

Trade name: **SS4 Acidifier**

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1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY

1.1 Product identifier

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

The product is a surface treatment agent for concrete.

1.3 Details of the supplier providing the safety data sheet

Manufacturer/Supplier:

Backstein Engineering GmbH
Langgasse 21
D-65510
Idstein,
Germany
Tel. +49 (0) 6434/9089115
Email: shop@moertelshop.com

1.4 Emergency number

Joint Poisons Information Centre (GGIZ) for the federal states of Mecklenburg-Western Pomerania, Saxony, Saxony-Anhalt and Thuringia
GGIZ's 24-hour German-language emergency number: Telephone number +49 361 730730
For Austria: Poison Information Centre of Gesundheit Österreich GmbH: Telephone number +43 1 406 43 43

2 POTENTIAL HAZARDS

2.1 Classification of the substance or mixture in accordance with Regulation (EC) No 1272/2008

Skin Corrosion 1 (H290); Acute Toxicity 3 (H331); Acute Toxicity 4 (H302); Eye Damage 1 (H318); Skin Corrosion IA (H314); Skin Irritation 2 (H315); Eye Damage 1 (H318)

For classifications not shown in full in this section, the full text is set out in Section 16.

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2.2 Labelling elements in accordance with Regulation (EC) No 1272/2008

2.2.1 Pictograms and signal word for the product



GHS05

Signal word: DANGER

2.2.2 Hazard-determining components for labelling

Formic acid, citric acid, hydrochloric acid

2.2.3 Hazard statements

[H318] Causes serious eye damage [

H315] Causes skin irritation

[H302] Harmful if swallowed [H290] May be

corrosive to metals

2.2.4 Safety instructions

[P102] Keep out of reach of children [P103] Read

the label before use

[P280] Wear protective gloves/protective clothing/eye protection/face

protection [P501] Dispose of contents/container at suitable waste collection

points

[P302+P352+ P333+P313] IF ON SKIN: Wash with plenty of soap and water

[P305+P351+ P338+P310] IF IN EYES: Rinse cautiously with water for several minutes. Remove any contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor.

[P332+P313] If skin irritation occurs, seek medical advice / seek medical attention

[P101] If medical advice is needed, have product container or label at hand [P362] Take

off contaminated clothing and wash before wearing again

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2.3 Other hazards

Not applicable

3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

This product is a mixture.

3.2 Mixtures

3.2.1 Composition/Information on constituents

Aqueous solution, gel-like

3.2.2 Hazardous ingredients

Formic acid 0–30% (CAS: 64-18-6) – Classification in accordance with Regulation (EC) No 1272/2008: H226, H290, H331, H302, H314,

Citric acid 0–50% (CAS: 77-92-9) – Classification in accordance with Regulation (EC) No 1272/2008: H319

Hydrochloric acid 33% 0–10% (CAS: 7647-01-0) – Classification in accordance with Regulation (EC) No 1272/2008: H314, H335, H290, H318

The wording of the hazard statements listed can be found in Section 16.

4 FIRST AID MEASURES

4.1 Description of first-aid measures

4.1.1 General advice

First-aiders should take care to protect themselves. Remove contaminated clothing immediately.

4.1.2 After skin contact

If the substance comes into contact with the skin, wash off immediately with plenty of water and soap. Do not use solvents under any circumstances. If irritation occurs, seek medical advice.

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4.1.3 After eye contact

Rinse thoroughly under running water for 15 minutes with eyelids held open; follow-up examination by an ophthalmologist.

4.1.4 After inhalation

If you experience any symptoms after inhaling vapour/aerosol: move to fresh air and seek medical assistance.

4.1.5 If swallowed

Rinse mouth immediately and drink plenty of water; seek medical attention. Do not induce vomiting.

4.2 Key acute and delayed symptoms and effects

Symptoms: The most important known symptoms and effects are described on the product label (see Section 2) and/or in Section 11.

