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

1.1 Product identifier

Trade name: Descaling Tablets

UFI: C600-6054-500Q-5FDV

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

General use: For the removal of boiler scale

1.3 Details of the supplier of the safety data sheet

Company name: IBEDA-CHEMIE Klaus P. Christ GmbH
Street/POB-No.: Am Eichelgärtchen 32
Postal Code, city: 56283 Halsenbach
Germany
E-mail: info@ibeda-chemie.com
Telephone: +49 (0)6747-9501-0
Telefax: +49 (0)6747-9501-11
Department responsible for information:
Herr Dohmann, Telephone: +49 (0)6747-9501-16 (Only available during office hours.)

Additional information: Source of supply, other:

BSH Home Appliances Ltd.
M50 Business Park
IRL-Dublin 12 Ballymount
Telephone: 01450 2655
E-mail: mks-spares-ie@bshg.com

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)

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.
STOT SE 3; H335	May cause respiratory irritation.

2.2 Label elements

Labelling (CLP)

Signal word: **Warning**

Hazard statements:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Precautionary statements:

P102	Keep out of reach of children.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302+P352	IF ON SKIN: Wash with plenty of water/soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.

Special labelling

Text for labelling: Contains Maleic acid and Citric acid, anhydrous.

2.3 Other hazards

No risks worthy of mention.

Endocrine disrupting properties, Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition/information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterisation: Mixture of the substances listed below with non-hazardous additions

Hazardous ingredients:

Identifiers	Designation Classification	Content
REACH 01-2119457026-42-xxxx EC No. 201-069-1 CAS 77-92-9	Citric acid, anhydrous Eye Irrit. 2; H319. STOT SE 3; H335.	30 - 60 %
EC No. 203-742-5 CAS 110-16-7	Maleic acid Acute Tox. 4; H302. Acute Tox. 4; H312. Skin Irrit. 2; H315. Eye Irrit. 2; H319. Skin Sens. 1; H317. STOT SE 3; H335. Specific concentration limits (SCL): Skin Sens. 1; H317: C ≥ 0.1 %	10 - 25 %
REACH 01-2119488633-28-xxxx EC No. 226-218-8 CAS 5329-14-6	Sulphamidic acid Skin Irrit. 2; H315. Eye Irrit. 2; H319. Aquatic Chronic 3; H412.	< 25 %

Full text of H- and EUH-statements: see section 16.

Additional information: Contains Sodium hydrogencarbonate. The maximum workplace exposure limits are, where necessary, listed in section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: If medical advice is needed, have product container or label at hand.
Take off contaminated clothing and wash it before reuse.

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: Immediately clean with water and soap followed by thorough rinsing. In case of skin irritation, 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. Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Rinse mouth with water. Product reacts acidic.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

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

Extinguishing media which must not be used for safety reasons:

Full water jet

5.2 Special hazards arising from the substance or mixture

May form dangerous gases and vapours in case of fire.
Furthermore, there may develop: Nitrogen oxides (NOx), sulphur oxides, carbon monoxide and carbon dioxide.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information: Cool endangered containers with water spray and, if possible, remove from danger zone.
Use water spray jet to knock down vapours.
Do not breathe fumes. Do not allow fire water to penetrate into surface or ground water.
Fire water becomes acidic. Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid generation of dust. Do not breathe dust.
If possible, eliminate leakage. Provide adequate ventilation.
Wear appropriate protective equipment. Keep unprotected people away.
Take off contaminated clothing and wash it before reuse.

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

Avoid generation of dust.
Collect dry and place in appropriate containers for disposal. Subsequent cleaning.
To clean the floor and all object contaminated by this material, use water. Use soda or another alkaline detergent for removal of residues.

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. Avoid generation of dust. 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. Take off contaminated clothing and wash it before reuse.
Have eye wash bottle or eye rinse ready at work place.

Precautions against fire and explosion:

Usual measures for fire prevention.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed and in a well-ventilated place.
Keep container dry. Keep only in the original container.
Protect from heat and direct sunlight.

Hints on joint storage: Materials to avoid: Halogens, bases, acids, oxidizing agents (nitrates, nitrites, nitric acid), metals with water.
Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

Type	Limit value
Ireland: 8 hours	10 mg/m³ (Dust limit value, inhalable fraction)
Ireland: 8 hours	4 mg/m³ (Dust limit value, respirable fraction)

8.2 Exposure controls

Use acid resistant materials and devices.
Inspect electric installations more frequently for corrosion damage.
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: Respiratory protection must be worn whenever the WEL levels have been exceeded.
Dust mask or Combination filter Use combination filter type A-(P3) according to EN 14387.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.

Hand protection: Protective gloves according to I.S. EN ISO 374:1.
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 I.S. EN ISO 16321-1:2022.

Body protection: Wear suitable protective clothing.

General protection and hygiene measures:
Avoid generation of dust. 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. Take off contaminated clothing and wash it before reuse. Have eye wash bottle or eye rinse ready at work place.

