

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 4

Revision: 11.10.2017

**SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking**

**1.1 Product Identifier:**

**Trade name:** Buffered Ammonium Persulphate Solutions 15%

**Synonyms:**

Sodium Peroxodisulphate; Hydrogen Phosphate Solution and Water; Disodium Peroxodisulphate; Orthophosphoric Acid and Water

**Altus Science Individual Product Reference:** A-2804, A-7800

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

**Product category:** PC21 Laboratory chemicals

**Application of the substance / the mixture:** Laboratory chemicals

**1.3 Details of the supplier of the safety data sheet:**

**Manufacturer / Importer / Supplier:**

Altus Science Limited  
Park House  
Manor Park Avenue  
Manor Park  
Runcorn, Cheshire, WA7 1TL  
United Kingdom

Telephone: +44 (0) 1928 238 000

Email address: info@altusscience.com

**Further information obtainable from:** Product safety department.

**1.4 Emergency telephone number:**

Tel. +44(0) 1928 238 000

This telephone number can be reached during office hours.

**SECTION 2: Hazards Identification**

**2.1 Classification of the substance or mixture:**

**Classification according to Regulation (EC) No 1272/2008:**



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

**2.2 Label elements:**

**Labelling according to Regulation (EC) No 1272/2008:**

The substance is classified and labelled according to the CLP regulation.

**Hazard pictograms:** GHS08

**Signal word:** Danger

**Hazard-determining components of labelling:**

Diammonium Peroxodisulphate

**Hazard statements:**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

**Precautionary statements:**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P284 [In case of inadequate ventilation] wear respiratory protection.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 4

Revision: 11.10.2017

**Trade name: Buffered Ammonium Persulphate Solutions 15%**

(Contd. of page 1)

**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 nonhazardous additions.

<b>Components:</b>		
CAS: 7727-54-0 EINECS: 231-786-5 Index number: 016-060-00-6	Diammonium Peroxodisulphate ⚠ Ox. Sol. 3, H272; ⚠ Resp. Sens. 1, H334; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	10-25%
CAS: 7732-18-5 EINECS: 231-791-2	Water, distilled, conductivity or of similar purity	≥80.5%
CAS: 7558-79-4 EINECS: 231-448-7	Disodium hydrogenorthophosphate	≤<3.0%
CAS: 10049-21-5	Sodium Phosphate, monobasic	≤<2.0%

**Additional information:** For the wording of the listed hazard phrases See section 16.

**SECTION 4: First Aid Measures**

**4.1 Description of first aid measures:**

**General information:** In the event of exposure, show Safety Data Sheet to a Doctor.

**After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:**

Take off contaminated clothing immediately and wash the skin with plenty of water (possibly showering).

Wash with (warm) water and soap.

**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After ingestion:**

Rinse Mouth.

Seek medical treatment.

**4.2 Most important symptoms and effects, both acute and delayed:**

Sensitisation.

Irritant effects

**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:**

Use fire extinguishing methods suitable to surrounding conditions.

All extinguishing media are possible.

**5.2 Special hazards arising from the substance or mixture:**

Has a fire-promoting effect due to release of oxygen.

Carbonoxides

Nitrogen oxides (NOx)

Sulfuroxides (SOx)

Phosphorus oxides

**5.3 Advice for firefighters:**

**Protective equipment:** Wear self-contained respiratory protective device.

**Additional information:** Cool endangered tanks with water spray.

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 4

Revision: 11.10.2017

**Trade name: Buffered Ammonium Persulphate Solutions 15%**

(Contd. of page 2)

**SECTION 6: Accidental Release Measures**

**6.1 Personal precautions, protective equipment and emergency procedures:**

Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation

**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

**6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Water contaminated with this product may be sent to a sanitary sewer treatment facility, or a permitted waste treatment facility, in accordance with any local agreements  
Dispose contaminated material as waste according to section 13.  
Dilute remainder with plenty of water.  
Ensure adequate ventilation.

**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:**

Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.

