

Product 9012 A  
Revision date 02 March 2018  
Revision 2



## Safety Data Sheet (SDS)

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

#### 1.1 Product identifier

**Product name** 9012 A  
**Synonyms, Trade names** No information available.

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

**Identified uses** For industrial and professional use only.  
Vacuum casting.  
**Uses advised against** Any other purpose.

#### 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 Not classified  
Environment Not classified

#### 2.2 Label elements

**Label in accordance with (EC) no. 1272/2008** No pictogram required

**Signal word** No Signal Word

**Hazard statements** No hazard statements required

**Precautionary statements** No precautionary statements required

#### 2.3 Other hazards

This product is not classified as hazardous. The information in this datasheet is given for guidance only.

### Section 3: Composition/identification of ingredients

#### 3.1 Substance

Name	Product identifier	Reg. EU 1272/2008	%
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The full text for all hazard statements are displayed in section 16.

#### Composition comments

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section. The data shown are in accordance with the latest EC Directives.

### 3.2 Mixtures

Not applicable.

## 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. First aid personnel must be aware of own risk during rescue.

#### Inhalation

If this product is inhaled and symptoms occur, move the exposed person to fresh air promptly. If breathing is difficult, give oxygen. Seek medical attention. Keep person warm and at rest.

#### Ingestion

If this product is ingested, remove victim immediately from source of exposure. Rinse mouth out and then drink plenty of water. Do not induce vomiting. Provide fresh air, warmth and rest, preferably in comfortable upright sitting position. Seek medical advice (show the label where possible). Never give anything by mouth to an unconscious person.

#### Skin contact

Remove contaminated clothing and shoes and wash before reuse. Wash skin thoroughly with soap and water. If skin irritation occurs, get medical attention.

#### Eye contact

Do not rub eye. Avoid contaminating unaffected eye. Remove contact lenses if present and easy to do so. Flush eye(s) with plenty of clean running water for at least fifteen (15) minutes. Lift the upper and lower eyelids occasionally while rinsing. Seek medical attention.

### 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

Due to low vapor pressure at room temperature, product not likely to be inhaled.

#### Ingestion

Product has low to very low oral toxicity. Swallowing a small amount of this product is not likely to cause injury.

#### Skin contact

Skin contact with the product is not likely to result in significant irritation.

#### Eye contact

May cause temporary eye irritation.

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

#### Notes to the physician

Treat symptomatically and supportively.

## Section 5: Fire-fighting measures

### 5.1 Extinguishing media

#### Extinguishing media

Foam, dry powder, carbon dioxide (CO<sub>2</sub>), water spray. Use fire-extinguishing media appropriate for surrounding materials.

#### Unsuitable extinguishing media

High volume water jet.

### 5.2 Special hazards arising from the substance or mixture

#### Hazardous combustion products

During fire, toxic gases (CO, CO<sub>2</sub>) are formed.

#### Unusual fire & explosion hazards

No unusual fire or explosion hazards noted.

#### Specific hazards

If heated, harmful vapours may be formed. Floors may become slippery, avoid falls.

### 5.3 Advice for firefighters

#### Special fire fighting procedures

If possible, fight fire from protected position. Avoid breathing fire vapours. Ventilate closed spaces before entering them. Keep up-wind to avoid fumes. Containers close to fire should be removed immediately or cooled with water if safe to do so.

**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.

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## Section 6: Accidental release measures

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### 6.1 Personal precautions, protective equipment and emergency procedures

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

### 6.2 Environmental precautions

<b>Environmental precautions</b>	Do not discharge onto the ground or into water courses.
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### 6.3 Methods and material for containment and cleaning up

<b>Spill clean up methods</b>	Stop leak if possible without risk. DO NOT touch spilled material! Wear necessary protective equipment. Ventilate and evacuate the area. Eliminate all sources of ignition. Wear respirator if ventilation is not adequate. Absorb spillage with non-combustible, absorbent material - sand. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labelled container Wash work area with water.
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### 6.4 Reference to other sections

<b>Reference to other sections</b>	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

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### 7.1 Precautions for safe handling

