

1. Product and company identification

Product identifier

Trade name: WMF Special Scale Remover

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

General use: For the removal of boiler scale

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 Christ, Telephone: +49 (0)6747-95010 (Only available during office hours.)

Emergency phone number

**GIZ-Nord, Göttingen, Germany,
Telephone: +49 551-19240**

2. Hazards identification

Emergency overview

Appearance: Form: solid, Powder

Color: white

Odor: odorless

Classification: Skin Irritation - Category 2. Eye Irritation - Category 2A. Aquatic toxicity - chronic - Category 3.

Hazard symbols:



Signal word:

Warning

Hazard statements:

Causes skin irritation.

Causes serious eye irritation.

Harmful to aquatic life with long lasting effects.

Precautionary statements:

Keep out of reach of children.

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection.

IF ON SKIN: Wash with plenty of water/soap.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Dispose of contents/container to hazardous or special waste collection point.

Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazards not otherwise classified

see section 11: Toxicological information

3. Composition / Information on ingredients

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 5329-14-6	Sulphamidic acid	>= 80 %	Skin Irritation - Category 2. Eye Irritation - Category 2A. Aquatic toxicity - chronic - Category 3.

4. First aid measures

In case of inhalation:	Move victim to fresh air, put at rest and loosen restrictive clothing. In case of respiratory difficulties seek medical attention. If breathing becomes irregular or ceases, apply rescue breathing or artificial respiration immediately, where required supply oxygen. If victim is at risk of losing consciousness, position and transport on their side.
Following skin contact:	After contact with skin, wash immediately with soap and plenty of water. Change contaminated clothing. 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. Subsequently consult an ophthalmologist.
After swallowing:	Never give anything by mouth to an unconscious person. Drink large quantities of water. Do not induce vomiting. Seek medical attention.

Most important symptoms/effects, acute and delayed

In case of inhalation: Cough, shortage of breath.
In case of ingestion:
Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
After contact with skin: irritation
After eye contact: Strongly irritant up to corrosive

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:	No data available
Auto-ignition temperature:	No data available
Suitable extinguishing media:	Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.
Extinguishing media which must not be used for safety reasons:	Full water jet

Specific hazards arising from the chemical

Hazardous vapors may form during fires.
In case of fire may be liberated: sulphur oxides, nitrogen oxides (NOx), ammonia.

Protective equipment and precautions 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 a water fog to control vapors. Do not breathe fumes.
Do not allow fire water to penetrate into surface or ground water. Fire water becomes acidic.

6. Accidental release measures

Personal precautions:	Provide adequate ventilation. Wear appropriate protective equipment. Avoid contact with the substance. Avoid generation of dust. Do not breathe dust.
Environmental precautions:	Do not allow to penetrate into soil, waterbodies or drains. If necessary notify appropriate authorities.

Methods for clean-up: Avoid generation of dust. Collect dry and place in appropriate containers for disposal.
Subsequent cleaning.
Final cleaning: Use soda or another alkaline detergent for removal of residues.

7. Handling and storage

Handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed.
Avoid contact with skin, eyes, and clothing.
Avoid generation of dust. Do not breathe dust. Wear appropriate protective equipment.
When using do not eat, drink or smoke.
When diluting, always add the product to water. Never add water to the product.

Precautions against fire and explosion: Usual measures for fire prevention.

Storage

Requirements for storerooms and containers: Keep only in the original container. Keep container tightly closed and dry.
storage temperature: No special measures are required.

Hints on joint storage: Not let come into contact with light metals.
Keep away from food, drink and animal feedingstuffs.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

Type	Limit value
USA: ACGIH: TWA	10 mg/m ³ (Dust limit value, inhalable fraction)
USA: ACGIH: TWA	3 mg/m ³ (Dust limit value, respirable fraction)
USA: OSHA: TWA	15 mg/m ³ (Dust limit value, inhalable fraction)
USA: OSHA: TWA	5 mg/m ³ (Dust limit value, respirable fraction)

Engineering controls

Provide good ventilation. Dust should be exhausted directly at the point of origin.
See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection: Wear suitable protective clothing.
Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: Nitrile rubber (0.11 mm).
Breakthrough time: >480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: With the formation of dust, use a dust mask.
Use filter apparatus type B-P2.

General hygiene considerations: Avoid contact with skin, eyes, and clothing. Change contaminated clothing.
Do not breathe dust. Wear appropriate protective equipment.
Have eye wash bottle or eye rinse ready at work place.
When using do not eat or drink.
Wash hands before breaks and after work.

Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Form: solid, Powder Color: white
Odor:	odorless
Odor threshold:	No data available
pH:	at 68 °F, 10 g/L: 1.0
Melting point/freezing point:	401 °F
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	No data available
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	at 68 °F: 0.0078 hPa at 212 °F: 0.025 hPa
Vapor density:	No data available
Density:	at 77 °F: 2.06 g/cm ³
Water solubility:	at 68 °F: 213 g/L at 176 °F: 470 g/L
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	408.2 °F
Bulk density:	800 - 1200 kg/m ³
Additional information:	Molar mass: 97.09 g/mol

10. Stability and reactivity

Reactivity:	In aqueous solution: May be corrosive to metals.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	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.
Conditions to avoid:	Keep away from heat. Avoid generation of dust.
Incompatible materials:	halogens, bases, oxidizing agents (nitrates, nitrites, nitric acid), metals with water.
Hazardous decomposition products:	In case of strong heating: sulphur oxides, nitrogen oxides (NO _x), ammonia
Thermal decomposition:	408.2 °F

11. Toxicological information

Toxicological tests

Acute toxicity:	LD50 Rat, oral: Sulphamidic acid > 2000 mg/kg
	LD0 Rat, oral: Sulphamidic acid 100 mg/kg
	LD50 Rat, dermal: Sulphamidic acid > 2000

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.