**Information about fire and explosion protection:**

When heated, decomposition occurs, releasing oxygen.  
No special measures required.

**7.2 Conditions for safe storage, including any incompatibilities:**

Storage must comply with the local regulations.  
Store in a closed container away from incompatible materials  
Store in a well ventilated storage area.

**Storage:**

**Requirements to be met by storerooms and tanks:**

Store in a cool location.  
Store only in the original receptacle.

**Information about storage in one common storage facility:**

Do not store in areas where food, drink and animal foodstuff are taken.  
Store away from flammable substances.

**Further information about storage conditions:**

Keep container tightly sealed.  
Protect from heat and direct sunlight.

**7.3 Specific end use(s):** For professional and industrial users only

**SECTION 8: Exposure Controls/Personal Protection**

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

**8.1 Control parameters:**

**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.

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

**8.2 Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from food, drink and animal foodstuff.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.

(Contd. on page 4)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 4

Revision: 11.10.2017

**Trade name: Buffered Ammonium Persulphate Solutions 15%**

(Contd. of page 3)

**Respiratory protection:**

In case of insufficient ventilation, use a breathing mask with filter type ABEK

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.

**Protection of hands:**



Protective gloves

Only use chemical-protective gloves with CE-labelling of category III.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

**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.

Neoprene gloves

**Penetration time of glove material:**

Not applicable.

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

**For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Fluorocarbon rubber (Viton)

**Eye protection:**



Tightly sealed goggles

**Body protection:** Protective work clothing

**Limitation and supervision of exposure into the environment:** Prevent spills from reaching surface waters or soil.

**SECTION 9: Physical and Chemical Properties**

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

**General Information:**

**Appearance:**

<b>Form:</b>	Liquid.
<b>Colour:</b>	Colourless.
<b>Odour:</b>	Odourless.
<b>Odour threshold:</b>	Not determined.

**pH-value:** 6.5

**Change in condition**

<b>Melting point/Melting range:</b>	1 °C
<b>Boiling point/Boiling range:</b>	100 °C

**Flash point:** >100 °C (Pensky Martens (cc))

**Flammability (solid, gaseous):** Not applicable.

**Ignition temperature:**

**Decomposition temperature:** Not determined.

**Self-igniting:** Product is not self-igniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**Vapour pressure at 20 °C:** 14 hPa

**Density at 20 °C:** 1.09 g/cm<sup>3</sup>

(Contd. on page 5)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 4

Revision: 11.10.2017

**Trade name: Buffered Ammonium Persulphate Solutions 15%**

(Contd. of page 4)

<b>Relative density:</b>	Not determined.
<b>Vapour density:</b>	Not determined.
<b>Evaporation rate:</b>	Not determined.
<b>Solubility in / Miscibility with:</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Solvent content:</b>	
<b>Oxidizing properties:</b>	Does not contain oxidizing properties.
<b>9.2 Other information:</b>	No further relevant information available.

**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 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:** Reducing Agents

**10.6 Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

Sulphur oxides (SOx)

Phosphorus compounds

**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:**

<b>ATE (Acute Toxicity Estimates)</b>		
Oral	LD50	5467 mg/kg (Rat)

**7727-54-0 Diammonium Peroxodisulphate**

Oral	LD50	495 mg/kg (Rat)
Dermal	LD50	>2000 mg/kg (rbt)

**Primary irritant effect:**

**Skin corrosion/irritation:**

Causes skin irritation.

**Serious eye damage/irritation:**

Causes serious eye irritation.

**Respiratory or skin sensitization:**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

**CMR effects (carcinogenic, mutagenic and reprotoxic):**

**Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

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

**Reprotoxicity:** 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.

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

GB

(Contd. on page 6)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 4

Revision: 11.10.2017

**Trade name: Buffered Ammonium Persulphate Solutions 15%**

(Contd. of page 5)

**SECTION 12: Ecological Information**

**12.1 Toxicity:**

The product components are not classified as dangerous for the environment or the quantities are not relevant. Larger or frequent spills can be dangerous or harmful to the environment.

