

Material Safety Data Sheet

Type 1000A1

Conforms to Regulation (EC) No. 1907/2006 (REACH), Article 31

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Kistler number	1000A1
Product name	grouting compound 1000A1 comp B, hardener
CAS number	9003-36-5
CE Nummer	25620-58-0

1.2. Use of the substance / preparation

sensor moulding/potting

1.3. Details of the supplier of the safety data sheet

Name	Kistler Instrumente AG,
Address	Eulachstrasse 22
District and Country	8408 Winterthur, Switzerland
	Tel: +41 52 224 11 11, Fax: +41 52 224 14 14
	info@kistler.com, www.kistler.com

E-mail address of person responsible for this SDS	info@kistler.com, www.kistler.com
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1.4. Emergency telephone

+41797768935 ASTAG AG (8h, GMT +1)
+41442515151 Swiss Toxicology Centre (24h)

2. Hazards identification

2.1. Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.

Hazard classification and indication:

Acute Tox. 4 H302
Skin Corr. 1B H314
Skin Sens. 1B H317
Aquatic Chronic 3 H412

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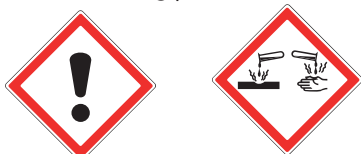
2.1.2. 67/548/EEC and 1999/45/EC Directives and following amendments and adjustments.

Danger Symbols: C
R phrases: 22-34-43-52/53

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.



Signal word

Danger

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.
P264	Wash ... thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves / protective clothing / eye protection / face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Nr. EC: 247-134-8

2.3. Other hazards Information not available.

3. Composition/information on ingredients

3.1. Substances

Identification	Conc. %	Classification 67/548/EEC	Classification 1272/2008 (CLP)
trimethylhexamethylenediamines CAS. 25620-58-0 EC. 247-134-8 INDEX. -	100	R52/53 C R34 Xn R22 Xi R43	Acute Tox. 4 H302 Skin Corr. 1B H314 Skin Sens. 1B H317 Aquatic Chronic 3 H412

Note: Upper limit is not included into the range.

The full wording of the Risk (R) and hazard (H) phrases is given in section 16 of the sheet.

T+ = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = Extremely Flammable(F+), F = Highly Flammable(F), N = Dangerous for the Environment(N)

3.2. Mixtures

Information not relevant.

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4. First aid measures

4.1. Description of first aid measures

EYES:	Remove contact lenses, if present Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice
SKIN:	Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.
INHALATION:	Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.
INGESTION:	Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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

For symptoms and effects caused by the contained substances, see chap. 11.

4.3. Indication of any immediate medical attention and special treatment needed

Information not available.

5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products. The product is combustible and, when the powder is released into the air in sufficient concentrations and in the presence of a source of ignition, it can create explosive mixtures with air. Fires may start or get worse by leakage of the solid product from the container, when it reaches high temperatures or through contact with sources of ignition.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal firefighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available.

8. Exposure controls/personal protection

8.1. Control parameters Information not available.

8.2. Exposure controls As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration. Personal protection equipment must comply with the rules in force indicated below.

HAND PROTECTION Protect hands with category III (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in PVA, butyl, fluoroelastomer or equivalent. The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves' limit depends on the duration of exposure.

EYE PROTECTION Wear protective airtight goggles (ref. standard EN 166).

SKIN PROTECTION Wear category II professional long-sleeved overalls and safety footwear (ref. Directive 89/686/CEE and standard EN 344). Wash body with soap and water after removing overalls.

RESPIRATORY PROTECTION If the threshold value (if available) for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction established by the company's prevention and protection service is exceeded, wear a mask with an E or universal filter, the class (1, 2 or 3) of which must be chosen according to the limit concentration of use (ref. standard EN 141). The use of respiratory tract protection equipment, such as masks like that indicated above, is necessary to reduce worker exposure in the absence of technical measures. The protection provided by masks is in any case limited. If the substance in question is odourless or its olfactory threshold is higher than the relative exposure limit and in the event of an emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear self-contained, open-circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138). An emergency eye washing and shower system must be provided.

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid
Colour	yellowish
Odour	amino
Odour threshold	Not available.
pH	11
Melting point / freezing point	Not available.
Initial boiling point	Not available.
Boiling range	Not available.
Flash point	> 60 °C.
Evaporation Rate	Not available.
Flammability of solids and gases	Not available.
Lower inflammability limit	Not available.
Upper inflammability limit	Not available.
Lower explosive limit	Not available.
Upper explosive limit	Not available.
Vapour pressure	<0,75 mmHg
Vapour density	Not available.
Relative density	0.930 Kg/l
Solubility	partially miscible
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information Information not available.

10. Stability and reactivity

- 10.1. **Reactivity** There are no particular risks of reaction with other substances in normal conditions of use.
- 10.2. **Chemical stability** The product is stable in normal conditions of use and storage.
- 10.3. **Possibility of hazardous reactions** No hazardous reactions are foreseeable in normal conditions of use and storage.
- 10.4. **Conditions to avoid** None in particular. However the usual precautions used for chemical products should be respected.
- 10.5. **Incompatible materials** Information not available.
- 10.6. **Hazardous decomposition products** In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

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11. Toxicological Information

11.1. Information on toxicological effects

Acute effects: ingestion of this product is harmful. Even small amounts of product may cause serious health problems (stomach pain, nausea, sickness, diarrhoea).

