

Product Acid Etch Solution
 Revision date 14 September 2020
 Revision 2



Safety Data Sheet (SDS)
 according to Regulation (EC) No. 1907/2006

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

1.1 Product identifier

Product name Acid Etch Solution
Synonyms, Trade names No information available.

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

Identified uses Acid Etch Solution is used to remove residual laitance from new concrete. It may be used to prepare very smooth surfaces such as power floated concrete floors.
Uses advised against For industrial and professional use only.
 Any other purpose.

1.3 Details of the supplier of the safety data sheet

Supplier Castle Paints Ltd
 Cloncollig Industrial Estate
 Tullamore
 Offaly
 R35 X993
 Ireland
 Tel: 353 (0)579351583
 info@castlepaints.ie

Contact person

1.4 Emergency telephone number

Emergency telephone Emergency medical information: 8am - 10pm (Seven Days) contact National Poison Center, Beaumont Hospital. Telephone: +353 (0) 18092166

Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (EC 1272/2008)
 Physical and chemical hazards Me. Corr 1 - H290
 Human health Skin Irrit.2 - H315, Eye Irrit.2A - H319
 Environment Not classified

2.2 Label elements

Contains Phosphoric acid 12.5%

Label in accordance with (EC) no. 1272/2008



Signal word Warning

Hazard statements H290 May be corrosive to metals.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.

Precautionary statements **Prevention**
 P280 Wear protective gloves/ protective clothing/eye protection/face protection.

P234 Keep only in original container.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

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

P337 + P313 If eye irritation persists: Get medical advice/attention.

P390 Absorb spillage to prevent material damage.

2.3 Other hazards

None known.

Section 3: Composition/identification of ingredients

3.1 Substance

Not applicable.

3.2 Mixtures

Name	Product identifier	Regulation (EC) No 1272/2008	%
Phosphoric acid 12.5%	CAS-No.: 7664-38-2 EC No.: 231-633-2 REACH Reg No.: 01-2119485924-24-xxxx	Acute Tox 4 - H302, Skin Corr. 1B - H314, Me. Corr 1 - H290	100%

The full text for all hazard statements are displayed in section 16.

Composition comments

The data shown are in accordance with the latest EC Directives.

Section 4: First aid measures

4.1 Description of first aid measures

General information

Provide general first aid, rest, warmth and fresh air. As a general rule, in case of doubt or if symptoms persist, always call a doctor. Seek medical attention for all burns and eye injuries, regardless how minor they may seem. First aid personnel must be aware of own risk during rescue.

Inhalation

Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues. If the exposed person is not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Seek medical attention.

Ingestion

DO NOT induce vomiting! Immediately rinse mouth thoroughly with water and provide fresh air. Never give anything by mouth to a person who is unconscious or is having convulsions. If vomiting occurs, the head should be kept low so that stomach content doesn't enter the lungs, and is not swallowed. Get medical attention immediately!

Skin contact

Remove affected person from source of contamination. Immediately wash with water, preferably under a shower, removing contaminated clothing while washing proceeds. Remove all contaminated clothes and footwear immediately unless stuck to skin. Continue to rinse for at least 15 minutes. Get medical attention if irritation develops or persists.

Eye contact

Do not rub eye. Avoid contaminating unaffected eye. Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Remove contact lenses if present and easy to do so. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

General information

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation

Inhalation may cause respiratory irritation. There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

Ingestion

Exposure to liquid product may cause irritation to mouth, throat and esophagus. May cause digestive tract irritation, pain or vomiting.

Skin contact

Causes skin irritation. May cause irritation, redness, and pain.

Eye contact

Causes serious eye irritation. Spray and vapour in the eyes may cause irritation and smarting. Adverse symptoms may include: pain or irritation, watering, redness.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to the physician Treat symptomatically. Immediate effects can be expected after short-term exposure.

Section 5: Fire-fighting measures

5.1 Extinguishing media

Extinguishing media Use fire-extinguishing media appropriate for surrounding materials. Foam, dry powder, carbon dioxide (CO₂), water spray.

Unsuitable extinguishing media None noted.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products Fire may generate irritating, toxic and corrosive gases. Combustion may lead to the release of oxides of carbon and oxides of phosphorous.

Unusual fire & explosion hazards Water used for fire fighting may become corrosive in contact with the product. May react with metal to liberate flammable hydrogen gas.