4.3 Indications for immediate medical attention or specialised treatment

Monitor for pneumonia and pulmonary oedema. Monitor circulation.

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing agents

Suitable extinguishing media:

Foam, water spray, dry powder, carbon dioxide

Extinguishing media unsuitable for safety reasons:

Full-power water jet

5.2 Special hazards arising from the substance or mixture

Mixture corrosive to metals

5.3 Fire-fighting instructions

Special protective equipment: Wear self-contained breathing apparatus.

Further information:

The hazard depends on the substances burning and the fire conditions. Cool containers at risk from heat with water. Collect contaminated fire-fighting water separately; it must not enter the sewerage system or wastewater. Contaminated fire-fighting water must be disposed of in accordance with regulatory requirements.

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6 MEASURES IN THE EVENT OF ACCIDENTAL RELEASE

6.1 Personal precautions, protective equipment and emergency procedures

Do not inhale vapour/aerosol/spray mist. Wear safety goggles/face protection. If exposed to high vapour concentrations, leave the area immediately. Use personal protective clothing. Observe the usual precautions when handling chemical building materials.

6.2 Environmental protection measures

Retain contaminated water/fire-fighting water. Do not allow to enter the sewerage system/surface water/groundwater.

6.3 Methods and materials for containment and cleaning

For small quantities: Absorb with an inert liquid-binding material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, soil, etc.). Dispose of contaminated material in accordance with regulations. For large quantities: Pump out the product.

6.4 Reference to other sections

For information on safe handling, see Section 7. For information on personal protective equipment, see Section 8. For information on disposal, see Section 13

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Guidance on safe handling

Avoid the formation of aerosols. Avoid inhaling mists/vapours. Avoid skin contact. Do not mix with alkalis.

7.1.2 Fire and explosion prevention instructions

No special measures required.

7.1.3 Guidance on general hygiene measures

Do not eat, drink or smoke whilst working. Wear protective gloves to avoid skin contact.

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7.2 Conditions for safe storage, taking incompatibilities into account

7.2.1 Requirements for storage areas and containers

Suitable materials for containers: high-density polyethylene (HDPE)

Further details on storage conditions: Store only in the original container in a cool, well-ventilated place, away from sources of ignition, heat or flames. Protect from direct sunlight.

7.2.2 Storage compatibility guidelines

Keep away from heat sources, acids, bases, metals and oxidising agents

7.2.3 Further details on storage conditions

Not specified

7.2.4 Storage class

Storage class in accordance with TRGS 510 (originally VCI, Germany): (12) Non-flammable liquids

8 EXPOSURE CONTROLS AND MONITORING / PERSONAL PROTECTIVE EQUIPMENT

8.1 Parameters to be monitored

Components with occupational exposure limits: No occupational exposure limits are known.

8.2 Exposure control and monitoring

8.2.1 Suitable engineering controls

Engineering controls and the use of appropriate work practices take precedence over the use of personal protective equipment. Ensure good ventilation. This can be achieved by local exhaust ventilation or general exhaust ventilation.

8.2.2 General protection and hygiene measures

Do not inhale gases, vapours or aerosols. Avoid contact with the skin, eyes and clothing. Avoid exposure – seek specific instructions before use. Observe the usual precautions when handling chemical building materials. Wearing closed-neck work clothing is recommended. Do not eat, drink or smoke whilst using the product. Wash hands and/or face before breaks and at the end of the working day. Ensure skin is cleaned and cared for after work. Gloves must be checked regularly and before use. They must be replaced if necessary (e.g. small tears).

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8.2.3 Respiratory protection

Respiratory protection where ventilation is inadequate. Combination filters for organic, inorganic, acidic inorganic and basic gases/vapours (e.g. EN 14387 Type ABEK).

