

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

PHOSPHORIC ACID \geq 25% (ALL GRADES)

Version 5.0

Print Date 2013/11/19

Revision date / valid from 2013/11/19

MSDS code: MPHA679

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

1.1. Product identifier

Trade name : PHOSPHORIC ACID \geq 25% (ALL GRADES)
 Substance name : phosphoric acid
 Index-No. : 015-011-00-6
 CAS-No. : 7664-38-2
 EC-No. : 231-633-2
 Registration number : 01-2119485924-24-xxxx

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

Use of the Substance/Mixture : At this time we do not yet have information on identified uses. They will be included in this safety data sheet when available.
 Uses advised against : At this moment we have not identified any uses advised against

1.3. Details of the supplier of the safety data sheet

Company : Brenntag UK & Ireland
 Albion House, Rawdon Park
 GB LS19 7XX Leeds Yeadon
 Telephone : +44 (0) 113 3879 200
 Telefax : +44 (0) 113 3879 280
 E-mail address : msds@brenntag.co.uk

1.4. Emergency telephone number

Emergency telephone number : Emergency only telephone number (open 24 hours):
 +44 (0) 1865 407333 (N.C.E.C. Culham)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008			
Hazard class	Hazard category	Target Organs	Hazard statements
Skin corrosion	Category 1B	---	H314

PHOSPHORIC ACID $\geq 25\%$ (ALL GRADES)

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Directive 67/548/EEC or 1999/45/EC	
Hazard symbol / Category of danger	Risk phrases
Corrosive (C)	R34


For the full text of the R-phrases mentioned in this Section, see Section 16.

Most important adverse effects

- Human Health : See section 11 for toxicological information.
- Physical and chemical hazards : See section 9 for physicochemical information.
- Potential environmental effects : See section 12 for environmental information.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

- Hazard symbols : 
- Signal word : Danger
- Hazard statements : H314 Causes severe skin burns and eye damage.
- Precautionary statements
- Prevention : P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response : P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353 IF ON SKIN (or hair): Remove/ 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.
 P308
 P310 IF exposed or concerned: Immediately call a POISON CENTER or doctor/ physician.

PHOSPHORIC ACID \geq 25% (ALL GRADES)

Hazardous components which must be listed on the label:

- phosphoric acid

2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.

Section 3: Composition/information on ingredients

3.1. Substances

Chemical nature : Aqueous solution

Hazardous components	Amount [%]	Classification (REGULATION (EC) No 1272/2008)		Classification (67/548/EEC)
		Hazard class / Hazard category	Hazard statements	
phosphoric acid				
Index-No. : 015-011-00-6		Skin Corr.1B	H314	Corrosive; C; R34
CAS-No. : 7664-38-2	\geq 25			
EC-No. : 231-633-2				
Registration : 01-2119485924-24-xxxx				

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4: First aid measures

4.1. Description of first aid measures

- General advice : Take off all contaminated clothing immediately.
- If inhaled : In case of accident by inhalation: remove casualty to fresh air and keep at rest. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.
- In case of skin contact : Wash off immediately with soap and plenty of water. Call a physician immediately.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.
- If swallowed : Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician immediately.

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

Symptoms : corrosive effects

PHOSPHORIC ACID $\geq 25\%$ (ALL GRADES)

Effects : See Section 11 for more detailed information on health effects and symptoms.

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

Treatment : Treat symptomatically.

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.

Unsuitable extinguishing media : No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : Gives off hydrogen by reaction with metals. Risk of explosion. Decomposes on heating. Under fire conditions: oxides of phosphorus, The formation of caustic fumes is possible.

5.3. Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Wear appropriate body protection (full protective suit)

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment. Keep away unprotected persons. Avoid contact with skin and eyes. Do not breathe vapours or spray mist.

6.2. Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities. Avoid subsoil penetration. If material reaches soil inform authorities responsible for such cases.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up : Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders). Keep in suitable, closed containers for disposal. Clean-up methods - small spillage: Neutralize with chalk, alkali solution or ammonia.

Further information : Treat recovered material as described in the section "Disposal"

PHOSPHORIC ACID $\geq 25\%$ (ALL GRADES)

considerations".

6.4. Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment.
See Section 13 for waste treatment information.

Section 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling : Keep container tightly closed. Use personal protective equipment. Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Hygiene measures : Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Avoid contact with the skin and the eyes. Take off all contaminated clothing immediately. Avoid contact with skin and clothing. Do not breathe vapours or spray mist.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in an area equipped with acid resistant flooring. Store in original container.

Advice on protection against fire and explosion : The product is not flammable. Normal measures for preventive fire protection. Gives off hydrogen by reaction with metals. Risk of explosion.

Further information on storage conditions : Keep tightly closed in a dry and cool place. Avoid moisture. Product is hygroscopic. Keep in a well-ventilated place.

