

Safety data sheet

according to 1907/2006/EC, Article 31 as amended

Printing date 05.12.2023

Version number 4

Revision: 05.12.2023

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

- **1.1 Product identifier**
- **Trade name:**
- **Article number:** AS3-Ver.7
- **Registration number** Mixture
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Product category** PC37 Water treatment chemicals
- **Application of the substance / the mixture** Concentrated antiscalant for swimming pool and hot tub water
- **Uses advised against**
Processes involving extreme heat use advised against.
Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).
- **1.3 Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:**
Total Water Products
Unit 6 Seaway Parade Ind. Estate
Baglan
Port Talbot
SA12 7BR

Tel: 0044 1639 823233
e-mail: info@totalwaterproducts.co.uk
- **Further information obtainable from:** Product safety department.
- **1.4 Emergency telephone number:**
Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



corrosion

Met. Corr.1 H290 May be corrosive to metals.

Eye Dam. 1 H318 Causes serious eye damage.



Skin Irrit. 2 H315 Causes skin irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms** GHS05
- **Signal word** Danger
- **Hazard-determining components of labelling:**
phosphorous acid
- **Hazard statements**
H290 May be corrosive to metals.

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H315 Causes skin irritation.

H318 Causes serious eye damage.

· Precautionary statements

P260 Do not breathe mist/vapours/spray.

P280 Wear eye protection / face protection.

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

P332+P313 If skin irritation occurs: Get medical advice/attention.

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

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· **PBT:** Not applicable.· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with non-hazardous multifunctional additives.

· Dangerous components:

CAS: 6419-19-8 EINECS: 229-146-5 Reg.nr.: 01-2119487988-08-XXXX	nitrilotrimethylenetris(phosphonic acid) ⚠ Met. Corr. 1, H290; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	25 – 50%
CAS: 13598-36-2 EINECS: 237-066-7 Reg.nr.: 01-2119488030-46-XXXX	phosphorous acid ⚠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H302	2.5 – < 5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· **General information:** Immediately remove any clothing soiled by the product.· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· After skin contact:

Immediately rinse with water.

If skin irritation continues, consult a doctor.

· After eye contact:

Check for and remove any contact lenses.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

· **Information for doctor:** Treat symptomatically and supportively.

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

No further relevant information available.

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

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray.

Use fire extinguishing methods suitable to surrounding conditions.

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- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Nitrogen oxides (NO_x)
Phosphorous oxides
- **5.3 Advice for firefighters**
- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Do not allow to penetrate the ground/soil.
Do not allow product to reach sewage system or any water course in the undiluted form.
- **6.3 Methods and material for containment and cleaning up:**
Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Safety showers and eye wash facilities should be available at the work area.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Do not store in aluminium or galvanised containers.
Prevent any seepage into the ground.
- **Information about storage in one common storage facility:**
Store away from oxidising agents.
Store away from metals.
- **Further information about storage conditions:**
Protect from frost.
Store in cool, dry conditions in well sealed receptacles.
Store in a banded area.
- **Storage class:** 12
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see section 7.

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· **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs**

6419-19-8 nitrilotrimethylenetris(phosphonic acid)

Oral	DNEL Long-term systemic effects	1.38 mg/kg bw/day (general population)
	DNEL Short-term systemic effects	1.38 mg/kg bw/day (general population)
Dermal	DNEL Long-term systemic effects	1.38 mg/kg bw/day (general population) 2.75 mg/kg bw/day (worker)
	DNEL Short-term systemic effects	1.38 mg/kg bw/day (general population) 2.75 mg/kg bw/day (worker)
Inhalative	DNEL Long-term systemic effects	2.39 mg/m ³ (general population) 9.7 mg/m ³ (worker)
	DNEL Short-term systemic effects	2.39 mg/m ³ (general population) 9.7 mg/m ³ (worker)

13598-36-2 phosphorous acid

Oral	DNEL Long-term systemic effects	420 µg/kg bw/day (general population)
Dermal	DNEL Long-term systemic effects	420 µg/kg bw/day (general population)
		830 µg/kg bw/day (worker)
Inhalative	DNEL Long-term systemic effects	720 µg/m ³ (general population) 2,940 µg/m ³ (worker)

· **PNECs**

6419-19-8 nitrilotrimethylenetris(phosphonic acid)

PNEC Freshwater	400 – 460 µg/L
PNEC Marine water	40 – 46 µg/L
PNEC Sewage Treatment Plant	20 mg/L
PNEC Sediment (freshwater)	150 – 603 mg/kg
PNEC Sediment (marine water)	15 – 60 mg/kg
PNEC Soil	4.73 – 244 mg/kg
PNEC Secondary poisoning	170 mg/kg food

13598-36-2 phosphorous acid

PNEC Freshwater	153 µg/L
PNEC Freshwater - Intermittent releases	1.53 mg/L
PNEC Marine water	15.3 µg/L

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Do not eat or drink while working.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Ensure that eyewash stations and safety showers are close to the workstation location.

