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# Safety Data Sheet according to UK REACH (SI 2020/1577) as amended

Printing date 01.07.2025 Version number 3 (replaces version 2) Revision: 01.07.2025

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

· 1.1 Product identifier

· Trade name: APS (Ammonium Persulphate)

· Product Code: 20-3001-01, 20-3001-25

• CAS Number: 7727-54-0 • EC number: 231-786-5

· Index number:

016-060-00-6

- · 1.2 Relevant identified uses of the substance or mixture and uses advised against
- · Product category

PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents

PC21 Laboratory chemicals

- · Application of the substance / the mixture Catalyst
- · Uses advised against

Processes involving extreme heat use advised against.

Any use involving significant release of aerosol, vapour or dust in the breathing zone of workers where they are exposed without suitable respiratory protective equipment (RPE).

Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Processes involving the use of incompatible substances - refer to section 10.

- · 1.3 Details of the supplier of the safety data sheet
- · Supplier:

Severn Biotech Ltd.

Unit 2,

Park Lane,

Kidderminster.

Worcestershire.

DY11 6TJ

UK

Tel: 0044 1562 825286 Fax: 0044 1562 825284 email: info@severnbiotech.com

· 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 GB-CLP

Ox. Sol. 3 H272 May intensify fire; oxidiser.

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

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

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Skin Sens. 1 H317 May cause an allergic skin reaction. STOT SE 3 H335 May cause respiratory irritation.

- · 2.2 Label elements
- · Labelling according to GB-CLP The substance is classified and labelled according to the GB CLP regulation.
- · Hazard pictograms







GHS03 GHS07 GHS08

- · Signal word Danger
- · Hazard-determining components of labelling:

Ammonium peroxodisulphate

· Hazard statements

H272 May intensify fire; oxidiser.

H302+H332 Harmful if swallowed or if inhaled.

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.H335 May cause respiratory irritation.

· Precautionary statements

P221 Take any precaution to avoid mixing with combustibles.

P260 Do not breathe dust.

P270 Do not eat, drink or smoke when using this product.

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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or

shower

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

# **SECTION 3: Composition/information on ingredients**

- · 3.1 Substances
- · CAS No. Description

CAS: 7727-54-0 Ammonium peroxodisulphate

· Identification number(s) · EC number: 231-786-5 · Index number: 016-060-00-6

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### **SECTION 4: First aid measures**

### · 4.1 Description of first aid measures

#### · General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Immediately remove any clothing soiled by the product.

Rinse contaminated clothes (fire hazard) with plenty of water.

#### · After inhalation:

In case of inhalation:

- Provide fresh air.
- In case of breathing difficulties administer oxygen.
- No mouth-to-mouth or mouth-to-nose resuscitation. Use respiratory bag or oxygen resuscitation apparatus.
- Do not leave patient unattended.

Seek immediate medical advice.

#### · After skin contact:

Immediately wash with water and soap and rinse thoroughly.

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: Water
- · For safety reasons unsuitable extinguishing agents: Foam
- · 5.2 Special hazards arising from the substance or mixture

Strong oxidiser. Contact with combustible or flammable substances may cause fire.

In case of fire, the following can be released:

Nitrogen oxides (NOx)

Sulphur Oxides (SOx)

Oxygen

- · 5.3 Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Do not inhale explosion gases or combustion gases.

#### · Additional information

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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# **SECTION 6: Accidental release measures**

#### · 6.1 Personal precautions, protective equipment and emergency procedures

Avoid formation of dust.

Ensure adequate ventilation

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:

Pick up mechanically.

Do not use combustible materials such as paper towels to clean up spills.

Ensure adequate ventilation.

Send for recovery or disposal in suitable receptacles.

### · 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

Handle with care. Avoid jolting, friction and impact.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of dust.

Ensure high housekeeping standards to remove build of dust.

Avoid contact with clothing and other combustible materials.

The product must only be handled by authorised, trained and experienced professionals under strictly controlled conditions.

Welding and other hot work operations in the work area must only be permitted under supervision.

Safety showers and eye wash facilities should be available at the work area.

Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.

Rinse contaminated clothing with plenty of water (Fire hazard)

# $\cdot$ Information about fire - and explosion protection: Protect from heat.

#### · 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

#### · Requirements to be met by storerooms and receptacles:

Store in a cool location.

Do not store on combustible materials such as wooden floors or wooden pallets.

### · Information about storage in one common storage facility:

Store away from flammable substances.

Store away from foodstuffs.

Do not store together with textiles.