8.2.4 Skin protection

Suitable chemical-resistant protective gloves (EN 374), even during prolonged, direct contact (recommended: protection index 6, corresponding to a permeation time of > 480 minutes according to EN 374):
e.g. made of nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm), etc. Due to the wide variety of types available, the manufacturers' instructions for use must be followed.

Select personal protective equipment appropriate to the task and potential exposure, e.g. apron, protective boots, chemical protective suit (in accordance with EN 14605 for splashes or EN ISO 13982 for dust)

8.2.5 Eye protection

Safety goggles with side protection (framed goggles) (e.g. EN 166)

8.3 Limiting and monitoring environmental exposure

8.3.1 Air

Information on the control and monitoring of environmental exposure can be found in Section 6.

8.3.2 Water

Information on limiting and monitoring environmental exposure can be found in Section 6.

8.3.3 Soil

Information on limiting and monitoring environmental exposure can be found in Section 6.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Transparent liquid	Odour
	Characteristic	Melting
point	Not determined	Boiling
point	Not determined	Flash
point	Not determined	
Spontaneous combustion	Not determined	Explosion
hazard	Not explosive	Density
	Not determined	
Solubility in water	Not applicable	
Organic solvents	0.0%	Solid
content	Not	
determined		

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Other information _____ No further relevant information available

10 STABILITY AND REACTIVITY

10.1 Reactivity

Corrosive to metal

10.2 Chemical stability

The product is stable provided the instructions for storage and handling are followed.

10.3 Potential for hazardous reactions

The product is stable provided the storage and handling instructions are followed.

10.4 Conditions to avoid

See SDS Section 7 – Handling and Storage.

10.5 Incompatible materials

Strong acids, strong bases, strong oxidising agents, strong reducing agents

10.6 Hazardous decomposition products

No hazardous decomposition products provided that the instructions for storage and handling are followed

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

11.1.1 Acute toxicity

Components that may contribute to acute oral toxicity. Formic acid
(0–30%), LD₅₀ (oral): 730 mg/kg

Calculated estimated acute oral toxicity (ATE, mixed): 4866 mg/kg

Components that may contribute to acute inhalation toxicity. Formic acid (0–
30%), LC₅₀ (inhalation): 7.85 mg/l/4h

Calculated estimated acute inhalation toxicity (ATE, mix): 52.333 mg/l/4h

11.1.2 Primary irritant

effect on the skin

Relevant ingredients: Formic acid
(0–30 per cent), non-additive;
classification of the substance:
Category 1A

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SCL: Category 1A: 5 % (general limit) Category 1B: 5 % (general limit) Category 1C: 5 % (general limit) Category 2: 10 % (general limit) 33 % hydrochloric acid (0–10 %) non-additive,

Classification of the substance: Category 1B

Category 1B: 25 per cent Category 1C: 25 per cent Category 2: 10 per cent Result: The mixture is classified as Category 1A.

To the eyes

Substances classified as Category 1A skin corrosives also cause serious eye damage. The mixture is therefore classified as Category 1.

11.1.3 Sensitisation

A sensitising effect in particularly sensitive individuals cannot be ruled out. Based on the available data, the classification criteria are not met. The product has not been tested. This statement is derived from the properties of the individual components.

11.1.4 Mutagenicity

The chemical structure does not give rise to any particular suspicion of such an effect. Based on the available data, the classification criteria are not met.

11.1.5 Carcinogenicity

The chemical structure does not give rise to any particular suspicion of such an effect. Based on the available data, the classification criteria are not met.

11.1.6 Reproductive toxicity

The chemical structure does not give rise to any particular suspicion of such an effect. Based on the available data, the classification criteria are not met.

11.1.7 Additional toxicological information

Specific target organ toxicity (single exposure): Respiratory tract irritation

Relevant ingredients:

Hydrochloric acid 33% (5.0 %),

Classification of the substance:

Category 3 SCL: Category 3: 10 %

12 ENVIRONMENTAL INFORMATION

12.1 Toxicity

Assessment of aquatic toxicity:

Based on the available data, the classification criteria are not met. It is highly unlikely to be acutely harmful to aquatic organisms.