<b>Handling</b>	Keep away from heat, sparks and open flame. Static electricity and formation of sparks must be prevented. Avoid contact with skin and eyes. Avoid inhalation of vapours. Provide good ventilation. Wear personal protective equipment. Do not mix with other chemicals. Use dry nitrogen or low dew point air for tank padding. Prevent contact with water or with moist atmosphere, as product is hygroscopic.
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### 7.2 Conditions for safe storage, including any incompatibilities

<b>Storage precautions</b>	Keep away from heat, sparks, direct sunlight and open flames. Keep away from incompatible materials (see section 10). Store in tightly closed original container in a dry, cool and well-ventilated place. Keep at temperatures of between: 15 - 30 °C.
<b>Storage class</b>	Chemical storage.

### 7.3 Specific end use(s)

<b>Specific end use(s)</b>	The identified uses for this product are detailed in Section 1.
<b>Usage description</b>	Use only according to directions.

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## Section 8: Exposure controls/Personal protection

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### 8.1 Control parameters

<b>Ingredient comments</b>	No exposure limits noted for ingredient(s).
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## 8.2 Exposure Controls

### Protective equipment



### Engineering measures Respiratory equipment

Provide adequate ventilation, including appropriate local extraction. Where risk assessment shows air-purifying respirators are appropriate a full face respirator conforming to EN143, and suitable respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Consult manufacturer for specific advice.

Use respirators and components tested and approved under appropriate government standards such as CEN (EU). Use respiratory protection as specified by an industrial hygienist or other qualified professional if concentrations exceed the limits listed in Section 8.

### Hand protection

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: Neoprene/nitrile. Layer thickness: 0.2 mm. 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. Change gloves regularly. Selection of the glove material depends on consideration of the penetration times, rates of diffusion and degradation, and concentration specific to the workplace.

### 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. The selected clothing must satisfy the European norm standard EN 943.

### Hygiene measures

Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work. Handle in accordance with good industrial hygiene and safety practice. Keep container tightly closed. Wash promptly if skin becomes wet or contaminated.

### Process conditions

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

<b>Appearance</b>	Viscous liquid.
<b>Colour</b>	Clear.
<b>Odour</b>	Mild.
<b>Odour threshold - lower</b>	No information available.
<b>Odour threshold - upper</b>	No information available.
<b>pH-Value, Conc. Solution</b>	No information available.
<b>pH-Value, Diluted solution</b>	No information available.
<b>Melting point</b>	21.00 °C
<b>Initial boiling point and boiling range</b>	No information available.
<b>Flash point</b>	199.00 °C
<b>Evaporation rate</b>	No information available.
<b>Flammability state</b>	No information available.
<b>Flammability limit - lower(%)</b>	No information available.
<b>Flammability limit - upper(%)</b>	No information available.

<b>Vapour pressure</b>	No information available.
<b>Vapour density (air=1)</b>	No information available.
<b>Relative density</b>	1.09g/cm <sup>3</sup> @ 20.00 °C
<b>Bulk density</b>	No information available.
<b>Solubility</b>	No information available.
<b>Decomposition temperature</b>	No information available.
<b>Partition coefficient; n- Octanol/Water</b>	No information available.
<b>Auto ignition temperature (°C)</b>	No information available.
<b>Viscosity</b>	No information available.
<b>Explosive properties</b>	Not classified as explosive.
<b>Oxidising properties</b>	No information available.

## **9.2 Other information**

<b>Molecular weight</b>	No information available.
<b>Volatile organic compound</b>	No information available.
<b>Other information</b>	None noted.

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## **Section 10: Stability and reactivity**

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### **10.1 Reactivity**

<b>Reactivity</b>	Stable product under recommended storage and handling conditions.
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### **10.2 Chemical stability**

<b>Stability</b>	Stable under normal temperature conditions and recommended use.
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### **10.3 Possibility of hazardous reactions**

<b>Hazardous reactions</b>	Avoid contact with acidic, basic or oxidizing materials.
<b>Hazardous polymerisation</b>	May polymerise. The reaction of polyols and isocyanates generates heat.
<b>Polymerisation description</b>	Unknown.