Specific hazards In case of fire, toxic and corrosive gases may be formed.

5.3 Advice for firefighters

Special fire fighting procedures Ventilate closed spaces before entering them. Water spray should be used to cool containers. If possible, fight fire from protected position. Keep up-wind to avoid fumes. Be aware of danger of explosion.

Protective equipment for firefighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. Acid resistant clothing is recommended.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation. In case of inadequate ventilation, use respiratory protection.

Do not smoke, eat or drink while using this product. Read and follow manufacturer's recommendations. Do not touch or walk through spilled material. If necessary evacuate surrounding areas.

For emergency responders Follow safe handling advice and personal protective equipment recommendations for normal use of product.

6.2 Environmental precautions

Environmental precautions Do not discharge onto the ground or into water courses.

6.3 Methods and material for containment and cleaning up

Spill clean up methods Stop leak if possible without risk. DO NOT touch spilled material! Wear necessary protective equipment. Ventilate and evacuate the area. Prevent entry to into sewers, water course, basement or confined areas.

Absorb spillage with non-combustible, absorbent material - sand. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labelled container. Flush with plenty of water to clean spillage area.

6.4 Reference to other sections

Reference to other sections See section 1 for emergency contact. For personal protection, see section 8. For waste disposal, see section 13.

Section 7: Handling and storage

7.1 Precautions for safe handling

Handling Avoid inhalation of vapours and contact with skin and eyes. Ensure adequate ventilation.

Wear appropriate respirator when ventilation is inadequate. Use proper personal protection when handling (refer to Section 8). Do not use contact lenses.
Avoid forming spray/aerosol mists. Do not mix with other chemicals. Read and follow manufacturer's recommendations. Do not eat, drink or smoke when using the product.

7.2 Conditions for safe storage, including any incompatibilities

Storage precautions	Store locked up. Keep out of reach of children. Store in tightly closed original container in a dry, cool and well-ventilated place.
Storage class	Corrosive storage.

7.3 Specific end use(s)

Specific end use(s)	The identified uses are in section 1 of this Safety Data Sheet.
Usage description	Use only according to directions.

Section 8: Exposure controls/Personal protection

8.1 Control parameters

Component	STD	TWA (8 Hrs)		STEL (15mins)	Notes
Phosphoric acid 12.5%	OEL		1 mg/m ³	2 mg/m ³	IOELV.

Ingredient comments Ireland, Occupational Exposure Limits 2020.

8.2 Exposure Controls

Protective equipment



Engineering measures

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Respiratory equipment

Where risk assessment shows air-purifying respirators are appropriate a full face respirator conforming to EN143 should be used, and suitable respirator cartridges as a backup to engineering controls. Use a filter suitable for inorganic acids. ABEK (EN 14387). Consult manufacturer for specific advice.

If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as CEN (EU).

Hand protection

Wear appropriate protective gloves complying with EN 374. Suggested material: (Suitable materials for longer, direct contact) Natural rubber. Layer thickness: 0.5 mm. Breakthrough time: >480 minutes. Consult manufacturer for specific advice on material.

Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Selection of the glove material depends on consideration of the penetration times, rates of diffusion and degradation, and concentration specific to the workplace. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Eye protection

Wear safety goggles or face shield to prevent any possibility of eye contact. Use equipment for eye protection tested and approved under appropriate government standards such as EN 166(EU).

Other protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Wear appropriate clothing to prevent any possibility of skin contact. Suggested PPE: chemical resistant full-length overalls and boots.

Hygiene measures

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

Process conditions

Keep container tightly sealed when not in use. Ensure that eye flushing systems and safety showers are located close by in the work place.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Slightly pungent odour.
Odour threshold - lower	No information available as testing has not been completed.
Odour threshold - upper	No information available as testing has not been completed.
pH-Value, Conc. Solution	< 1 (@ 20 °C)
pH-Value, Diluted solution	No information available as testing has not been completed.
Melting point	No information available as testing has not been completed.
Initial boiling point and boiling range	> 35 °C.
Flash point	60.00 - 93.00 °C
Evaporation rate	No information available as testing has not been completed.
Flammability state	The product is not classified as flammable.
Flammability limit - lower(%)	No information available as testing has not been completed.
Flammability limit - upper(%)	No information available as testing has not been completed.
Vapour pressure	0.04 hPa (20 °C) (Applies to anhydrous phosphoric acid)
Vapour density (air=1)	No information available as testing has not been completed.
Relative density	1.02g/cm ³ @ 20.00 °C
Bulk density	No information available as testing has not been completed.
Solubility	Miscible.
Decomposition temperature	No information available as testing has not been completed.
Partition coefficient; n-Octanol/Water	No information available as testing has not been completed.
Auto ignition temperature (°C)	No information available as testing has not been completed.
Viscosity	Phosphoric acid: 2.0 - 32 mPa.s (30 °C)
Explosive properties	Not classified as explosive.
Oxidising properties	The product does not meet the criteria to be classified as oxidising.

