



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) No 2020/878

Revision date: 19/12/2022

Version: 11.0

Replaces version: 10.1

Language: en-IE

Printed on: 19/12/2023

F-digital deluxe DESCALER, Sensia Arena DESCALER, Sensia Arena care set, SENSIA ARENA DESCALING KIT

Material number 409591040

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

1.1 Product identifier

Trade name: F-digital deluxe DESCALER, Sensia Arena DESCALER, Sensia Arena care set, SENSIA ARENA DESCALING KIT
REACH registration No.: 01-2119457026-42-XXXX

This safety data sheet pertains to the following products:
4697700M (Sensia Arena DESCALER 4x80g)
46978000 (Sensia Arena care set 1x80g)
14015000 (F-digital deluxe DESCALER for steam generator 6x80g)

CAS-Number: 5949-29-1

EC-number: 201-069-1

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

General use: DESCALERS

1.3 Details of the supplier of the safety data sheet

Company name: Grohe AG
Street/POB-No.: Industriepark Edelburg
Postal Code, city: DE-58675 Hemer
WWW: www.grohe.com
E-mail: info@grohe.com
Telephone: +49 (0)2372 93-0
Telefax: +49 (0)2372 93-1322
Department responsible for information:
Telephone: +49 (0)2372 93-2037
sustainability@grohe.com

Additional information: Corporate headquarters:
Grohe AG
Feldmühleplatz 15
40545 Düsseldorf
Telephone: +49 (0)211 9130 3000

1.4 Emergency telephone number

Poisons Information Centre of Ireland
Telephone: 01 809 2566

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Eye Irrit. 2; H319 Causes serious eye irritation.
STOT SE 3; H335 May cause respiratory irritation.

2.2 Label elements

Labelling (CLP)



Signal word:

Warning



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Hazard statements:	H319	Causes serious eye irritation.
	H335	May cause respiratory irritation.
Precautionary statements:	P102	Keep out of reach of children.
	P261	Avoid breathing dust.
	P264	Wash hands and face thoroughly after handling.
	P271	Use only outdoors or in a well-ventilated area.
	P280	Wear protective gloves/protective clothing/eye protection.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P312	Call a POISON CENTER/doctor if you feel unwell.
	P405	Store locked up.
	P501	Dispose of contents/container to hazardous or special waste collection point.

Special labelling

Text for labelling: Citric acid monohydrate

2.3 Other hazards

May form explosible dust-air mixture if dispersed.

Endocrine disrupting properties, Results of PBT and vPvB assessment:

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical characterisation:	C6 H8 O7 x H2O Citric acid monohydrate
CAS-Number:	5949-29-1
EC-number:	201-069-1

SECTION 4: First aid measures

4.1 Description of first aid measures

In case of inhalation:	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention if problems persist.
Following skin contact:	Remove residues with soap and water. Change contaminated clothing. In case of skin reactions, consult a physician.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.
After swallowing:	Never give anything by mouth to an unconscious person. Rinse mouth and drink 2-4 cupfuls of water. Seek medical treatment in case of troubles.

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye irritation. May cause respiratory irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.



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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray jet, alcohol resistant foam, carbon dioxide, extinguishing powder.

Extinguishing media which must not be used for safety reasons:

Full water jet

5.2 Special hazards arising from the substance or mixture

Product is combustible.

May form dangerous gases and vapours in case of fire.

Furthermore, there may develop: carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information:

Do not allow fire water to penetrate into surface or ground water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Avoid contact with the substance.

Avoid generation of dust. Do not breathe dust.

Wear appropriate protective equipment. Change contaminated clothing.

6.2 Environmental precautions

Do not allow to enter into ground-water, surface water or drains.

If necessary notify appropriate authorities.

6.3 Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal. Final cleaning.

Larger quantities to be stemmed and pumped into tanks.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling:

Provide adequate ventilation, and local exhaust as needed. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment.

Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Change contaminated clothing.

Precautions against fire and explosion:

Keep away from sources of ignition - No smoking.

May form explosible dust-air mixture if dispersed.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Store container tightly closed in a dry area.

Protect against heat /sun rays.