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12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of the PBT and vPvB assessment

The product does not meet the criteria for PBT (persistent, bioaccumulative and toxic) and vPvB (very persistent and very bioaccumulative).

12.6 Other adverse effects

No data available.

13 DISPOSAL INSTRUCTIONS

13.1 Waste treatment procedures

13.1.1 Recommendation

National and local legal regulations must be observed. Residual quantities must be disposed of in the same way as the substance/product.

13.1.2 Waste code according to the European Waste Catalogue

16 05 07 Spent inorganic chemicals consisting of or containing hazardous substances

13.1.3 Uncleaned packaging

Contaminated packaging must be emptied as thoroughly as possible. It can then be sent for recycling following appropriate cleaning.

14 TRANSPORT INFORMATION

Transport hazard class 8 (ADR, RID, ADN, IMDG, IATA/ICAO)

14.1 UN number

1760

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14.2 Proper UN shipping name

CORROSIVE LIQUID, N.O.S.
(combination of active substances)

14.3 Transport hazard classes

Transport hazard class 8 (ADR, RID, ADN, IMDG, IATA/ICAO)

14.4 Packing group

Packing group III (ADR, RID, ADN, IMDG, IATA/ICAO) Hazard
label: 3
Classification code: F1

Special provisions (ADR/RID): 163 640E 650

Limited quantity (LQ) (ADR/RID): 450 L

Transport category (ADR/RID): 3

Hazard number (ADR/RID): 30 Tunnel

restriction code (ADR/RID): D/E

In packaging of less than 450 litres, the product is not subject to the ADR in accordance with
2.2.3.1.5.

Marine pollutant (IMDG): No Special
provisions (IMDG): 163, 223, 955 Limited
quantity (LQ) (IMDG): 30 L EmS (IMDG):
F-E, S-E

In packages of less than 30 litres, the product is not subject to the IMDG Code in accordance with
2.3.2.5.

Special provisions (IATA/ICAO): A3 A72

Limited Quantity (LQ) Passenger (IATA/ICAO): 10 L

IATA Packing Instruction – Passenger: 355

IATA maximum quantity – Passenger: 60 L

IATA packing instruction – Cargo: 366

IATA maximum quantity – Cargo: 220 L

14.5 Environmental hazards

The product is not harmful to the environment.

14.6 Special precautions for users

Warning: Corrosive substances

14.7 Transport in bulk in accordance with Annex II of the MARPOL Convention 73/78 and in accordance with the IBC Code

Not assessed

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15 REGULATIONS

15.1 Regulations on safety, health and environmental protection / specific legal provisions for the substance or mixture

15.1.1 EU regulations

1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC; (EU) 2015/830

15.1.2 National regulations

Hazardous Substances Ordinance – GefStoffV 2011; Water Resources Act – WHG; TRGS: 200, 615, 900, 905.

15.1.3 Other regulations, restrictions and prohibition orders

BGI 660: Information sheet: General occupational safety measures for handling hazardous substances (M 053). BGI 595: Information sheet: Irritant substances/corrosive substances (M 004). TRGS 401: Hazards arising from skin contact. - Identification, assessment, measures. BGI 564: Information sheet: Handling of substances hazardous to health (for employees) (M 050). TRGS 510: Storage of hazardous substances in portable containers

15.2 Chemical safety assessment

Substance safety assessment not required

16 OTHER INFORMATION

16.1 General

All information is based on our current state of knowledge; however, it does not constitute a guarantee of product properties and does not give rise to any contractual relationship.

