

Product 5175 A
 Revision date 03 October 2017
 Revision 1



Safety Data Sheet (SDS)

Section 1: Identification of the substance/preparation and of the company/undertaking

1.1 Product identifier

Product name 5175 A
Synonyms, Trade names No information available.

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

Identified uses Hardener.
Uses advised against No uses advised against are identified.

1.3 Details of the supplier of the safety data sheet

Supplier Renishaw plc
 Brooms Road
 Stone Business Park
 Stone, Staffordshire
 ST15 0SH
 United Kingdom
 Tel: +44 (0) 1785 285000 (during UK office hours 09:00 to 17:00 UTC).
 msds@renishaw.com

Contact person

1.4 Emergency telephone number

Emergency telephone 999 / 911 or local emergency number

Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (EC 1272/2008)
 Physical and chemical hazards Not classified
 Human health Eye Irrit.2A - H319
 Environment Not classified

2.2 Label elements

Contains Not applicable

Label in accordance with (EC) no. 1272/2008



Signal word Warning

Hazard statements H319 Causes serious eye irritation.

Precautionary statements

Prevention

P264 Wash hands thoroughly after handling.
 P280 Wear protective gloves/ protective clothing/eye protection/face protection.

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

None known.

Section 3: Composition/identification of ingredients

3.1 Substance

Not applicable.

3.2 Mixtures

Name	Product identifier	Reg. EU 1272/2008	%
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	CAS-No.: 102-60-3 EC No.: 203-041-4	Eye Irrit.2A - H319	60-100%

The full text for all hazard statements are displayed in section 16.

Composition comments

The data shown are in accordance with the latest EC Directives.

Section 4: First aid measures

4.1 Description of first aid measures

General information	Provide general first aid, rest, warmth and fresh air. As a general rule, in case of doubt or if symptoms persist, always call a doctor. Seek medical attention for all burns and eye injuries, regardless how minor they may seem.
Inhalation	If this product is inhaled and symptoms occur, move the exposed person to fresh air promptly. If necessary, clear the airway. If not breathing, give artificial respiration and get medical attention. If breathing is difficult, provide oxygen.
Ingestion	Provide fresh air, warmth and rest, preferably in comfortable upright sitting position. Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth out and then drink plenty of water. Get medical attention.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Do not rub eye. Avoid contaminating unaffected eye. Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Remove contact lenses if present and easy to do so. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Inhalation can cause asthma like symptoms.
Ingestion	May cause discomfort if swallowed.
Skin contact	No specific symptoms noted.
Eye contact	Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to the physician	May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
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Section 5: Fire-fighting measures

5.1 Extinguishing media

Extinguishing media	Use water spray, alcohol resistant foam, carbon dioxide or dry powder. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Do not use water jet as an extinguisher.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products	Combustion products may include and are not limited to: Carbon monoxide (CO). Carbon dioxide (CO ₂). Nitrous gases (NO _x).
Unusual fire & explosion hazards	Exposure to fire may cause containers to rupture/explode. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.
Specific hazards	Floors may become slippery, avoid falls.

5.3 Advice for firefighters

Special fire fighting procedures	If possible, fight fire from protected position. Ventilate closed spaces before entering them. Keep up-wind to avoid fumes. Avoid breathing fire vapours. Containers close to fire should be removed immediately or cooled with water if safe to do so. Take measures to avoid the spill of the products or chemicals to rivers or drains due to water-discharge from fire fighting.
Protective equipment for firefighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Eliminate all sources of ignition. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation. In case of inadequate ventilation, use respiratory protection. Read and follow manufacturer's recommendations. Do not touch or walk through spilled material. Keep unnecessary and unprotected personnel from entering.
For emergency responders	Follow safe handling advice and personal protective equipment recommendations for normal use of product.