**Aquatic toxicity:** No further relevant information available.

**12.2 Persistence and degradability:** No further relevant information available.

**12.3 Bioaccumulative potential:** No further relevant information available.

**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:** Disposal must be made in accordance with Hazardous waste regulations.

**European waste catalogue:**

16 03 03

16 Waste not otherwise specified in the list

16 03 Off-specification batches and unused products

16 03 03 Inorganic waste containing dangerous substances

Depending on the origin and state of waste, other EWC numbers may be applicable too

15 01 10 Packaging containing residues of or contaminated by dangerous substances.

Depending on the origin and state of the waste, other EWC numbers may be applicable too.

**Contaminated packaging:**

**Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport Information**

**14.1 UN-Number:**

ADR,RID,ADN, IMDG, IATA

UN3216

**14.2 UN proper shipping name:**

ADR/RID/ADN:

3216 PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.

IMDG:

PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.

IATA:

Persulfates, inorganic, aqueous solution, n.o.s.

**14.3 Transport hazard class(es):**

ADR/RID/ADN:



**Class:**

5.1 (O1) Oxidising substances.

**Label:**

5.1

(Contd. on page 7)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 4

Revision: 11.10.2017

**Trade name: Buffered Ammonium Persulphate Solutions 15%**

(Contd. of page 6)

<b>IMDG, IATA</b>	
<b>Class:</b>	5.1 Oxidising substances.
<b>Label:</b>	5.1
<b>14.4 Packing group: ADR,RID,ADN, IMDG, IATA</b>	III
<b>14.5 Environmental hazards: Marine pollutant:</b>	No
<b>14.6 Special precautions for user: Danger code (Kemler): EMS Number: Stowage Category Segregation Code</b>	Warning: Oxidising substances. 50 F-A,S-Q A SG38 Stow "separated from" ammonium compounds. SG49 Stow "separated from" cyanides SG62 Stow "separated from" sulphur
<b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:</b>	Not applicable.
<b>Transport/Additional information:</b>	
<b>ADR/RID/ADN: Limited quantities (LQ): Excepted quantities (EQ):</b>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<b>Transport category: Tunnel restriction code:</b>	3 E
<b>IMDG: Limited quantities (LQ): Excepted quantities (EQ):</b>	5 kg Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<b>UN "Model Regulation":</b>	UN 3216 PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S., 5.1, III

**SECTION 15: Regulatory Information**

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

**Directive 2012/18/EU:**

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

**Qualifying quantity (tonnes) for the application of lower-tier requirements:** 50 t

**Qualifying quantity (tonnes) for the application of upper-tier requirements:** 200 t

**REGULATION (EC) No 1907/2006 ANNEX XVII:** Conditions of restriction: 3

**National regulations:** Not applicable

**Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

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

**SECTION 16: Other Information**

**Relevant phrases:**

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

(Contd. on page 8)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Version number 4

Revision: 11.10.2017

**Trade name: Buffered Ammonium Persulphate Solutions 15%**

(Contd. of page 7)

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

**Training hints:** Provide training on safe handling considering the type of application and exposure scenarios.

**Department issuing SDS:** Environment protection department.

**Abbreviations and acronyms:**

ADN: Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

EC50: Effective Concentration, 50 percent

IOELVS: Indicative Occupational Exposure Limit Values

mPa.s: milliPascal per second

Ox. Sol. 3: Oxidizing solids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

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

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

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

**References:**

This information is based on the current available data (suppliers of raw materials, chemistry maps, Annex VI)

See also the internet site: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

**Revisions were made in sections marked with \*.**

**Disclaimer:**

The information believed to be accurate within this document and is intended only as a guide to the appropriate precautionary handling of this substance by a properly trained person using this product. The information relates only to the specific material designated and does not relate to its use in combination with other materials. The user is responsible for determining whether Altus Science products are fit for a particular purpose and suitable to the users method of use or application.

Updated versions will be made available when significant information becomes available. The user shall ensure that they work with the most up to date revision.