Unsuitable materials: Metal container

Hints on joint storage:

Do not store together with oxidizing agents, alkalis, reducing agents or metals.

Do not store together with combustible or self-igniting materials or any highly flammable solids.

Further details:

Avoid formation of dust/air mixtures because of explosion hazard.

7.3 Specific end use(s)

No information available.



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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

Type	Limit value
Ireland: 8 hours	10 mg/m ³ (Dust limit value, inhalable fraction)
Ireland: 8 hours	4 mg/m ³ (Dust limit value, respirable fraction)

PNEC: Substance anhydrous:
PNEC water (freshwater): 0.44 mg/L
PNEC water (marine water): 0.044 mg/L
PNEC sewage treatment plant: 1000 mg/L
PNEC sediment (freshwater): 34.6 mg/kg dw
PNEC sediment (marine water): 3.46 mg/kg dw
PNEC floor: 33.1 mg/kg dw

8.2 Exposure controls

Provide good ventilation and/or an exhaust system in the work area.
Dust should be exhausted directly at the point of origin.

Personal protection equipment

Occupational exposure controls

Respiratory protection: With the formation of dust, use a dust mask.
Possible alternatives: Particulates filter P1 according to EN 143.

Hand protection: Protective gloves according to EN 374.
Glove material: nitrile rubber - Layer thickness: 0.11 mm.
Breakthrough time: >480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Wear suitable protective clothing.

General protection and hygiene measures:
Do not breathe dust. Do not get in eyes, on skin, or on clothing.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Have eye wash bottle or eye rinse ready at work place. Change contaminated clothing.

Environmental exposure controls

Refer to "6.2 Environmental precautions".

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state at 20 °C and 101.3 kPa: solid
Form: crystalline

Colour: colourless up to white

Odour: odourless

Odour threshold: No data available

Melting point/freezing point: 135 - 152 °C
(Decomposition)

Initial boiling point and boiling range: No data available

Flammability: No data available

Upper/lower flammability or explosive limits: No data available

Flash point/flash point range: not applicable



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Auto-ignition temperature:	345 °C
Decomposition temperature:	> 170 °C
pH:	at 10 g/L: 2.2 at 25 °C, 50 g/L: 1.85
Viscosity, kinematic:	No data available
Solubility:	at 25 °C: (Ethanol) 49 g/L
Water solubility:	at 20 °C: approx. 1630 g/L
Partition coefficient: n-octanol/water:	at 20 °C: -1.72 log P(o/w) (OECD 117) Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.
Vapour pressure:	at 20 °C: ≤ 0.1 hPa
Density:	at 20 °C: 1.542 g/cm ³
Vapour density:	No data available
Particle characteristics:	No data available

9.2 Other information

Explosive properties:	Explosive dust-air mixtures may form.
Oxidizing characteristics:	No data available
Auto-ignition temperature:	No data available
Bulk density:	approx. 800 - 1000 kg/m ³
Molecular weight	210.14 g/mol
Evaporation rate:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

May form explosible dust-air mixture if dispersed.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Reacts violently with oxidizing agents, reducing agents, metals and bases.

10.4 Conditions to avoid

Protect from excessive heat. (Release of water of crystalization in case of warming.)
Avoid formation of dust/air mixtures because of explosion hazard.

10.5 Incompatible materials

Strong oxidizing agents, reducing agent, metals, bases

10.6 Hazardous decomposition products

No hazardous decomposition products when regulations for storage and handling are observed.

Thermal decomposition: > 170 °C

SECTION 11: Toxicological information

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

Acute toxicity:	LD50 Rat, oral:	(Substance anhydrous) 3000 mg/kg
	LD50 Mouse, oral:	(Substance anhydrous) 5040 mg/kg
	LD50 Rat, intraperitoneal:	(Substance anhydrous) 375 mg/kg
	LD50 Mouse, intraperitoneal:	(Substance anhydrous) 961 mg/kg



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Toxicological effects:

Acute toxicity (oral): Based on available data, the classification criteria are not met.
Acute toxicity (dermal): Based on available data, the classification criteria are not met.
Acute toxicity (inhalative): Based on available data, the classification criteria are not met.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Specific symptoms in animal studies (Rabbit): Not an irritant (OECD 404)
Serious eye damage/irritation: Eye Irrit. 2; H319 = Causes serious eye irritation.
Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met.
Skin sensitisation: Based on available data, the classification criteria are not met.
Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.
Mutagenicity (in-vitro, Ames test): negative (Lit.)
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.
Effects on or via lactation: Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure): STOT SE 3; H335 = May cause respiratory irritation.
Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties: No data available

Symptoms

In case of inhalation: May cause irritations.
In case of ingestion: After intake of large amounts: stomachache, cough, vomiting with blood.

