

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

CHAMPION FLOCCULANT GRANULAR

Version 3.0

Print Date 2022/10/14

Revision date / valid from 2022/10/14

MSDS code: MAAA762

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Trade name : CHAMPION FLOCCULANT GRANULAR
Substance name : Aluminium sulphate tetradecahydrate
CAS-No. : 10043-01-3
EC-No. : 233-135-0
EU REACH-Reg. No. : 01-2119531538-36-xxxx

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

Use of the Substance/Mixture : Flocculant or coagulant for water treatment and wastewater., Drinking water, Industrial formulation, Formulation & (re) packaging of substances and mixtures
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 Limited
Alpha House, Lawnswood Business Park
GB LS16 6QY Leeds
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 S.I. 2019/720 (GB CLP)

Regulation S.I. 2019/720 (GB CLP)

Hazard class	Hazard category	Target Organs	Hazard statements
Serious eye damage	Category 1	---	H318

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

CHAMPION FLOCCULANT GRANULAR**Most important adverse effects**

Human Health	:	See section 11 for toxicological information.
Physical and chemical hazards	:	See section 9/10 for physicochemical information.
Potential environmental effects	:	See section 12 for environmental information.

2.2. Label elements**Labelling according to Regulation S.I. 2019/720 (GB CLP)**

Hazard symbols	:	
Signal word	:	Danger
Hazard statements	:	H318 Causes serious eye damage.
Precautionary statements	:	
Prevention	:	P280 Wear eye protection/ face protection.
Response	:	P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

Hazardous components which must be listed on the label:

- Aluminium sulphate tetradecahydrate

2.3. Other hazards

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This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients**3.1. Substances**

		Classification (Regulation S.I. 2019/720 (GB CLP))		
Hazardous components	Amount [%]	Hazard class / Hazard category	Hazard statements	
Aluminium sulphate tetradecahydrate				
CAS-No.	: 16828-12-9	>= 90 - <= 100	Eye Dam.1	H318
EC-No.	: 233-135-0			
EU REACH-	: 01-2119531538-36-xxxx			
Reg. No.				
		Acute toxicity estimate		
		Acute oral toxicity: 2000 mg/kg		
		Acute inhalation toxicity (gas): 5.01 mg/l		
		Acute dermal toxicity: 5000.01 mg/kg		

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. Symptoms may be delayed.
If inhaled	: Remove to fresh air. If symptoms occur, call a physician.
In case of skin contact	: Wash off immediately with plenty of water. If skin irritation persists, call a physician.
In case of eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.

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If swallowed : Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical advice.

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

Symptoms : Dust may cause sore throat and pains in the lungs and chest. Skin contact may provoke the following symptoms: Redness, Irritation, tingling, Corrosive to the eyes and may cause severe damage including blindness. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

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.
 Unsuitable extinguishing media : High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : May release toxic, irritating and/or corrosive gases. Decomposes in contact with water. sulphuric acid
 Hazardous combustion products : Sulphur oxides, Metal oxides

5.3. Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Wear personal protective equipment.
 Further advice : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Cool containers/tanks with water spray.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions : Use personal protective equipment. Avoid contact with skin and eyes. Avoid raising a dust cloud. Avoid dust formation. Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Avoid moisture.

6.2. Environmental precautions

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Environmental precautions : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up : Use mechanical handling equipment. Clean up promptly by scoop or vacuum. Keep in suitable, closed containers for disposal.

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

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Advice on safe handling : Keep container tightly closed. Avoid contact with skin, eyes and clothing. Avoid dust formation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from water. 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. Take off all contaminated clothing immediately. Provide adequate ventilation. Avoid contact with the skin and the eyes. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep only in the original container.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Further information on storage conditions : Keep tightly closed in a dry and cool place. Keep away from heat.

Advice on common storage : Keep away from food, drink and animal feedingstuffs. Keep away from oxidizing agents. Strong bases water

Other data : Stable at normal ambient temperature and pressure.

Suitable packaging materials : Stainless steel, rubber-coated steel, Polyethylene, Polypropylene, PVC

Unsuitable packaging materials : , Steel, Aluminium, Iron, carbon steel, Copper

CHAMPION FLOCCULANT GRANULAR**7.3. Specific end use(s)**

Specific use(s) : No information available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Component:	Aluminium sulphate tetradecahydrate	CAS-No. 16828-12-9
Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)		

DNEL

Workers, Long-term - systemic effects, Inhalation
anhydrous substance : 13.4 mg/m³

DNEL

Workers, Long-term - systemic effects, Skin contact
anhydrous substance : 3.8 mg/kg bw/day

DNEL

Consumers, Long-term - systemic effects, Inhalation
anhydrous substance : 3.3 mg/m³

DMEL

Consumers, Long-term - systemic effects, Skin contact
anhydrous substance : 1.9 mg/kg bw/day

DNEL

Consumers, Long-term - systemic effects, Ingestion
anhydrous substance : 1.9 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

No data available :

Other Occupational Exposure Limit Values

UK. EH40 Workplace Exposure Limits (WELs), as amended, Time Weighted Average (TWA):
2 mg/m³

ELV (IE), Time Weighted Average (TWA):
2 mg/m³

CHAMPION FLOCCULANT GRANULAR**8.2. Exposure controls****Appropriate engineering controls**

Refer to protective measures listed in sections 7 and 8.

Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

Personal protective equipment*Respiratory protection*

Advice : Required if dust is released
Filter Type : P2 filter

Hand protection

Advice : The glove material has to be impermeable and resistant to the product / the substance / the preparation.
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.
Protective gloves complying with EN 374.
Recommended Material:
Neoprene
butyl-rubber
Nitrile rubber
natural rubber
polyethylene
PVC
Viton®
Unsuitable materials:
Polyvinyl alcohol

Eye protection

Advice : Tightly fitting safety goggles
Equipment should conform to EN 166

Skin and body protection

Advice : Wear personal protective equipment.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.
Do not let product enter drains.

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

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Form	:	Crystalline powder
Physical state	:	solid
Colour	:	colourless, to, white
Odour	:	odourless
Odour Threshold	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flammability	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Self-Accelerating decomposition temperature (SADT)	:	No data available
pH	:	3 Concentration: 10 % (as aqueous solution)
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Flow time	:	No data available
Solubility(ies)		
Water solubility	:	880 g/l
Solubility in other solvents	:	No data available
Dissolution Rate	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Dispersion Stability	:	No data available

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Vapour pressure : < 0.01 hPa (20 °C)

Relative density : 1.7 (20 °C)

Density : No data available

Bulk density : No data available

Relative vapour density : No data available

Particle characteristics
Particle size : 500 - 2,000 µm

9.2 Other information

Explosives : No chemical groups associated with explosive properties.

Oxidizing properties : not oxidising

Surface tension : 73 mN/m, 1 g/l, 20 °C, OECD Test Guideline 115

SECTION 10: Stability and reactivity**10.1. Reactivity**

Advice : Reacts with acids.

10.2. Chemical stability

Advice : hygroscopic

10.3. Possibility of hazardous reactions

Hazardous reactions : Bases

10.4. Conditions to avoid

Conditions to avoid : Avoid dust formation. Heat, flames and sparks.

10.5. Incompatible materials

Materials to avoid : Oxidizing agents, Strong bases, Water, Avoid moisture.

10.6. Hazardous decomposition products

Hazardous decomposition products : Strong oxidizing agents, Risk of violent reaction. Corrosive gases / vapours, sulphur oxides (SO_x), At high temperature, decomposition products could include Metal oxides. Decomposes in contact with water. Exothermic reaction, corrosive effects, sulphuric acid

SECTION 11: Toxicological information

CHAMPION FLOCCULANT GRANULAR**11.1. Information on toxicological effects****Data for the product****Irritation****Eyes**

Result : Risk of serious damage to eyes.

Sensitisation

Result : No sensitizing effect known.

Component: Aluminium sulphate tetradecahydrate CAS-No. 16828-12-9

Acute toxicity**Oral**

LD50 : 2000 - 5000 mg/kg (Rat, female) (OECD Test Guideline 401) Tested on the hydrated substance

Inhalation

LC50 : > 5 mg/l (Rat, male and female; 4 h; gas) (OECD Test Guideline 403) The toxicological value for the pure substance was calculated on basis of a value for an aqueous solution.

Dermal

LD50 : > 5000 mg/kg (Rabbit, male and female) Prolonged or repeated contact may dry skin and cause irritation. Tested on the hydrated substance

Irritation**Skin**

Result : (Rabbit; No skin irritation) (OECD Test Guideline 404) anhydrous substance

Eyes

Result : Risk of serious damage to eyes. (Rabbit) (OECD Test Guideline 405)

Sensitisation

Result : not sensitizing (Mouse) (OECD Test Guideline 429) anhydrous substance

CHAMPION FLOCCULANT GRANULAR**CMR effects****CMR Properties**

Carcinogenicity	:	No carcinogenicity classification.
Mutagenicity	:	It is not considered mutagenic.
Teratogenicity	:	It is not considered teratogenic.
Reproductive toxicity	:	It is not considered toxic for reproduction.

Specific Target Organ Toxicity**Single exposure**

Remarks	:	No data available
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Repeated exposure

Remarks	:	No data available
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Other toxic properties**Aspiration hazard**

No data available,

11.2. Information on other hazards**Data for the product****Endocrine disrupting properties**

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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SECTION 12: Ecological information**12.1. Toxicity**

Component:	Aluminium sulphate tetradecahydrate	CAS-No. 16828-12-9
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Acute toxicity**Fish**

LC50	:	> 87.5 mg/l (Danio rerio (zebra fish); 96 h) (OECD Test Guideline 203)
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CHAMPION FLOCCULANT GRANULAR**Toxicity to daphnia and other aquatic invertebrates**

NOEC : > 160 mg/l (Daphnia magna)
 EC50 : > 160 mg/l (Daphnia magna; 48 h) (OECD Test Guideline 202)

12.2. Persistence and degradability

Component:	Aluminium sulphate tetradecahydrate	CAS-No. 16828-12-9
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Persistence and degradability**Persistence**

Result : No data available

Biodegradability

Result : The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Component:	Aluminium sulphate tetradecahydrate	CAS-No. 16828-12-9
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Bioaccumulation

Result : Bioaccumulation is not expected.