Advice on common storage : Incompatible with bases. Keep away from food, drink and animal feedingstuffs.

7.3. Specific end use(s)

Specific use(s) : No information available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Component: phosphoric acid

CAS-No.
7664-38-2

PHOSPHORIC ACID \geq 25% (ALL GRADES)

Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)

Workers, Long-term - local effects, Inhalation	:	2.92 mg/m ³
Population, Long-term - local effects, Inhalation	:	0.73 mg/m ³

Other Occupational Exposure Limit Values

EU ELV, Short Term Exposure Limit (STEL):
2 mg/m³
Indicative

EU ELV, Time Weighted Average (TWA):
1 mg/m³
Indicative

EH40 WEL, Time Weighted Average (TWA):
1 mg/m³

EH40 WEL, Short Term Exposure Limit (STEL):
2 mg/m³

ELV (IE), Time Weighted Average (TWA):
1 mg/m³
Indicative OELV

ELV (IE), Short Term Exposure Limit (STEL):
2 mg/m³
Indicative OELV

8.2. Exposure controls

Appropriate engineering controls

Refer to protective measures listed in sections 7 and 8.

Personal protective equipment

Respiratory protection

Advice : Required, if exposure limit is exceeded (e.g. OEL).
Required if vapours or aerosol are released.
In case of brief exposure or low pollution use breathing filter apparatus.
Combination filter: B-P2

Hand protection

Advice : The glove material has to be impermeable and resistant to the product / the substance / the preparation.
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

PHOSPHORIC ACID $\geq 25\%$ (ALL GRADES)

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Protective gloves should be replaced at first signs of wear.
The following materials are suitable:

Material : butyl-rubber
Break through time : ≥ 8 h
Glove thickness : 0.5 mm

Material : polychloroprene
Break through time : ≥ 8 h
Glove thickness : 0.5 mm

Material : Polyvinylchloride
Break through time : ≥ 8 h
Glove thickness : 0.5 mm

Material : Nitrile rubber
Break through time : ≥ 8 h
Glove thickness : 0.35 mm

Material : Fluorinated rubber
Break through time : ≥ 8 h
Glove thickness : 0.4 mm

Eye protection

Advice : Tightly fitting safety goggles

Skin and body protection

Advice : Acid resistant protective clothing.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.
Avoid subsoil penetration.
If material reaches soil inform authorities responsible for such cases.

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

Form : liquid

PHOSPHORIC ACID \geq 25% (ALL GRADES)

Colour	:	colourless to greenish
Odour	:	odourless
Odour Threshold	:	no data available
pH	:	< 1 (20 °C)
Melting point/range	:	no data available
Boiling point/boiling range	:	no data available
Flash point	:	does not flash
Evaporation rate	:	no data available
Flammability (solid, gas)	:	not applicable
Upper explosion limit	:	not applicable
Lower explosion limit	:	not applicable
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	no data available
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	not applicable
Thermal decomposition	:	no data available
Viscosity, dynamic	:	no data available
Explosivity	:	Product is not explosive.
Oxidizing properties	:	not oxidising

9.2. Other information

No further information available.

Section 10: Stability and reactivity
10.1. Reactivity

Advice : No decomposition if stored and applied as directed.

PHOSPHORIC ACID \geq 25% (ALL GRADES)

10.2. Chemical stability

Advice : The product is chemically stable.

10.3. Possibility of hazardous reactions

Hazardous reactions : Gives off hydrogen by reaction with metals. Exothermic reaction with: Alkali metals

10.4. Conditions to avoid

Conditions to avoid : No information available.

10.5. Incompatible materials

Materials to avoid : Bases, Oxidizing agents

10.6. Hazardous decomposition products

Hazardous decomposition products : Gives off hydrogen by reaction with metals. In case of fire hazardous decomposition products may be produced such as: oxides of phosphorus, phosphine

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Inhalation

Inhalation may cause pain in respiratory system, sneezing, coughing and difficulty in breathing. Risk for pulmonary edema by high concentration.

Further information

Other relevant toxicity information : If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Component:	phosphoric acid	CAS-No.
		7664-38-2

Acute toxicity

Oral

LD50 Oral : 2600 mg/kg (rat, female) (OECD 423)

Dermal

LD50 Dermal : 2740 mg/kg (rabbit)

PHOSPHORIC ACID \geq 25% (ALL GRADES)
Irritation
Skin

Result : corrosive effects (rabbit) (OECD Test Guideline 404)

Eyes

Result : corrosive effects (rabbit)

Sensitisation

Result : Human experience
not sensitizing

CMR effects
CMR Properties

Carcinogenicity : It is not considered carcinogenic.