General remarks

Physiologically benign according to current data (not a mutagen, carcinogen or teratogen).

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

Harmful effects by modification of pH-value.
Algae toxicity:
IC5 Scenedesmus quadricauda: 640 mg/l/7d (anhydrous).
IC5 Mycrocystis aeruginosa: 80 mg/L/8 d.
Bacterial toxicity:
EC5 Pseudomonas putida: > 10,000 mg/L/16h (anhydrous).
Daphnia toxicity:
EC50 Daphnia magna: 1,535 mg/L/24h
Fish toxicity:
LC50 Leuciscus idus: 440 - 760 mg/L/96h (anhydrous).

12.2 Persistence and degradability

Further details:

Biodegradability: 97 %/28d (OECD 301B)
Product is highly biodegradable.

Oxygen demand:

BOD: 481 mg/g/5d
COD: 685 mg/g
ThOD: 685 mg/g



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12.3 Bioaccumulative potential

Bio-accumulation is not to be expected ($\log P(o/w) < 1$).

Partition coefficient: n-octanol/water:

at 20 °C: $-1.72 \log P(o/w)$ (OECD 117)

Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

General information:

Do not release large quantities into the surface water or into drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number:

07 01 10* = Other filter cakes and spent absorbents
* = Evidence for disposal must be provided.

Recommendation:

Dispose of waste according to applicable legislation.

Package

Recommendation:

Dispose of waste according to applicable legislation.
Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID, IMDG, IATA-DGR: not applicable

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR: Not restricted

14.3 Transport hazard class(es)

ADR/RID, IMDG, IATA-DGR: not applicable

14.4 Packing group

ADR/RID, IMDG, IATA-DGR: not applicable

14.5 Environmental hazards

Dangerous for the environment: Substance/mixture is not environmentally hazardous
according to the criteria of the UN model regulations.

Marine pollutant:

no

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

14.7 Maritime transport in bulk according to IMO instruments

No data available



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SECTION 15: Regulatory information

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

National regulations - EC member states

Further regulations, limitations and legal requirements:

Use restriction according to REACH annex XVII, no.: 75

15.2 Chemical Safety Assessment

No data available

SECTION 16: Other information

Reason of change: Changes in section 2: Classification, labelling

General revision

Date of first version: 10/5/2013

Department issuing data sheet: see section 1: Department responsible for information

Abbreviations and acronyms:

- ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- AS/NZS: Australian Standards/New Zealand Standards
- BOD: Biochemical oxygen demand
- CAS: Chemical Abstracts Service
- CFR: Code of Federal Regulations
- CLP: Classification, Labelling and Packaging
- COD: Chemical Oxygen Demand
- DMEL: Derived minimal effect level
- DNEL: Derived no-effect level
- EC: European Community
- EC50: Effective Concentration 50%
- EN: European Standard
- EQ: Excepted quantities
- EU: European Union
- Eye Irrit.: Eye irritation
- IATA: International Air Transport Association
- IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
- IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
- IMDG Code: International Maritime Dangerous Goods Code
- LC50: Median lethal concentration
- LD50: Lethal dose 50%
- log P(o/w): Partition coefficient: octanol/water
- MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
- OECD: Organisation for Economic Co-operation and Development
- OSHA: Occupational Safety and Health Administration
- PBT: Persistent, bioaccumulative and toxic
- PNEC: Predicted no-effect concentration
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
- STOT SE: Specific target organ toxicity - single exposure
- ThOD: Theoretical Oxygen Demand
- TRGS: Technical Rules for Hazardous Substances
- vPvB: Very persistent and very bioaccumulative

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.