12.4. Mobility in soil**Data for the product****Surface tension**

Result : 73 mN/m (1 g/l; 20 °C) (OECD Test Guideline 115)

Component:	Aluminium sulphate tetradecahydrate	CAS-No. 16828-12-9
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Mobility

: No data available

12.5. Results of PBT and vPvB assessment**Data for the product****Results of PBT and vPvB assessment**

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Result : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Component:	Aluminium sulphate tetradecahydrate	CAS-No. 16828-12-9
Results of PBT and vPvB assessment		

Result : PBT and vPvB assessment is not applicable to inorganic substances.

12.6. Endocrine disrupting properties

Data for the product	
Endocrine disrupting potential	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects

Data for the product	
Additional ecological information	

Result : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

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

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Not dangerous goods for ADR, RID, IMDG and IATA.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packaging group

Not applicable.

14.5. Environmental hazards

Not applicable.

14.6. Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Component:	Aluminium sulphate tetradecahydrate	CAS-No. 16828-12-9
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EU. Chemicals Subject : ; The substance/mixture does not fall under this legislation.
to PIC Procedure:
Regulation 649/2012/EU
on export and import of
dangerous chemicals, as
amended

EU. REACH, Annex XVII, : ; Not listed
Marketing and Use
Restrictions (Regulation
1907/2006/EC)

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EU. Regulation No : EC Number: , 233-135-0; Listed
1451/2007 [Biocides],
Annex I, OJ (L 325)

EU. Directive : ; The substance/mixture does not fall under this legislation.
2012/18/EU (SEVESO
III) on major accident
hazards involving
dangerous substances,
Annex I

Germany. Ordinance on : WGK 1: slightly hazardous to water: 486; This classification
Facilities Handling does not limit the use of the substance, when used skillfully
Substances that are and in compliance with relevant regulations, for drinking water
Hazardous to Water, preparation, surface water cleanup, or waste water treatment.
((AwSV of 21 April 2017),
UBA, BAnz AT), as
amended

15.2. Chemical safety assessment

No data available

SECTION 16: Other information**Full text of H-Statements referred to under sections 2 and 3.**

H318 Causes serious eye damage.

Abbreviations and Acronyms

AU AIICL	Australia. Industrial Chemicals Act (AIIC) List
BCF	bioconcentration factor
BOD	biochemical oxygen demand
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	carcinogenic, mutagenic or toxic to reproduction
COD	chemical oxygen demand
DNEL	derived no-effect level
DSL	Canada. Environmental Protection Act, Domestic Substances List
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
ENCS (JP)	Japan. Kashin-Hou Law List

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GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IECSC	China. Inventory of Existing Chemical Substances
INSQ	Mexico. National Inventory of Chemical Substances
ISHL (JP)	Japan. Inventory of Industrial Safety & Health
KECI (KR)	Korea. Existing Chemicals Inventory
LC50	median lethal concentration
LOAEC	lowest observed adverse effect concentration
LOAEL	lowest observed adverse effect level
LOEL	lowest observed effect level
NDSL	Canada. Environmental Protection Act. Non-Domestic Substances List
NLP	no-longer polymer
NOAEC	no observed adverse effect concentration
NOAEL	no observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
NZIOC	New Zealand. Inventory of Chemicals
OECD	Organisation for Economic Cooperation and Development
OEL	occupational exposure limit
ONT INV	Canada. Ontario Inventory List
PBT	persistent, bioaccumulative and toxic
PHARM (JP)	Japan. Pharmacopoeia Listing
PICCS (PH)	Philippines. Inventory of Chemicals and Chemical Substances
PNEC	predicted no-effect concentration
REACH Auth. No.:	REACH Authorisation Number
REACH AuthAppC. No.	REACH Authorisation Application Consultation Number
STOT	specific target organ toxicity
SVHC	substance of very high concern
TCSI	Taiwan. Existing Chemicals Inventory
TH INV	Thailand. Existing Chemicals Inventory from FDA
TSCA	US. Toxic Substances Control Act
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
VN INVL	Vietnam. National Chemical Inventory
vPvB	very persistent and very bioaccumulative

Further information

Key literature references : Supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.

Methods used for : The classification for human health, physical and chemical

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product classification		hazards and environmental hazards were derived from a combination of calculation methods and if available test data.
Hints for trainings	:	The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.
Other information	:	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.