This product is corrosive and causes serious burns and vesicles on the skin, which can arise even after exposure. Burns are very stinging and painful. Upon contact with eyes, it may cause serious harm, such as cornea opacity, iris lesions, irreversible eye coloration. Possible vapours are caustic for the respiratory system and may cause pulmonary oedema, whose symptoms sometimes arise only after some hours.

Exposure symptoms may include: sting, cough, asthma, laryngitis, respiratory disorders, headache, nausea and sickness.

If swallowed, it may cause mouth, throat and oesophagus burns, sickness, diarrhoea, oedema, larynx swelling and, consequently, asphyxia. Perforation of the gastro-intestinal tract is also possible.

Upon contact with skin, this product causes sensitization (dermatitis). Dermatitis derives from skin irritation on the areas which repeatedly come into contact with the sensitizing agent. Cutaneous lesions may include: erythemas, oedemas, papules, vesicles, pustules, scurries, ulcerations and exudative phenomena, whose intensity varies according to illness seriousness and affected areas. Erythemas, oedemas and exudative phenomena prevail during the acute phase. Scurfy skin, dryness, ulcerations and skin thickening prevail during the chronic phase.

12. Ecological information

This product is dangerous for the environment and is toxic for the aquatic organisms. In the long term, it has negative effects on the aquatic environment.

Code of waste disposal for uncured material: 070204

Contaminated packaging: Dispose of as unused product.

Do not reuse empty containers.

12.1. Toxicity

trimethylhexamethylenediamines
EC50 (48h) - for Algae / Aquatic Plants.
31,5 mg/l daphnia

12.2. Persistence and degradability

Information not available.

12.3. Bioaccumulative potential

Information not available.

12.4. Mobility in soil

Information not available.

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available.

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13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations. Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations. Avoid littering. Do not contaminate soil, sewers and waterways. Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

14. Transport information

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations. These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Road and rail transport:



ADR/RID Class: 8 UN: 2327

Packing Group: III

Label: 8

Nr. Kemler: 80

Limited Quantity: 5 L

Tunnel restriction code: (E)

Proper Shipping Name:

TRIMETHYLHEXAMETHYLENEDIAMINES

Carriage by sea (shipping):



IMO Class: 8 UN: 2327

Packing Group: III

Label: 8

EMS: F-A, S-B

Marine Pollutant: NO

Proper Shipping Name:

TRIMETHYLHEXAMETHYLENEDIAMINES

Transport by air:



IATA: 8 UN: 2327

Packing Group: III

Label: 8

Cargo:

Packaging instructions: 856 Maximum quantity: 60 L

Pass.:

Packaging instructions: 852 Maximum quantity: 5 L

Special Instructions: A803

Proper Shipping Name:

TRIMETHYLHEXAMETHYLENEDIAMINES

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15. Regulatory information

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

Seveso category.	none
Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006	Product. Point. 3
Substances in Candidate List (Art. 59 REACH)	None.
Substances subject to authorisation (Annex XIV REACH)	None.
Substances subject to exportation reporting pursuant to (EC) Reg. 689/2008	None.
Substances subject to the Rotterdam Convention	None.
Substances subject to the Stockholm Convention	None.
Healthcare controls	Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical Safety Assessment

No chemical safety assessment has been processed for the mixture and the substances it contains.

16. Other information

	Text of hazard (H) indications mentioned in section 2-3 of the sheet:
Acute Tox. 4 A	acute toxicity, category 4
Skin Corr. 1B	Skin corrosion, category 1B
Skin Sens. 1B	Skin sensitization, category 1B
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

R22	HARMFUL IF SWALLOWED.
R34	CAUSES BURNS.
R43	MAY CAUSE SENSITISATION BY SKIN CONTACT.
R52/53	HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

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LEGEND:

- ADR	European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER	Chemical Abstract Service Number
- CE50	Effective concentration (required to induce a 50% effect)
- CE NUMBER	Identifier in ESIS (European archive of existing substances)
- CLP	EC Regulation 1272/2008
- DNEL	Derived No Effect Level
- EmS	Emergency Schedule
- GHS	Globally Harmonized System of classification and labelling of chemicals
- IATA DGR	International Air Transport Association Dangerous Goods Regulation
- IC50	Immobilization Concentration 50%
- IMDG	International Maritime Code for dangerous goods
- IMO	International Maritime Organization
- INDEX NUMBER	Identifier in Annex VI of CLP
- LC50	Lethal Concentration 50%
- LD50	Lethal dose 50%
- OEL	Occupational Exposure Level
- PBT	Persistent bioaccumulative and toxic as REACH Regulation
- PEC	Predicted environmental Concentration
- PEL	Predicted exposure level
- PNEC	Predicted no effect concentration
- REACH	EC Regulation 1907/2006
- RID	Regulation concerning the international transport of dangerous goods by train
- TLV	Threshold Limit Value
- TLV CEILING	Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL	Short-term exposure limit
- TWA	Time-weighted average exposure limit
- VOC	Volatile organic Compounds
- vPvB	Very Persistent and very Bioaccumulative as for REACH Regulation.

GENERAL BIBLIOGRAPHY

1. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament
4. Regulation (EC) 1272/2008 (CLP) of the European Parliament
5. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
6. Regulation (EC) 453/2010 of the European Parliament
7. Regulation (EC) 286/2011 (II Atp. CLP) of the European Parliament
8. The Merck Index. - 10th Edition
9. Handling Chemical Safety
10. NIOSH - Registry of Toxic Effects of Chemical Substances
11. INRS - Fiche Toxicologique (toxicological sheet)
12. Patty - Industrial Hygiene and Toxicology
13. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
14. ECHA website

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Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property. The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses. Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 06 / 08 / 09 / 11 / 12 / 13 / 14 / 15 / 16.

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