



## SAFETY DATA SHEET BREFELDIN A SOLUTION (1000X)

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

**Product name** BREFELDIN A SOLUTION (1000X)

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

**Identified uses** For research use only.

#### 1.3. Details of the supplier of the safety data sheet

**Supplier** Web: [www.bio-rad-antibodies.com](http://www.bio-rad-antibodies.com)  
Bio-Rad  
Endeavour House  
Langford Business Park  
Kidlington  
Oxford  
OX5 1GE  
Tel. +44 (0)1865 852700  
[antibody\\_safetydatasheets@bio-rad.com](mailto:antibody_safetydatasheets@bio-rad.com)

**Contact person** Technical Services Manager

#### 1.4. Emergency telephone number

**Emergency telephone** +1 7037415970 (CHEMTREC)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (EC 1272/2008)

**Physical hazards** Not Classified

**Health hazards** Not Classified

**Environmental hazards** Not Classified

#### 2.2. Label elements

**Hazard statements** NC Not Classified

#### 2.3. Other hazards

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

<b>DIMETHYL SULFOXIDE</b>	<b>60-100%</b>
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CAS number: 67-68-5	EC number: 200-664-3
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<b>Classification</b> Not Classified
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## BREFELDIN A SOLUTION (1000X)

<b>BREFELDIN A</b>	<b>0.1-1%</b>
CAS number: 20350-15-6	EC number: 606-528-3
<b>Classification</b>	
Acute Tox. 3 - H301	
Acute Tox. 3 - H311	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>Inhalation</b>	If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.
<b>Skin contact</b>	Remove contaminated clothing and rinse skin thoroughly with water. Get medical attention if any discomfort continues.
<b>Eye contact</b>	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

<b>Inhalation</b>	May cause coughing or mild irritation.
<b>Ingestion</b>	May cause discomfort if swallowed.
<b>Skin contact</b>	Prolonged skin contact may cause redness and irritation.
<b>Eye contact</b>	May cause temporary eye irritation.

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

<b>Notes for the doctor</b>	No specific recommendations.
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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire. Use alcohol-resistant foam, carbon dioxide or dry powder to extinguish. Water spray.
<b>Unsuitable extinguishing media</b>	None known.

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

<b>Specific hazards</b>	Combustible liquid.
<b>Hazardous combustion products</b>	Oxides of carbon. Oxides of sulphur.

#### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	No specific firefighting precautions known.
<b>Special protective equipment for firefighters</b>	Wear full protective clothing.

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### SECTION 6: Accidental release measures

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

**Personal precautions** Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Eliminate all sources of ignition.

#### 6.2. Environmental precautions

**Environmental precautions** Avoid the spillage or runoff entering drains, sewers or watercourses.

#### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up** Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Avoid the spillage or runoff entering drains, sewers or watercourses.

#### 6.4. Reference to other sections

**Reference to other sections** Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see Section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

**Usage precautions** Avoid spilling. Avoid inhalation of vapours and contact with skin and eyes. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Do not eat, drink or smoke when using this product.

**Advice on general occupational hygiene** Wash after use and before eating, smoking and using the toilet.

#### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions** Take precautionary measures against static discharges. Store in tightly-closed, original container in a well-ventilated place. Store contents under inert gas.

**Storage class** Refer to product datasheet.

#### 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

### SECTION 8: Exposure Controls/personal protection

#### 8.1. Control parameters

#### 8.2. Exposure controls

##### Protective equipment



**Appropriate engineering controls**

Provide adequate ventilation. Avoid inhalation of vapours and spray/mists. Observe any occupational exposure limits for the product or ingredients.

**Eye/face protection**

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

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<b>Other skin and body protection</b>	Wear appropriate clothing to prevent any possibility of skin contact. Wear apron or protective clothing in case of contact.
<b>Hygiene measures</b>	Provide eyewash station. Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.
<b>Respiratory protection</b>	No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

### SECTION 9: Physical and Chemical Properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	No characteristic odour.
<b>Melting point</b>	Not determined.
<b>Initial boiling point and range</b>	No information available.
<b>Flash point</b>	~ 87°C / 189°F Method: Closed cup.
<b>Evaporation rate</b>	Not determined.
<b>Flammability (solid, gas)</b>	No information required.
<b>Upper/lower flammability or explosive limits</b>	Not applicable.
<b>Vapour pressure</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Solubility(ies)</b>	Soluble in water.
<b>Partition coefficient</b>	Not determined.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition Temperature</b>	Not determined.
<b>Viscosity</b>	Not determined.
<b>Explosive properties</b>	Not determined.
<b>Oxidising properties</b>	Not determined.