Mutagenicity : In vitro tests did not show mutagenic effects

Reproductive toxicity : No toxicity to reproduction

Genotoxicity in vitro

negative (Ames test; Salmonella typhimurium) (OECD Test Guideline 471)

negative (Chromosome aberration test in vitro; In vitro gene mutation study in mammalian cells) (OECD Test Guideline 473)

Teratogenicity

NOAEL Teratog. : \geq 410 mg/kg
(rat)
No evidence of reproductive effects.

Reproductive toxicity

NOAEL Parent : \geq 500 mg/kg
(rat)
(Oral)
(OECD Test Guideline 422)

Specific Target Organ Toxicity

PHOSPHORIC ACID \geq 25% (ALL GRADES)
Single exposure

remark : The substance or mixture is not classified as specific target organ toxicant, single exposure.

Repeated exposure

remark : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Other toxic properties
Aspiration hazard

not applicable

Section 12: Ecological information
12.1. Toxicity

Component:	phosphoric acid	CAS-No.
		7664-38-2

Acute toxicity
Fish

LC50 : 138 mg/l (Gambusia affinis; 96 h)

LC50 : 3 - 3.25 mg/l (Lepomis macrochirus (Bluegill sunfish); 96 h)

Toxicity to daphnia and other aquatic invertebrates

EC50 : > 100 mg/l (Daphnia magna (Water flea); 48 h) (Immobilization; OECD Test Guideline 202)

algae

NOEC : 100 mg/l (Desmodesmus subspicatus; 72 h) (OECD Test Guideline 201)

EC50 : > 100 mg/l (Desmodesmus subspicatus; 72 h) (OECD Test Guideline 201)

Bacteria

EC50 : 270 mg/l (activated sludge)

PHOSPHORIC ACID \geq 25% (ALL GRADES)

12.2. Persistence and degradability

Persistence and degradability

Persistence

Result : no data available

Component:	phosphoric acid	CAS-No.
		7664-38-2

Persistence and degradability

Biodegradability

Result : Not relevant

12.3. Bioaccumulative potential

Component:	phosphoric acid	CAS-No.
		7664-38-2

Bioaccumulation

Result : Not relevant

12.4. Mobility in soil

Component:	phosphoric acid	CAS-No.
		7664-38-2

Mobility

: no data available

12.5. Results of PBT and vPvB assessment

Component:	phosphoric acid	CAS-No.
		7664-38-2

Results of PBT and vPvB assessment

Result : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

12.6. Other adverse effects

PHOSPHORIC ACID \geq 25% (ALL GRADES)

Section 13: Disposal considerations

13.1. Waste treatment methods

- Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.
- Contaminated packaging : Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Packagings that cannot be cleaned are to be disposed of in the same manner as the product.
- European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

Section 14: Transport information

14.1. UN number

1805

14.2. UN proper shipping name

ADR : PHOSPHORIC ACID, SOLUTION
 RID : PHOSPHORIC ACID, SOLUTION
 IMDG : PHOSPHORIC ACID SOLUTION

14.3. Transport hazard class(es)

ADR-Class : 8
 (Labels; Classification Code; Hazard identification No; Tunnel restriction code) 8; C1; 80; (E)
 RID-Class : 8
 (Labels; Classification Code; Hazard identification No) 8; C1; 80
 IMDG-Class : 8
 (Labels; EmS) 8; F-A, S-B

14.4. Packaging group

ADR : III
 RID : III
 IMDG : III

14.5. Environmental hazards

Labeling according to 5.2.1.8 ADR : no
 Labeling according to 5.2.1.8 RID : no
 Labeling according to 5.2.1.6.3 IMDG : no

PHOSPHORIC ACID \geq 25% (ALL GRADES)

Classification as environmentally hazardous according to 2.9.3 IMDG : no
 Classified as "P" according to 2.10 IMDG : no

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG : Not applicable.

Section 15: Regulatory information

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

Other regulations : Occupational restrictions: Take note of Dir 92/85/EEC on the safety and health of pregnant workers at work and of Dir 94/33/EC on the protection of young people at work.

phosphoric acid

EU. Regulation No 1451/2007 [Biocides], Annex I, Active substances identified as existing (OJ (L 325)
 Listed EC Number: 231-633-2

Notification status

phosphoric acid:

Regulatory List	Notification	Notification number
AICS	YES	
DSL	YES	
INV (CN)	YES	
ENCS (JP)	YES	(1)-422
ISHL (JP)	YES	(1)-422
TSCA	YES	
EINECS	YES	231-633-2
KECI (KR)	YES	KE-27427
PICCS (PH)	YES	

15.2. Chemical Safety Assessment

no data available

Section 16: Other information

Full text of R-phrases referred to under sections 2 and 3.

R34 Causes burns.

PHOSPHORIC ACID \geq 25% (ALL GRADES)**Full text of H-Statements referred to under sections 2 and 3.**

H314 Causes severe skin burns and eye damage.

Further information

Other information : Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use. The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship.

The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

|| Indicates updated section.