9.2 Other information

Molecular weight	The product is a mixture, molecular weight data is not required.
Volatile organic compound	No information available as testing has not been completed.
Other information	None noted.

Section 10: Stability and reactivity

10.1 Reactivity

Reactivity	Reaction with: Alkaline substances. Reaction with Oxidisers. Reacts violently with sodium tetrahydroborate. Forms an explosive mixture with nitromethane. Reacts with cyanide compounds to release gaseous hydrogen cyanide. May generate flammable/toxic gases in contact with mercaptans, dithiocarbamates,
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isocyanates, nitriles, nitrides, sulfides, or strong reducing agents. May react with active metals, such as aluminum and iron, to release flammable hydrogen gas. In the presence of chlorides can corrode stainless steel to form explosive hydrogen gas. Emits toxic and irritating fumes of oxides of phosphorus when heated to decomposition.

10.2 Chemical stability

Stability Stable under normal temperature conditions and recommended use.

10.3 Possibility of hazardous reactions

Hazardous reactions Gives off hydrogen by reaction with metals. Risk of explosion.
See section 10.1 for information on hazardous reactions.

Hazardous polymerisation Will not polymerise. Can initiate the polymerization of certain organic compounds.

Polymerisation description Violent polymerization with azo compounds, epoxides and other polymerizable compounds.
Not applicable.

10.4 Conditions to Avoid

Conditions to avoid Heat, sparks, open flames, temperature extremes and direct sunlight.

10.5 Incompatible materials

Materials to avoid Keep away from strong oxidizing agents and strong alkalies. In contact with reactive metals (steel, carbon & aluminum), product may produce flammable hydrogen gas.
Avoid contact with: Azo compounds. Epoxides. Sodium tetrahydroborate. Nitromethane. Cyanide compounds. Mercaptans. Dithiocarbamates. Isocyanates. Nitriles. Sulfides. Strong reducing agents.

10.6 Hazardous decomposition products

Hazardous decomposition products Irritating, hazardous and toxic fumes and gases. Oxides of carbon, oxides of phosphorus.
Converted to pyrophosphoric acid (H₄P₂O₇) when heated to 213 °C.

Section 11: Toxicological information

11.1 Information on toxicological effects

Toxicological information No toxicological information for the overall finished product.

Acute toxicity (Oral LD50) No information available as testing has not been completed.
Acute toxicity (Dermal LD50) No information available as testing has not been completed.
Acute toxicity (Inhalation LD50) No information available as testing has not been completed.

Serious eye damage/irritation Causes serious eye irritation.

Skin corrosion/irritation The product is classified as a skin corrosion/irritation hazard.

Respiratory sensitisation The product is not classified as a respiratory hazard.
Skin sensitisation The product is not classified as a skin sensitisation hazard.

Germ cell mutagenicity The product is not classified as a mutagen.

Carcinogenicity The product is not classified as a carcinogen hazard.

Specific target organ toxicity - Single exposure:
STOT - Single exposure The product is not classified as a single exposure specific target organ toxin.
Specific target organ toxicity - Repeated exposure:
STOT - Repeated exposure The product is not classified as a repeat exposure specific target organ toxin.

Inhalation Inhalation may cause respiratory irritation. There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

Ingestion Exposure to liquid product may cause irritation to mouth, throat and esophagus. May cause digestive tract irritation, pain or vomiting.

Skin contact Causes skin irritation. May cause irritation, redness, and pain.
Eye contact Causes serious eye irritation. Spray and vapour in the eyes may cause irritation and smarting. Adverse symptoms may include: pain or irritation, watering, redness.

Waste management When handling waste and waste packaging, consideration should be made to the safety

precautions applying to handling of the product. Comply with local, national and international regulations for disposal.