6.2 Environmental precautions

Environmental precautions	Do not discharge into drains, water courses or onto the ground. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.
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6.3 Methods and material for containment and cleaning up

Spill clean up methods	Wear appropriate personal protective equipment as specified in Section 8. Stop leak if possible without risk. Eliminate all sources of ignition. Ventilate and evacuate the area. Absorb spillage with non-combustible, absorbent material - sand. In case of a large scale of spill, dyke area with sand to stop the spill spreading. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labelled container. Wash thoroughly after dealing with a spillage. Floors may become slippery, avoid falls.
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6.4 Reference to other sections

Reference to other sections	See section 1 for emergency contact. For personal protection, see section 8. For waste disposal, see section 13.
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Section 7: Handling and storage

7.1 Precautions for safe handling

Handling	Use proper personal protection when handling (refer to Section 8). Provide good ventilation. Wear appropriate respirator when ventilation is inadequate. Keep away from heat, sparks and open flame. Do not eat, drink or smoke when using the product. Avoid contact with skin and eyes. Do not use contact lenses. Read and follow manufacturer's recommendations. Do not mix with other chemicals.
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7.2 Conditions for safe storage, including any incompatibilities

Storage precautions	Keep away from heat, sparks, direct sunlight and open flames. Store in tightly closed original container in a dry, cool and well-ventilated place. Keep away from incompatible materials
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Storage class (see section 10).
Chemical storage.

7.3 Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.
Usage description Use only according to directions. Replace and tighten cap after use.

Section 8: Exposure controls/Personal protection

8.1 Control parameters

Ingredient comments No exposure limits noted for ingredient(s).
Workplace Exposure Limits Guidance Note EH40/2005.
The National Institute for Occupational Safety and Health (NIOSH).

8.2 Exposure Controls

Protective equipment



Engineering measures Respiratory equipment

Provide adequate ventilation.
Where risk assessment shows air-purifying respirators are appropriate a full face respirator conforming to EN143 should be used, and suitable respirator cartridges as a backup to engineering controls. Recommended: Respirator with combination filter for organic vapour/particulate (EN 141). Consult manufacturer for specific advice.
If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as CEN (EU).

Hand protection

Selection of the glove material depends on consideration of the penetration times, rates of diffusion and degradation, and concentration specific to the workplace. Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374) is recommended. Gloves must be inspected prior to use.
Suggested material: (Suitable materials for short-term contact or splashes) Butyl rubber. Layer thickness: 0.7 mm.
Nitrile rubber. Layer thickness: 0.4 mm. (At least protective index 2, corresponding > 30 minutes of permeation time according to EN 374.) Consult manufacturer for specific advice.
Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Eye protection

Wear safety goggles or face shield to prevent any possibility of eye contact. Use equipment for eye protection tested and approved under appropriate government standards such as EN 166(EU).

Other protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. The selected clothing must satisfy the European norm standard EN 943.

Hygiene measures

Wash promptly if skin becomes contaminated. Handle in accordance with good industrial hygiene and safety practice. DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet.

Process conditions

Use only according to directions. Keep container tightly sealed when not in use. Ensure that eye flushing systems are located close by in the work place.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance Viscous liquid.
Colour Clear.
Odour No information available.
Odour threshold - lower No information available.

Odour threshold - upper	No information available.
pH-Value, Conc. Solution	No information available.
pH-Value, Diluted solution	No information available.
Melting point	No information available.
Initial boiling point and boiling range	No information available.
Flash point	> 175.00 °C
Evaporation rate	No information available.
Flammability state	No information available.
Flammability limit - lower(%)	No information available.
Flammability limit - upper(%)	No information available.
Vapour pressure	No information available.
Vapour density (air=1)	No information available.
Relative density	110g/cm ³ @ 20.00 °C
Bulk density	No information available.
Solubility	Miscible.
Decomposition temperature	No information available.
Partition coefficient; n-Octanol/Water	No information available.
Auto ignition temperature (°C)	No information available.
Viscosity	No information available.
Explosive properties	Not classified as explosive.
Oxidising properties	No information available.

9.2 Other information

Molecular weight	No information available.
Volatile organic compound	No information available.
Other information	None noted.

Section 10: Stability and reactivity

10.1 Reactivity

Reactivity	Stable product under recommended storage and handling conditions.
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10.2 Chemical stability

Stability	Relatively stable when stored in a cool and dark place.
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10.3 Possibility of hazardous reactions

Hazardous reactions	None under normal processing.
Hazardous polymerisation	Hazardous polymerisation is not expected to occur under normal temperatures and pressures.
Polymerisation description	Unknown.

10.4 Conditions to Avoid

Conditions to avoid Heat, sparks, open flames, temperature extremes and direct sunlight.

10.5 Incompatible materials

Materials to avoid Avoid contact with oxidising substances and acids. Acid chlorides. Acid anhydrides. Chloroformates.