16.2 Wording of the hazard statements (in accordance with Regulation (EC) No 1272/2008) referred to in Sections 2 and 3

Flamm. Liq. 2 [H225] – Flammable liquids, Category 2: Liquid and vapour highly flammable

Flam. Liq. 3 [H226] – Flammable liquids, Category 3: Liquid and vapour are flammable Flam. Sol. 2

[H228] – Flammable solids, Category 2: Flammable solid

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Met. Corr. 1 [H290] – Substances or mixtures corrosive to metals: May be corrosive to metals

Acute Tox. 3 [H301] – Acute toxicity category 3: Toxic if swallowed

Acute Tox. 4 [H302] – Acute toxicity Category 4: Harmful if swallowed

Asp. Tox. 1 [H304] – Aspiration hazard Category 1: May be fatal if swallowed and enters the respiratory tract

Acute Tox. 4 [H312] – Acute toxicity Category 4: Harmful if in contact with skin

Skin. Corr. 1A [H314] – Skin corrosion / skin irritation Category 1A: Causes severe skin burns and serious eye damage

Skin. Irrit 2 [H315] – Skin corrosion / skin irritation Category 2: Causes skin irritation

Skin Sens. 1 [H317] – Skin sensitisation Category 1: May cause allergic skin reactions

Eye Dam. 1 [H318] – Serious eye damage/eye irritation Category 1: Causes serious eye damage

Eye Irrit. 2 [H319] – Causes severe eye irritation

Acute Tox. 3 [H330] – Acute toxicity Category 3: Life-threatening if inhaled

Acute Tox. 3 [H331] – Acute toxicity Category 3: Toxic if inhaled

Acute Tox. 4 [H332] – Acute toxicity Category 4: Harmful if inhaled STOT SE 3 [H335] –

May cause respiratory irritation

STOT SE 3 [H336] – Specific target organ toxicity (single exposure) Category 3: May cause drowsiness and dizziness

STOT RE 2 [H373] – Specific target organ toxicity (repeated exposure) Category 2: May cause damage to organs through prolonged or repeated exposure (following prolonged or repeated inhalation, skin contact or ingestion)

Aquatic Acute 1 [H400] – Hazardous to aquatic life Category 1: Very toxic to aquatic organisms

Aquatic Chronic 2 [H411] – Chronically hazardous to the aquatic environment, Category 2: Toxic to aquatic organisms with long-term effects

16.3 Abbreviations and acronyms

[ADR] International Regulations concerning the Transport of Dangerous Goods by Rail [

AGW] Occupational exposure limit

[AwSV] Ordinance on Installations for the Handling of Substances Hazardous to Water

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[BGR] German Social Accident Insurance Association Regulation
[BimSchV] Ordinance on the Implementation of the Federal Immission Control
Act [CAS] Chemical Abstracts Service
[DIN] Standard of the German Institute for
Standardisation [EC] Effective concentration
[EC] European Community
[EINECS] European Inventory of Existing Commercial Chemical
Substances [EN] European Standard
[GHS] Globally Harmonised System of Classification and Labelling of Chemicals
[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
[ICAO-TI] International Civil Aviation Organisation – Technical
Instructions [IMDG Code] International Maritime Dangerous Goods
Code
[ISO] Standard of the International Organisation for Standardisation
[IUCLID] International Uniform Chemical Information Database
[LC] Lethal concentration
[LD] Lethal Dose
[log Kow] Partition coefficient between octanol and water
[MARPOL] Maritime Pollution Convention = Convention for the Prevention of Marine Pollution
by Ships
[OECD] Organisation for Economic Co-operation and Development
[PBT] Persistent, bioaccumulative, toxic
[REACH] Registration, Evaluation and Authorisation of Chemicals (Regulation (EC) No
1907/2006)
[RID] International Regulations concerning the Carriage of Dangerous Goods by Rail
[SDS] Safety Data Sheet
[STOT] Specific target organ toxicity [TRGS] Technical Rules
for Hazardous Substances
[UN] United Nations
[VOC] Volatile Organic Compounds
[vPvB] very persistent and very bioaccumulative [VwVwS] Administrative Regulation on
Substances Hazardous to Water
[WGK] Water Hazard Class