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: Tablets
Colour:	white
Odour:	odourless
Odour threshold:	No data available
Melting point/freezing point:	132 - 135 °C
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:	> 100 °C
Decomposition temperature:	> 135 °C
pH:	at 20 °C, 10 g/L: 1.0
Viscosity, kinematic:	No data available
Water solubility:	at 80 °C: easily soluble
Partition coefficient: n-octanol/water:	No data available
Vapour pressure:	No data available
Density:	No data available
Vapour density:	No data available
Particle characteristics:	No data available

9.2 Other information

Explosive properties:	No data available
Oxidizing characteristics:	No data available
Auto-ignition temperature:	No data available
Evaporation rate:	No data available
Additional information:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

In aqueous solution: May be corrosive to metals.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No dangerous reactions with proper and specified storage and handling
At high temperatures, will react with alkali nitrites and nitrates as well as with other metal nitrates in explosive fashion and develop nitrogen.
The product develops hydrogen in an aqueous solution in contact with metals.
Reacts with alkalis with development of heat.

10.4 Conditions to avoid

Humidity. Keep away from heat sources, sparks and open flames.
Protect from direct sunlight.

10.5 Incompatible materials

Halogens, bases, acids, oxidizing agents (nitrates, nitrites, nitric acid), metals with water.

10.6 Hazardous decomposition products

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

Thermal decomposition: > 135 °C

SECTION 11: Toxicological information

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

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.
ATEmix (calculated): 2,000 mg/kg < ATE <= 5,000 mg/kg.

Acute toxicity (dermal): Based on available data, the classification criteria are not met.
ATEmix (calculated): > 2,000 mg/kg

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Skin Irrit. 2; H315 = Causes skin irritation.

Serious eye damage/irritation: Eye Irrit. 2; H319 = Causes serious eye irritation.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Skin Sens. 1; H317 = May cause an allergic skin reaction.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Lack of data.

Reproductive toxicity: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): STOT SE 3; H335 = May cause respiratory irritation.

Specific target organ toxicity (repeated exposure): Lack of data.

Aspiration hazard: Lack of data.

11.2 Information on other hazards

Endocrine disrupting properties:

No data available

Other information: A corrosive effect cannot be ruled out because of the pH value.

Information about Maleic acid:
LD50 Rat, oral: 708 mg/kg
LD50 Rabbit, dermal: 1,560 mg/kg

Symptoms

In case of inhalation: Inhalation of dust may cause irritation of the respiratory system.
Other symptoms: Cough, shortage of breath. Pulmonary edema is possible.
Symptoms may occur with delay.
In case of ingestion:
Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
Other symptoms: Abdominal pain, vomiting, burns.
After eye contact: Upon direct contact with eyes may cause burning, tearing, redness.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Harmful effects on water organisms by modification of pH-value.
Before discharge into sewage plants the product normally needs to be neutralised.

Information about Sulphamidic acid:
Bacterial toxicity:
EC50 Activated sludge: >200 mg/L/3h (OECD 209)
Algae toxicity:
EC50 Desmodesmus subspicatus (green algae): 48 mg/L/72h (OECD 201)
NOEC Desmodesmus subspicatus (green algae): 18 mg/L/72h (OECD 201)
Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 71.6 mg/L/48h (OECD 202)
Fish toxicity:
LC50 Pimephales promelas (fathead minnow): 70.3 mg/L/96h (OECD 203)

12.2 Persistence and degradability

Further details: No data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:
No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 20 01 14* = Acids
* = Evidence for disposal must be provided.

Recommendation: Special waste. Dispose of waste according to applicable legislation.

Package

Recommendation: Waste key number 150101 - Paper and cardboard packaging
Waste key number 150102 - Plastic packaging: OPP

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

ADR, ADN, IMDG, IATA: No dangerous good in sense of these transport regulations.

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

National regulations - EC member states

Volatile organic compounds (VOC):

0 % by weight

Further regulations, limitations and legal requirements:

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

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

SECTION 16: Other information

Wording of the H-phrases under paragraph 2 and 3:

H315 = Causes skin irritation.
H317 = May cause an allergic skin reaction.
H319 = Causes serious eye irritation.
H335 = May cause respiratory irritation.
H302 = Harmful if swallowed.
H312 = Harmful in contact with skin.
H412 = Harmful to aquatic life with long lasting effects.

Reason of change: Changes in section 1.3: Department responsible for information
Date of first version: 28/1/2008

Department issuing data sheet:

see section 1: Department responsible for information

Abbreviations and acronyms:

Acute Tox.: Acute toxicity
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
Aquatic Chronic: Hazardous to the aquatic environment - chronic
AS/NZS: Australian Standards/New Zealand Standards
ATE: Acute toxicity estimate
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
CLP: Classification, Labelling and Packaging
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%
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
NOEC: No Observed Effect Concentration
OEL: Occupational Exposure Limit Value
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
Skin Irrit.: Skin irritation
Skin Sens.: Skin sensitisation
STOT SE: Specific target organ toxicity - single exposure
TLV: Threshold Limit Value
TRGS: Technical Rules for Hazardous Substances
vPvB: Very persistent and very bioaccumulative
WEL: Workplace Exposure Limit

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.

Most recent product information is available at:
http://sumdat.net/1hk1iztc