· **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.

· **Protection of hands:**



Protective gloves.

Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles conforming to EN166.

- **Body protection:**



Impervious protective clothing

Body protection must be chosen depending on product properties, activity and possible exposure.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Fluid

Colour: Clear

- **Odour:** Mild

- **Odour threshold:** Not determined.

- **pH-value (10 g/l) at 20 °C:** 2

- **Change in condition**

Melting point/freezing point: -12 °C

Initial boiling point and boiling range: >105 °C

- **Flash point:** Not applicable.

- **Flammability (solid, gas):** Not applicable.

- **Decomposition temperature:** Not determined.

- **Ignition temperature:** Product is not self-igniting.

- **Explosive properties:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

- **Vapour pressure:** Not determined.

- **Density at 20 °C:** 1.35 g/cm³

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with**

water: Fully miscible.

- **Partition coefficient: n-octanol/water:** Not determined.

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· Viscosity:	
Dynamic:	Not determined.
Kinematic at 20 °C:	11 mm ² /s
· Solvent content:	
VOC (EC)	0.00 %
· 9.2 Other information	NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
Strong bases.
Strong acids and oxidising agents
- **10.6 Hazardous decomposition products:**
Phosphorus oxides (e.g. P₂O₅)
Nitrogen oxides (NO_x)
Carbon monoxide and carbon dioxide
Phosphine

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	39,000 mg/kg (rat)
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6419-19-8 nitrilotrimethylenetrakis(phosphonic acid)

Oral	LD50	> 2,000 mg/kg (rat)
Dermal	LD50	> 5,000 mg/kg (rabbit)

13598-36-2 phosphorous acid

Oral	LD50	300 – 2,000 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
ROUTES OF EXPOSURE: Can be absorbed into the body by inhalation and by ingestion.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.

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· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

6419-19-8 nitrilotrimethylenetris(phosphonic acid)

EC50 (96 h)	297 mg/l (Bacteria)
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13598-36-2 phosphorous acid

EC50 (96 h)	> 1,000 mg/l (Bacteria)
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· **12.2 Persistence and degradability** The organic portion of the product is biodegradable.

· **12.3 Bioaccumulative potential** Contains components with the potential to bioaccumulate.

· **12.4 Mobility in soil** No further relevant information available.

· Additional ecological information:

· General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· 12.5 Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Recommended Hierarchy of Controls:

- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

· Uncleaned packaging:

· Recommendation:

Disposal must be made according to official regulations.

Container remains hazardous when empty. Continue to observe all precautions.

Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number

· **ADR/RID/ADN, IMDG, IATA**

UN3265

· 14.2 UN proper shipping name

· **ADR/RID/ADN**

UN3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (nitrilotrimethylenetris(phosphonic acid), PHOSPHOROUS ACID)

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· IMDG, IATA	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (nitrilotrimethylenetris(phosphonic acid), PHOSPHOROUS ACID)
· 14.3 Transport hazard class(es) · ADR/RID/ADN, IMDG, IATA	
	
· Class · Label	8 Corrosive substances. 8
· 14.4 Packing group · ADR/RID/ADN, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category · Stowage Code	Warning: Corrosive substances. 80 F-A,S-B (SGG1) Acids A SW2 Clear of living quarters.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· ADR/RID/ADN · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml 3 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N O S (NITRILOTRIMETHYLENETRIS(PHOSPHONIC ACID), PHOSPHOROUS ACID), 8, III

SECTION 15: Regulatory information

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

· Poisons Act

· Regulated explosives precursors

None of the ingredients is listed.

· Regulated poisons

None of the ingredients is listed.

· Reportable explosives precursors

None of the ingredients is listed.

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· Reportable poisons

None of the ingredients is listed.

· Directive 2012/18/EU

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Training hints

This product should only be handled by workers who have received sufficient training in the safe handling and use of chemical products.

· **Department issuing SDS:** Product safety department.

· Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (UK REACH)

PNEC: Predicted No-Effect Concentration (UK REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

· *** Data compared to the previous version altered.**

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