSeam GmbH & Co.KG

Speditionstraße 8

40221 Düsseldorf

E-mail address

weld@cleanseam.de

1.4. Emergency telephone number

Poison center Bonn: +49 0228 / 19 240

SECTION 2: Hazards identification *****2.1. Classification of the substance or mixture****Classification (Regulation (EC) No. 1272/2008)**

Met. Corr. 1

H290

Acute Tox. 4

H302

Skin Corr. 1B

H314

2.2. Label elements**Labelling according to regulation (EC) No 1272/2008****Hazard pictograms *******Signal word**

Danger

Hazard statements ***

H302

Harmful if swallowed.

H290

May be corrosive to metals.

H314

Causes severe skin burns and eye damage.

Precautionary statements

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338

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

P304+P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P301+P330+P331

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Further supplemental information

Restricted to professional users

2.3. Other hazards**PBT and vPvB**

You find the results of PBT and vPvB assessment in section 12.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous ingredients (Regulation (EC) No. 1272/2008)****Phosphoric acid**

CAS No.	7664-38-2	
EINECS no.	231-633-2	
REACH-Registration no.	01-2119485924-24-XXXX	
Concentration	< 50%	
Met. Corr. 1	H290	
Acute Tox. 4	H302	
Skin Corr. 1B	H314	
Concentration limits (Regulation (EC) No. 1272/2008)		
Skin Corr. 1B	H314	>= 25 < 25
Eye Irrit. 2	H319	<= 10 < 25
Skin Irrit. 2	H315	<= 10 < 25

Complete text of H-phrases in Chapter 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Remove affected person from danger area, lay him down. Remove contaminated, soaked clothing immediately and dispose of safely. Irregular breathing/no breathing: artificial respiration. If the patient is likely to become unconscious, place and transport in stable sideways position.

After inhalation

Remove the casualty into fresh air and keep him calm. Summon a doctor immediately.

After skin contact

Wash immediately with plenty of water for several minutes. Summon a doctor immediately.

After eye contact

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Summon a doctor immediately.

After ingestion

Rinse out mouth and give plenty of water to drink. Do not induce vomiting. Summon a doctor immediately.

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

Causes burns.

Risk of pneumonia; Risk of stomach perforation

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

Keep under medical supervision for at least 48 hours.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide, Water spray jet, Dry powder, Foam, Product itself is non-combustible; adapt fire extinguishing measures to surrounding areas.

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Reactions with metals, with evolution of hydrogen. In the event of fire the following can be released: Phosphorus oxides (e.g. P₂O₅); Phosphorus trihydride (phosphine)

5.3. Advice for firefighters

Use self-contained breathing apparatus. Wear full protective suit.

Cool endangered containers with water spray jet. Collect contaminated fire-fighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Ensure adequate ventilation. Use breathing apparatus if exposed to vapours/dust/aerosol. Avoid contact with skin, eyes and clothing. High risk of slipping due to leakage/spillage of product.

6.2. Environmental precautions

Do not allow to enter drains or waterways. Do not discharge into the subsoil/soil. Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3. Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Neutralization agent use. When picked up, treat material as prescribed under Section 13 "Disposal".

6.4. Reference to other sections

Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep container tightly closed. Handle and open container with care. Avoid formation of aerosols. Provide good ventilation of working area (local exhaust ventilation if necessary). When diluting, always stir product into water. Take off immediately all contaminated clothing. Avoid contact with skin and eyes. Keep separated from food-stuffs and feed-stocks. At work do not eat, drink, smoke or take drugs. Wash hands before breaks and after work. Do not inhale gases/vapours/aerosols.

Advice on protection against fire and explosion

No special measures required.

7.2. Conditions for safe storage, including any incompatibilities

Provide acid-resistant floor. Keep only in the original container.