# · Further information about storage conditions:

Store in a bunded area.

Protect from humidity and water.

Store in cool, dry conditions in well sealed receptacles.

· Storage class: 5.1 B

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· 7.3 Specific end use(s) No further relevant information available.

# **SECTION 8: Exposure controls/personal protection**

- · 8.1 Control parameters
- · Ingredients with limit values that require monitoring at the workplace: Not required.

· DNELs					
CAS: 7727-54-0 Ammonium peroxodisulphate					
Oral	Short-term systemic effects	1.38 mg/kg bw/day (general population)			
	Long-term systemic effects	460 μg/kg bw/day (general population)			
Dermal	Long-term systemic effects	4.6 mg/kg bw/day (general population)			
		12.7 mg/kg bw/day (worker)			
Inhalative	Long-term local effects	421 μg/m³ (general population)			
		824 μg/m³ (worker)			

#### · PNECs

# CAS: 7727-54-0 Ammonium peroxodisulphate

Freshwater	518 μg/L
Freshwater - Intermittent releases	763 μg/L
Marine water	51.8 μg/L 3.6 mg/L 2.03 mg/kg 203 μg/kg 100 μg/kg
Sewage Treatment Plant	3.6 mg/L
Sediment (freshwater)	2.03 mg/kg
Sediment (marine water)	203 μg/kg
Soil	100 μg/kg

- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Appropriate engineering controls No further data; see section 7.
- · Individual protection measures, such as personal protective equipment
- General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not eat, drink, smoke or sniff while working.

Do not breathe dust

A safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision.

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

Depending on the degree of exposure, periodic medical examination is suggested.

Contaminated clothes are a fire hazard. Rinse with plenty of water.

### · Respiratory protection:

Use suitable respiratory protective device when high concentrations are present.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

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#### · Hand protection



Protective gloves.

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

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.

#### · 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/face protection



Tightly sealed goggles conforming to EN166.



Use visor if handling dust.

#### · Body protection:



Protective work clothing

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

- Environmental exposure controls Do not let product enter drains. Risk of explosion.
- · Risk management measures

The operators shall be instructed adequately.

The workplace shall be inspected regularly by competent personnel e.g. the safety representative.

# **SECTION 9: Physical and chemical properties**

· 9.1 Information on basic physical and chemical properties

· General Information

Physical state
 Colour:
 Odourless
 Odour threshold:
 Melting point/freezing point:
 Boiling point or initial boiling point and boiling range

• Flammability Contact with combustible material may cause fire.

• Flash point: Not applicable. • pH at 20 °C 1.45 (5%)

· Solubility

• water at **20** °C: 559 g/l

Partition coefficient n-octanol/water (log value)
 Vapour pressure:
 Not determined.
 Not applicable.

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· Density and/or relative density				
· Density at 20 °C:	1.982 g/cm <sup>3</sup>			
· Bulk density:	$950 - 1,050 \text{ kg/m}^3$			
· 9.2 Other information	NOTE: The physical data presented above are typical values and should not be construed as a specification.			
· Appearance:				
· Form:	Crystalline			
· Important information on protection of health a	nd			
environment, and on safety.				
· Explosive properties:	Product does not present an explosion hazard.			
· Solids content:	100.0 %			
· Molecular weight	228.2 g/mol			
· Information with regard to physical hazard classes				
· Explosives	Not applicable			
· Flammable gases	Not applicable			
· Aerosols	Not applicable			
· Oxidising gases	Not applicable			
· Gases under pressure	Not applicable			
· Flammable liquids	Not applicable			
· Flammable solids	Not applicable			
· Self-reactive substances and mixtures	Not applicable			
· Pyrophoric liquids	Not applicable			
· Pyrophoric solids	Not applicable			
· Self-heating substances and mixtures	Not applicable			
· Substances and mixtures, which emit flammable gases				
in contact with water	Not applicable			
· Oxidising liquids	Not applicable			
· Oxidising solids	May intensify fire; oxidiser.			
· Organic peroxides	Not applicable			
· Corrosive to metals	Not applicable			
· Desensitised explosives	Not applicable			

# **SECTION 10: Stability and reactivity**

- 10.1 Reactivity No further relevant information available.
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:

Decomposes on heating, producing toxic fumes.

Oxygen released during thermal decomposition may support combustion.

· 10.3 Possibility of hazardous reactions

Acts as an oxidising agent on organic materials such as wood, paper and fats.

Aqueous solution forms hydrogen in contact with some metals.

Reacts with reducing agents.