#### 9.2. Other information

<b>Other information</b>	None.
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
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#### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures.
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#### 10.3. Possibility of hazardous reactions

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**Possibility of hazardous reactions** Not determined.

### 10.4. Conditions to avoid

**Conditions to avoid** Avoid heat, flames and other sources of ignition.

### 10.5. Incompatible materials

**Materials to avoid** Strong acids. Strong oxidising agents. Strong reducing agents. Phosphorus halides. Acid chlorides

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Heating may generate the following products: Oxides of carbon. Oxides of sulphur.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

**Toxicological effects** No information available.

#### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** 7.2

**ATE oral (mg/kg)** 11,111.11

#### Acute toxicity - dermal

**ATE dermal (mg/kg)** 33,333.33

#### Skin corrosion/irritation

**Skin corrosion/irritation** Based on available data the classification criteria are not met.

**Extreme pH** 7.2

#### Serious eye damage/irritation

**Serious eye damage/irritation** Based on available data the classification criteria are not met.

#### Respiratory sensitisation

**Respiratory sensitisation** Based on available data the classification criteria are not met.

#### Skin sensitisation

**Skin sensitisation** Based on available data the classification criteria are not met.

#### Germ cell mutagenicity

**Genotoxicity - in vitro** Based on available data the classification criteria are not met.

#### Carcinogenicity

**Carcinogenicity** Based on available data the classification criteria are not met.

#### Reproductive toxicity

**Reproductive toxicity - fertility** Based on available data the classification criteria are not met.

#### Specific target organ toxicity - single exposure

**STOT - single exposure** Based on available data the classification criteria are not met.

#### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Based on available data the classification criteria are not met.

#### Aspiration hazard

**Aspiration hazard** Based on available data the classification criteria are not met.

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<b>Inhalation</b>	Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.
<b>Ingestion</b>	May cause discomfort if swallowed.
<b>Skin contact</b>	Liquid may irritate skin.
<b>Eye contact</b>	Vapour or spray in the eyes may cause irritation and smarting.
<b>Acute and chronic health hazards</b>	Because of the product's quantity and composition, the health hazard is regarded as low.
<b>Route of exposure</b>	Ingestion. Skin and/or eye contact

### Toxicological information on ingredients.

#### DIMETHYL SULFOXIDE

##### Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> mg/kg) 14,500.0

Species Rat

ATE oral (mg/kg) 14,500.0

##### Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 5,000.0

Species Rabbit

ATE dermal (mg/kg) 5,000.0

#### BREFELDIN A

##### Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> mg/kg) 2,000.0

Species Rat

ATE oral (mg/kg) 100.0

##### Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 2,000.0

Species Rabbit

ATE dermal (mg/kg) 300.0

### **SECTION 12: Ecological Information**

**Ecotoxicity** There are no data on the ecotoxicity of this product.

#### 12.1. Toxicity

#### 12.2. Persistence and degradability

**Persistence and degradability** no data available

#### 12.3. Bioaccumulative potential

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**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** Not determined.

### 12.4. Mobility in soil

**Mobility** No data available.

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** No information available

### 12.6. Other adverse effects

**Other adverse effects** Not determined.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**Disposal methods** The generation of waste should be minimised or avoided wherever possible. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Handle empty containers with care as residual vapors are flammable.

## SECTION 14: Transport information

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

**Road transport notes** Not classified.

**Rail transport notes** Not classified.

**Sea transport notes** Not classified.

**Air transport notes** Not classified.

### 14.1. UN number

Not applicable.

### 14.2. UN proper shipping name

Not applicable.

### 14.3. Transport hazard class(es)

Not applicable.

### 14.4. Packing group

Not applicable.

### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**

No.

### 14.6. Special precautions for user

Not applicable.

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

**Transport in bulk according to** Not applicable.

**Annex II of MARPOL 73/78 and the IBC Code**

## BREFELDIN A SOLUTION (1000X)

### SECTION 15: Regulatory information

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

<b>EU legislation</b>	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
<b>Guidance</b>	Workplace Exposure Limits EH40. Approved Classification and Labelling Guide (Sixth edition) L131. Safety Data Sheets for Substances and Preparations.

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

### SECTION 16: Other information

<b>General information</b>	Only trained personnel should use this material.
<b>Revision date</b>	25/09/2018
<b>Revision</b>	1
<b>Supersedes date</b>	24/07/2017
<b>SDS number</b>	20384
<b>Risk phrases in full</b>	Not classified.
<b>Hazard statements in full</b>	H301 Toxic if swallowed. H311 Toxic in contact with skin.

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.