Do not store together with: Alkalis, Reducing agents, Metals

storage category TRGS 510

8 B

Not combustible corrosive hazardous substances

Keep container tightly closed and in a well-ventilated place. Protect from heat/overheating.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit values

Phosphoric acid

List TRGS 900

Type AGW

Long term exposure limit 2 mg/m³

Maximum limit value: 2(l)

Pregnancy group: Y

Status: 4.4.2013

Remarks: DFG, AGS

Derived No/Minimal Effect Levels (DNEL/DMEL)

Phosphoric acid

DNEL

Conditions	Worker	Long term	inhalative	Local effects
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Concentration		2,92 mg/m ³		
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DNEL

Conditions	General Population	Long term	inhalative	Local effects
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Concentration		0,73 mg/m ³		
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8.2. Exposure controls**Respiratory protection in accordance with DIN EN 136 / DIN EN 140 / DIN EN 143 / DIN EN 149**

Breathing apparatus in the event of aerosol or mist formation. In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device. Short term: filter apparatus, combination filter E-P2; Short term: filter apparatus, combination filter B-P2

Hand protection in accordance with DIN EN 374

Appropriate Material	Chloroprene
Material thickness	>= 0,6 mm
Breakthrough time	>= 480 min

Eye protection in accordance with DIN EN 166

Tightly fitting safety glasses

Body protection in accordance with DIN EN 465

Acid-resistant protective clothing

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Appearance**

Form	liquid
Colour	colourless
Odour	odourless

Odour threshold

Remarks	No data available
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pH value

Value	< 1
Concentration/H ₂ O	23 g/l
Temperature	20 °C

Melting point/freezing point

Remarks	No data available
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Initial boiling point and boiling range

Value	appr. 140 °C
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Flash point

Remarks	Not applicable
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Evaporation rate

Remarks	No data available
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Flammability (solid, gas)

Not ignitable

Upper/lower flammability or explosive limits

Remarks	Not applicable
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Vapour pressure

Remarks	No data available
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Vapour density

Remarks	No data available
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Relative density

Value	1,335 g/ml
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Solubility(ies)

Medium	Water
Remarks	Completely miscible

Partition coefficient: n-octanol/water

Not applicable

Auto-ignition temperature

Remarks	Not applicable
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Decomposition temperature

Remarks	No data available
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Viscosity

Remarks	No data available
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Explosive properties

Remarks This product is not potentially explosive.

Oxidising properties

evaluation not oxidizing

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity**10.1. Reactivity**

see Possibility of hazardous reactions

10.2. Chemical stability

No decomposition if used as prescribed.

10.3. Possibility of hazardous reactions

Corrosive to metals. Reactions with reducing agents. Reactions with alkalis.

Reactions with metals, with evolution of hydrogen.

10.4. Conditions to avoid

To avoid thermal decomposition do not overheat.

10.5. Incompatible materials

Reducing agents, metals, Alkalis, Ammonia

10.6. Hazardous decomposition productsPhosphorus oxides (e.g. P₂O₅), Hydrogen**SECTION 11: Toxicological information *******11.1. Information on toxicological effects**

Acute oral toxicity (Components) ***

Phosphoric acid

Species

rat

LD50

>= 300 mg/kg

Method

WoE approach

Acute dermal toxicity (Components)**Phosphoric acid**

Species

rabbit

LD50

2740 mg/kg

Acute inhalative toxicity (Components)**Phosphoric acid**

No information available.

Skin corrosion/irritation

evaluation

corrosive

Corrosive action on the skin and mucous membrane.

Serious eye damage/irritation

evaluation

strongly corrosive

Sensitization (Components)**Phosphoric acid**

not investigated - substance is corrosive

Mutagenicity (Components)**Phosphoric acid**

Based on available data, the classification criteria are not met.

Carcinogenicity (Components)**Phosphoric acid**

Based on available data, the classification criteria are not met.

Reproduction toxicity (Components)**Phosphoric acid**

Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity (STOT)**Single exposure**

May cause respiratory irritation.

Repeated exposure

No data available

Aspiration hazard

No information available.