- 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials:

Strong bases.

Combustible materials.

Reducing agents.

Substances specifically listed in section 10.3 as incompatible.

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#### · 10.6 Hazardous decomposition products:

Ammonia

Nitrogen oxides (NOx)

Oxygen

Sulphur oxides (SOx)

# **SECTION 11: Toxicological information**

- · 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- · Acute toxicity

Harmful if swallowed or if inhaled.

· LD/LC50 values relevant for classification:						
ATE (Acute Toxicity Estimates)						
Oral	LD50	700 mg/kg (rat)				
Inhalative	LC50/4 h	> 2.95 mg/l (rat)				

# CAS: 7727-54-0 Ammonium peroxodisulphate Oral LD50 700 mg/kg (rat)

Dermal LD50 > 2,000 mg/kg (rat) Inhalative LC50/4 h > 2.95 mg/l (rat)

- · Primary irritant effect:
- · Skin corrosion/irritation

Causes skin irritation.

· Serious eye damage/irritation

Causes serious eye irritation.

· Respiratory or skin sensitisation

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

May cause an allergic skin reaction.

- · 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

May cause respiratory irritation.

- · 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.
- · Additional toxicological information:

ROUTES OF EXPOSURE: Can be absorbed into the body by inhalation and by ingestion.

Anyone who has shown symptoms of asthma due to this substance should avoid all further contact with this product. The symptoms of asthma often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential.

· 11.2 Information on other hazards

### · Endocrine disrupting properties

Substance is not listed.

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# **SECTION 12: Ecological information**

· 12.1 Toxicity

· Aquatic toxicity:

CAS: 7727-54-0 Ammonium peroxodisulphate

EC50 (72 h) 320 mg/l (Algae)

- · 12.2 Persistence and degradability Inorganic substance: not applicable
- · 12.3 Bioaccumulative potential Product is not expected to bioaccumulate.
- · 12.4 Mobility in soil No further relevant information available.
- · 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.
- · 12.7 Other adverse effects
- · Additional ecological information:
- · General notes:

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

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

# 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.

Do not mix with other waste streams.

- · Uncleaned packaging:
- · Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Do not mix with other waste streams.

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.

Disposal must be made according to official regulations.

· Recommended cleansing agents: Large quantities of water

### **SECTION 14: Transport information**

· 14.1 UN number or ID number

· ADR/RID/ADN, IMDG, IATA UN1444

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<ul><li>14.2 UN proper shipping name</li><li>ADR/RID/ADN</li><li>IMDG, IATA</li></ul>	UN1444 AMMONIUM PERSULPHATE AMMONIUM PERSULPHATE
· 14.3 Transport hazard class(es)	
· ADR/RID/ADN	
· Class · Label	<ul><li>5.1 (O2) Oxidising substances.</li><li>5.1</li></ul>
· IMDG, IATA	
· Class	5.1 Oxidising substances.
· Class · Label	5.1 Oxidishig substances.
· 14.4 Packing group · ADR/RID/ADN, IMDG, IATA	III
<ul><li>14.5 Environmental hazards:</li><li>Marine pollutant:</li></ul>	No
<ul><li>14.6 Special precautions for user</li><li>Hazard identification number (Kemler code):</li></ul>	Warning: Oxidising substances. 50
· Hazchem Code:	1Z
EMS Number:	F-A,S-Q
Segregation groups	(SGG2) Ammonium compounds
· Stowage Category	A
· 14.7 Maritime transport in bulk according to IM instruments	O Not applicable.
· Transport/Additional information:	
· ADR/RID/ADN	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1
<b>m</b>	Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
<ul><li> Transport category</li><li> Tunnel restriction code</li></ul>	3 E
	ь
· IMDG	5 kg
<ul><li>Limited quantities (LQ)</li><li>Excepted quantities (EQ)</li></ul>	5 kg Code: E1
Excepted quantities (EQ)	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
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· UN "Model Regulation":

UN 1444 AMMONIUM PERSULPHATE, 5.1, III

# **SECTION 15: Regulatory information**

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Poisons Act
- · Regulated explosives precursors

Substance is not listed.

· Regulated poisons

Substance is not listed.

· Reportable explosives precursors

Substance is not listed.

· Reportable poisons

Substance is not listed.

- · Control Of Major Accident Hazards Regulations 2015 (COMAH)
- · Named dangerous substances ANNEX I Substance is not listed.
- · COMAH category P8
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
- · Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- · 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.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

#### · 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

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

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

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



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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

\* Data compared to the previous version altered.

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