### **10.4 Conditions to Avoid**

<b>Conditions to avoid</b>	Heat, sparks, open flames, temperature extremes and direct sunlight. Avoid contact with water and moisture.
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### **10.5 Incompatible materials**

<b>Materials to avoid</b>	Store separately from acids, alkalies, and oxidising agents. Peroxides. Hypochlorite salts. Monomeric isocyanates.
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### **10.6 Hazardous decomposition products**

<b>Hazardous decomposition products</b>	Thermal decomposition or combustion may liberate carbon oxides and other harmful gases or vapors.
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## **Section 11: Toxicological information**

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### **11.1 Information on toxicological effects**

<b>Toxicological information</b>	No toxicological information for the overall finished product.
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<b>Acute toxicity (Oral LD50)</b>	No information available.
<b>Acute toxicity (Dermal LD50)</b>	No information available.
<b>Acute toxicity (Inhalation LD50)</b>	No information available.
<b>Serious eye damage/irritation</b>	May cause temporary eye irritation.
<b>Skin corrosion/irritation</b>	No information available.
<b>Respiratory sensitisation</b>	No information available.
<b>Skin sensitisation</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Specific target organ toxicity - Single exposure:</b>	
<b>STOT - Single exposure</b>	No information available.
<b>Specific target organ toxicity - Repeated exposure:</b>	
<b>STOT - Repeated exposure</b>	No information available.
<b>Inhalation</b>	Due to low vapor pressure at room temperature, product not likely to be inhaled.
<b>Ingestion</b>	Product has low to very low oral toxicity. Swallowing a small amount of this product is not likely to cause injury.
<b>Skin contact</b>	Skin contact with the product is not likely to result in significant irritation.
<b>Eye contact</b>	May cause temporary eye irritation.
<b>Waste management</b>	When handling waste, consideration should be made to the safety precautions applying to handling of the product.
<b>Routes of entry</b>	No information available.
<b>Target organs</b>	No target organs specified.
<b>Aspiration hazards:</b>	No information available.
<b>Reproductive toxicity:</b>	No information available.

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## Section 12: Ecological information

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### 12.1 Toxicity

<b>Acute toxicity - Fish</b>	No information available.
<b>Acute toxicity - Aquatic invertebrates</b>	No information available.
<b>Acute toxicity - Aquatic plants</b>	No information available.
<b>Acute toxicity - Microorganisms</b>	No information available.
<b>Chronic toxicity - Fish</b>	No information available.
<b>Chronic toxicity - Aquatic invertebrates</b>	No information available.
<b>Chronic toxicity - Aquatic plants</b>	No information available.
<b>Chronic toxicity - Microorganisms</b>	No information available.
<b>Ecotoxicity</b>	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 environment.
<b>Eco toxicological information</b>	No ecological toxicity available on the overall finished product.

### 12.2 Persistence and degradability

<b>Degradability</b>	No information available.
<b>Biological oxygen demand</b>	No information available.
<b>Chemical oxygen demand</b>	No information available.

### 12.3 Bioaccumulative potential

<b>Bioaccumulative potential</b>	No data available on bioaccumulation.
<b>Bioaccumulation factor</b>	No information available.
<b>Partition coefficient; n-Octanol/Water</b>	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** Product is not identified as PBT or vPvB.

**12.6 Other adverse effects**

**Other adverse effects** No information available.

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**Section 13: Disposal considerations**

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**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.

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**Section 14: Transport information**

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**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.

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**Section 15: Regulatory information**

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

<b>EU legislation</b>	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.
<b>Approved code of practice</b>	Workplace Exposure Limits Guidance Note EH40/2005.
<b>Chemical safety assessment</b>	No chemical safety assessment has been carried out.

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**Section 16: Other information**

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<b>General information</b>	This Safety Data Sheet is in accordance with Reach Regulation (EC) No 453/2010.
<b>Revision comments</b>	[3]Section 3: Formulation information updated. This is a second issue. [11]Section 11: LD50 information updated.
<b>Revision date</b>	02 March 2018
<b>Supersedes date</b>	06 November 2018
<b>Revision</b>	2
<b>Safety data sheet status</b>	Approved.

**Hazard statements in full**

**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.