Other information

Strong caustic effect in the mouth and throat and danger of perforation of the esophagus and stomach.

SECTION 12: Ecological information**12.1. Toxicity****Fish toxicity (Components)****Phosphoric acid**

Species	Gambusia affinis
LC50	138 mg/l
Duration of exposure	96 h

Daphnia toxicity (Components)**Phosphoric acid**

Species	Daphnia magna
EC50	> 100 mg/l
Duration of exposure	48 h
Method	OECD 202
Remarks	Static system
Species	Daphnia magna
NOEC	56 mg/l
Duration of exposure	48 h
Method	OECD 202

Algae toxicity (Components)**Phosphoric acid**

Species	Desmodesmus subspicatus
EC50	> 100 mg/l
Duration of exposure	72 h
Method	OECD 201
Remarks	Static system
Species	Desmodesmus subspicatus
NOEC	100 mg/l
Duration of exposure	72 h
Method	OECD 201

Bacteria toxicity (Components)**Phosphoric acid**

Species	activated sludge
EC50	270 mg/l

12.2. Persistence and degradability**Biodegradability (Components)****Phosphoric acid**

Inorganic product, cannot be eliminated from the water by biological purification processes.

12.3. Bioaccumulative potential**Partition coefficient: n-octanol/water**

Not applicable

12.4. Mobility in soil

Will not adsorb on soil.

12.5. Results of PBT and vPvB assessment

No valuation for anorganic substances necessary.

12.6. Other adverse effects

Behaviour in environment compartments

Harmful effect due to pH shift. Can contribute to eutrophication of waters.

Behaviour in sewers [waste treatment plants]

The product is an acid. Neutralization is normally necessary before a waste water is discharged into sewage treatment plants.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations for the product**

Allocation of a waste code number, according to the European Waste Catalogue (EWC), should be carried out in agreement with the regional waste disposal company.

Disposal recommendations for packaging

Packaging that cannot be cleaned should be disposed off in agreement with the regional waste disposal company.

SECTION 14: Transport information**Land transport ADR/RID**

14.1. UN number	1805
14.2. UN proper shipping name	PHOSPHORIC ACID, SOLUTION
14.3. Transport hazard class(es)	8
Label	8
14.4. Packing group	III
14.5. Environmental hazards	-
Tunnel restriction code	E
14.6. Special precautions for user	No information available.
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available.

Marine transport IMDG/GGVSee

14.1. UN number	1805
14.2. UN proper shipping name	PHOSPHORIC ACID, SOLUTION
14.3. Transport hazard class(es)	8
14.4. Packing group	III
14.5. Environmental hazards	-
EmS	F-A, S-B
14.6. Special precautions for user	No information available.
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available.

Air transport ICAO/IATA

14.1. UN number	1805
14.2. UN proper shipping name	PHOSPHORIC ACID, SOLUTION
14.3. Transport hazard class(es)	8
14.4. Packing group	III
14.5. Environmental hazards	-
14.6. Special precautions for user	No information available.
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Water Hazard Class (Germany)**

Water Hazard Class (Germany) WGK 1

Classification according to Betriebssicherheitsverordnung (BetrSichV)

not applicable

VOC-Content according to directive 2010/75/EU

VOC (EU) 0 %

SVHC

The product does not contain substances of very high concern (SVHC).

Registration status**Phosphoric acid**

AICS (Australian Inventory of Chemical Substances)	listed
DSL (Canada)	listed
IECSC (China)	listed
EINECS	listed
ENCS (Japan)	listed
ECL (Korea)	listed
PICCS (Philippines)	listed
TSCA (USA)	listed

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information**Hazard statements listed in Chapter 3**

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

CLP categories listed in Chapter 3

Acute Tox. 4	Acute toxicity, Category 4
Met. Corr. 1	Substance or mixture corrosive to metals, Category 1
Skin Corr. 1B	Skin corrosion, Category 1B