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Skin Irritation - Category 2 = Causes skin irritation.

Serious eye damage/irritation: Eye Irritation - Category 2A = Causes serious eye irritation.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Based on available data, the classification criteria are not met.
Not known to cause sensitization.

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): Lack of data.

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

Aspiration hazard: Lack of data.

Symptoms

In case of inhalation: Cough, shortage of breath.

In case of ingestion:
Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

After contact with skin: irritation

After eye contact: Strongly irritant up to corrosive

12. Ecological information

Ecotoxicity

Aquatic toxicity: Harmful to aquatic life with long lasting effects. Harmful effects on water organisms by modification of pH-value.

Effects in sewage plants: Before discharge into sewage plants the product normally needs to be neutralised.

Mobility in soil

No data available

Persistence and degradability

Further details: No data available

Additional ecological information

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

13. Disposal considerations

Product

Recommendation: Dispose of waste according to applicable legislation.

Package

Recommendation: Dispose of waste according to applicable legislation.

14. Transport information

UN number

ADR/RID, IMDG, IATA-DGR: UN 2967

UN proper shipping name

ADR/RID, IMDG, IATA-DGR: UN 2967, SULPHAMIC ACID

Transport hazard class(es)

ADR/RID: Class 8, Code: C2

IMDG: Class 8, Subrisk -

IATA-DGR: Class 8



Packing group

ADR/RID: III

Environmental hazards

Marine pollutant: no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

USA: Department of Transportation (DOT)

Identification number: UN2967
Proper shipping name: UN 2967, SULFAMIC ACID
Hazard class or Division: 8
Labels: 8
Special Provisions: IB8, IP3, T1, TP33
Packaging – Exceptions: 154
Packaging – Non-bulk: 213
Packaging – Bulk: 240
Quantity limitations – Passenger aircraft / rail: 25 kg
Quantity limitations – Cargo only: 100 kg
Vessel stowage – Location: A
Vessel stowage – Other: 53, 58



Sea transport (IMDG)

UN number: UN 2967
Proper shipping name: UN 2967, SULPHAMIC ACID
Class or division, Subsidiary risk: Class 8, Subrisk -
EmS: F-A, S-B
Special Provisions: -
Limited quantities: 5 kg
Excepted quantities: E1
Package - Instructions: P002, LP02
Package - Provisions: -
IBC - Instructions: IBC08
IBC - Provisions: B3
Tank instructions - IMO: -
Tank instructions - UN: T1
Tank instructions - Provisions: TP33
Stowage and handling: Category A.
Segregation: SG36 SG49
Properties and observations: White crystalline powder. Soluble in water. Decomposes when heated, evolving toxic fumes. Causes burns to skin, eyes and mucous membranes.
Marine pollutant: no
Segregation group: 1

Air transport (IATA)

UN/ID number:	UN 2967
Proper shipping name:	UN 2967, SULPHAMIC ACID
Class or division, Subsidiary risk:	Class 8
Hazard label:	Corrosive
Excepted Quantity Code:	E1
Passenger and Cargo Aircraft: Ltd.Qty.:	Pack.Instr. Y845 - Max. Net Qty/Pkg. 5 kg
Passenger and Cargo Aircraft:	Pack.Instr. 860 - Max. Net Qty/Pkg. 25 kg
Cargo Aircraft only:	Pack.Instr. 864 - Max. Net Qty/Pkg. 100 kg
Special Provisions:	A803
Emergency Response Guide-Code (ERG):	8L

15. Regulatory information**National regulations - U.S. Federal Regulations**

Sulphamic acid:	TSCA Inventory: listed
	TSCA HPVC: not listed

National regulations - Great Britain

Hazchem-Code:	2X
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16. Other information

Text for labeling: Contains >= 80 % Sulphamic acid. Safety data sheet available on request.

Hazard rating systems:



Contains Sulphamic acid

NFPA Hazard Rating:

Health: 1 (Slight)

Fire: 0 (Minimal)

Reactivity: 1 (Slight)

HMIS Version III Rating:

Health: 1 (Slight)

Flammability: 0 (Minimal)

Physical Hazard: 1 (Slight)

Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	1
	X

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
Aquatic toxicity - chronic: Hazardous to the aquatic environment - chronic
AS/NZS: Australian Standards/New Zealand Standards
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
EN: European Standard
EQ: Excepted quantities
Eye irritation: 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
LD50: Lethal dose 50%
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
Skin Irritation: Skin irritation
TRGS: Technical Rules for Hazardous Substances
UN: United Nations
vPvB: Very persistent and very bioaccumulative

Reason of change: Changes in section 1.4: Emergency phone number

Date of first version: 5/11/2003

Department issuing data sheet

Contact person: see section 1: Department responsible for information

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/k9rwm2>