10.6 Hazardous decomposition products

Hazardous decomposition products Combustion products may include: carbon monoxide, carbon dioxide, Nitrogen oxides (NOx).

Section 11: Toxicological information

11.1 Information on toxicological effects

Toxicological information	No toxicological information for the overall finished product.
Acute toxicity (Oral LD50)	20800.00mg/kg Rat
Acute toxicity (Dermal LD50)	>2000.00mg/kg Rat
Acute toxicity (Inhalation LD50)	No information available.
Serious eye damage/irritation	Causes serious eye irritation.
Skin corrosion/irritation	No information available.
Respiratory sensitisation	No information available.
Skin sensitisation	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Specific target organ toxicity - Single exposure:	
STOT - Single exposure	No information available.
Specific target organ toxicity - Repeated exposure:	
STOT - Repeated exposure	No information available.
Inhalation	Inhalation can cause asthma like symptoms.
Ingestion	May cause discomfort if swallowed.
Skin contact	No specific symptoms noted.
Eye contact	Causes serious eye irritation.
Waste management	When handling waste, consideration should be made to the safety precautions applying to handling of the product.
Routes of entry	No information available.
Target organs	Eyes.
Aspiration hazards:	No information available.
Reproductive toxicity:	No information available.

Section 12: Ecological information

12.1 Toxicity

Acute toxicity - Fish	LC50 96 Hours > 1000.00 ppm Pimephales promelas (Fat-head Minnow)
Acute toxicity - Aquatic invertebrates	No information available.
Acute toxicity - Aquatic plants	No information available.
Acute toxicity - Microorganisms	No information available.
Chronic toxicity - Fish	No information available.
Chronic toxicity - Aquatic invertebrates	No information available.
Chronic toxicity - Aquatic plants	No information available.
Chronic toxicity - Microorganisms	No information available.
Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the

Eco toxicological information environment.
No ecological toxicity available on the overall finished product.

12.2 Persistence and degradability

Degradability The product is not readily biodegradable.
Biological oxygen demand No information available.
Chemical oxygen demand No information available.

12.3 Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.
Bioaccumulation factor No information available.
Partition coefficient; n-Octanol/Water No information available.

12.4 Mobility in soil

Mobility No information available.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment The product does not contain any PBT or vPvB substances.

12.6 Other adverse effects

Other adverse effects No information available.

Section 13: Disposal considerations

Waste management When handling waste, consideration should be made to the safety precautions applying to handling of the product.

13.1 Waste treatment methods

Disposal methods Dispose of waste and residues in accordance with local authority requirements, and in accordance with all local, national and international regulations. For waste disposal, use a licensed industrial waste disposal agent.

Section 14: Transport information

14.1 UN number

UN no. (ADR) Not applicable.
UN no. (IMDG) Not applicable.
UN no. (IATA) Not applicable.

14.2 UN proper shipping name

ADR proper shipping name Not applicable.
IMDG proper shipping name Not applicable.
IATA proper shipping name Not applicable.

14.3 Transport hazard class(es)

ADR class Not applicable.
IMDG class Not applicable.
IATA class Not applicable.

Transport labels Not applicable

14.4 Packing group

ADR/RID/ADN packing group Not applicable.
IMDG packing group Not applicable.
IATA packing group Not applicable.

14.5 Environmental hazards

ADR	No
IMDG	No
IATA	No

14.6 Special precautions for user

EMS	Not applicable.
Emergency action code	Not applicable.
Hazard no. (ADR)	Not applicable.
Tunnel restriction code	Not applicable.

14.7 Transport in bulk according to annex II of MARPOL73/78 and the IBC code

Not applicable.

Section 15: Regulatory information

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

EU legislation	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. The UN Globally Harmonized System (GHS) Safety Data Sheet format (Annex IV) is implemented as Annex II of REACH EU No 453/2010 of 20th May 2010 amending regulation (EC) No 1907/2006.
Approved code of practice	Workplace Exposure Limits Guidance Note EH40/2005.
Chemical safety assessment	No chemical safety assessment has been carried out.

Section 16: Other information

General information	This Safety Data Sheet is in accordance with Reach Regulation (EC) No 453/2010.
Revision comments	This is a first issue.
Revision date	03 October 2017
Revision	1
Safety data sheet status	Approved.

Hazard statements in full

H319 Causes serious eye irritation.

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.