Abbreviations

AC: Article Category

ACGIH: American Conference of Governmental Industrial Hygienists

ADN: Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure

ADNR: Accord européen relatif au transport international des marchandises dangereuses par navigation sur le Rhin

ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route

AGW: Arbeitsplatzgrenzwert

AICS: Australian Inventory of Chemical Substances

AOX: adsorbable organically bound halogens

ARW: Arbeitsplatzrichtwert (Germany)

ASTM: American Society for Testing And Materials

ATE: acute toxicity estimates

ATP: Adaptation to technical and scientific progress

AWsV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Germany)

BAR: Biologischer Arbeitsstoff-Referenzwert

BCF: bioconcentration factor

BetrSichV: Betriebssicherheitsverordnung (Germany)

BG: Berufsgenossenschaft (Germany)

BGW: Biologischer Grenzwert

BLW: Biologischer Leitwert

BOD: biochemical oxygen demand

Lowest lethal concentration

LOAEC: Lowest Observable Adverse Effect Concentration

LOAEL: Lowest observed adverse effect level

LOEC: Lowest observed effect concentration

LOEL: Lowest observed effect level

Log pow: logarithm of the distribution coefficient n-octanol / water

LQ: limited quantity

MAC: Maximale aanvaarde concentratie (Netherlands)

MAK: Maximale Arbeitsplatz-Konzentration

MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (MARPOL: Marine Pollution)

MEL: Maximum exposure limits

MITI: Ministry of International Trade and Industry (Japan)

n.a.g.: nicht anders genannt

NATEC: Naval Air Technical Data and Engineering Service Command

LOAEC: Lowest Observable Adverse Effect Concentration

NLP: No-longer Polymer

NOAEC: No observed adverse effect concentration

NOAEL: no observable adverse effect level

NOEC: No observable effect concentration

NOEL: No observable effect level

NOELR: no observable effect loading rate

NZIOC: New Zealand Inventory of Chemicals

OECD: Organisation for Economic Co-operation and Development

OEL: Occupational exposure limit

OELV: Occupational exposure limit value

OES: Occupational exposure standards

PBT: Persistent, Bioaccumulative and Toxic

PC: Product Category

PEC: Predicted environmental concentration

PICCS: Philippine Inventory of Chemicals and Chemical Substances

PNEC: predicted no effect concentration

PNEC: Predicted no effect concentration

pOW: Octanol-water partition coefficient

PROC: Process Category

REACH: Registration, Evaluation, Autohorisation and Restriction of Chemicals

RID: Règlement concernant le transport international ferroviaire de marchandises dangereuses

RTECS: Registry of Toxic Effects of Chemical Substances

SAE: Society of Automotive Engineers

STP: Sewage treatment plant

SU: Sector of Use

SUVA: Schweizerische Unfallversicherungsanstalt

SVHC: Substances of very high concern

TA Luft: Technische Anleitung zur Reinhaltung der Luft

TCCL: Toxic Chemical Control Law

ThOD: theoretical oxygen demand

TRA: targeted risk assessment

TRG: Technische Regeln Druckgase (Germany)

TRgA: Technische Regeln für gefährliche Arbeitsstoffe(Germany)

TRGS: Technische Regeln für Gefahrstoffe

TRK: Technische Richtkonzentration

TSCA: Toxic Substances Control Act (USA)

UN: United Nations

VbF: Verordnung über brennbare Flüssigkeiten

VCI: Verband der Chemischen Industrie e.V.

VDE: Verband der Elektrotechnik, Elektronik und Informtaionstechnik e.V.

VDI: Verein Deutscher Ingenieure

VLEP: Valeurs Limites d'exposition Professionnelle

VOC: Volatile Organic Compound

vPvB: Very persistent and very bioaccumulative

VwVwS: Verwaltungsvorschrift wassergefährdende Stoffe

WEL: Workplace exposure limit

WGK: water hazard class (Germany)

WHO: World Health Organization

WoE: Weight of Evidence

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.