Routes of entry Eye and skin contact, ingestion or inhalation.
Target organs Eyes, skin, digestive system, respiratory system.

Aspiration hazards: The product is not classified as an aspiration hazard.
Reproductive toxicity: The product is not classified as a reproductive hazard.

Name	LD50 oral	LD50 dermal	LD50 inhalation
Phosphoric acid 12.5%		2740.00mg/kg Rabbit	

Section 12: Ecological information

12.1 Toxicity

Acute toxicity - Fish No information available as testing has not been completed.
Acute toxicity - Aquatic invertebrates No information available as testing has not been completed.
Acute toxicity - Aquatic plants No information available as testing has not been completed.
Acute toxicity - Microorganisms No information available as testing has not been completed.
Chronic toxicity - Fish No information available as testing has not been completed.
Chronic toxicity - Aquatic invertebrates No information available as testing has not been completed.
Chronic toxicity - Aquatic plants No information available as testing has not been completed.
Chronic toxicity - Microorganisms No information available as testing has not been completed.
Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Eco toxicological information The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

12.2 Persistence and degradability

Degradability Not applicable for an inorganic substance.
Biological oxygen demand No information available as testing has not been completed.
Chemical oxygen demand No information available as testing has not been completed.

12.3 Bioaccumulative potential

Bioaccumulative potential Not applicable for an inorganic substance.
Bioaccumulation factor No information available as testing has not been completed.
Partition coefficient; n-Octanol/Water No information available as testing has not been completed.

12.4 Mobility in soil

Mobility May spread in water systems.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product is not identified as a PBT/vPvB substance. Not relevant for inorganic substances.

12.6 Other adverse effects

Other adverse effects None known.

Name	Acute toxicity (Fish)	Acute toxicity (Aquatic invertebrates)	Acute toxicity (Aquatic plants)
Phosphoric acid 12.5%	LC50 96 Hours 3.00ppm Lepomis macrochirus (Bluegill)	EC50 48 Hours >100.00ppm Daphnia magna	

Section 13: Disposal considerations

Waste management When handling waste and waste packaging, consideration should be made to the safety precautions applying to handling of the product. Comply with local, national and international regulations for disposal.

13.1 Waste treatment methods

Disposal methods Dispose of waste and residues in accordance with local authority requirements. Do not allow run-off to sewer, waterway or ground. For waste disposal, use a licensed industrial waste disposal agent.

Section 14: Transport information**14.1 UN number**

UN no. (ADR) UN1805
UN no. (IMDG) UN1805
UN no. (IATA) UN1805

14.2 UN proper shipping name

ADR proper shipping name PHOSPHORIC ACID, SOLUTION
IMDG proper shipping name PHOSPHORIC ACID, SOLUTION
IATA proper shipping name PHOSPHORIC ACID, SOLUTION

14.3 Transport hazard class(es)

ADR class 8
IMDG class 8
IATA class 8

Transport labels

**14.4 Packing group**

ADR/RID/ADN packing group III
IMDG packing group III
IATA packing group III

14.5 Environmental hazards

ADR No
IMDG No
IATA No

14.6 Special precautions for user

EMS F-A, S-B
Emergency action code A3 A803
Hazard no. (ADR) 80
Tunnel restriction code (E)

14.7 Transport in bulk according to annex II of MARPOL73/78 and the IBC code

Not applicable.

Section 15: Regulatory information**15.1 Safety, health and environmental regulations/Legislation specific for the substance or mixture**

EU legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. The UN Globally Harmonized System (GHS) Safety Data Sheet format (Annex IV) is implemented as Annex II of REACH EU No 830/2015 of 28

	May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
Approved code of practice	2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001-2019)
Chemical safety assessment	No chemical safety assessment has been carried out.

Section 16: Other information

General information	This Safety Data Sheet is in accordance with REACH Annex II, (EC) No 830/2015. 2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001-2019)
Revision comments	[2]Classification updated. Information updated. [3]Information updated. [8]Code of practice updated. Information updated. [9]Information updated. [10]Information updated. [11]Information updated. [12]Information updated. [15]Information updated.
Revision date	14 September 2020
Supersedes date	20 April 2017
Revision	2
Safety data sheet status	Approved.

Hazard statements in full

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use. Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations. The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions. It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations. The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.