

# SAFETY DATA SHEET



Berichrom® Antithrombin III (A)

SDS no.:

mrhm0158

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

### 1.1 Product identifier

**Product name** : Berichrom® Antithrombin III (A)  
**Product code** : OWWR15, 10446672; OWWR17, 10446673

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

**Identified uses** Berichrom® Antithrombin III (A) Thrombin Reagent Diagnostic agents.  
 Berichrom® Antithrombin III (A) Substrate Reagent Diagnostic agents.  
 Berichrom® Antithrombin III (A) Buffer Solution Diagnostic agents.

**Restrictions on use** For professional users only.

**Supplier** : Siemens Healthcare Diagnostics Limited  
 Park View,  
 Watchmoor Park,  
 Camberley,  
 Surrey,  
 GU15 3YL  
 United Kingdom

Phone: +44 (0) 345 600 1955

**e-mail address of person responsible for this SDS** : dx.msds.healthcare@siemens-healthineers.com

### 1.4 Emergency telephone number

CHEMTREC: +44 20 3807 3798

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Berichrom® Antithrombin III (A) Thrombin Reagent Mixture  
 Berichrom® Antithrombin III (A) Substrate Reagent Mixture  
 Berichrom® Antithrombin III (A) Buffer Solution Mixture

#### Classification according to UK CLP/GHS

Not classified.

The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.  
 See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Signal word** : Berichrom® Antithrombin III (A) Thrombin Reagent No signal word.  
 Berichrom® Antithrombin III (A) Substrate Reagent No signal word.  
 Berichrom® Antithrombin III (A) Buffer Solution No signal word.



## SECTION 2: Hazards identification

<b>Hazard statements</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent Berichrom® Antithrombin III (A) Substrate Reagent Berichrom® Antithrombin III (A) Buffer Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b><u>Precautionary statements</u></b>		
<b>Prevention</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent Berichrom® Antithrombin III (A) Substrate Reagent Berichrom® Antithrombin III (A) Buffer Solution	Not applicable. Not applicable. Not applicable.
<b>Response</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent Berichrom® Antithrombin III (A) Substrate Reagent Berichrom® Antithrombin III (A) Buffer Solution	Not applicable. Not applicable. Not applicable.
<b>Storage</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent Berichrom® Antithrombin III (A) Substrate Reagent Berichrom® Antithrombin III (A) Buffer Solution	Not applicable. Not applicable. Not applicable.
<b>Disposal</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent Berichrom® Antithrombin III (A) Substrate Reagent Berichrom® Antithrombin III (A) Buffer Solution	Not applicable. Not applicable. Not applicable.
<b>Supplemental label elements</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent  Berichrom® Antithrombin III (A) Substrate Reagent Berichrom® Antithrombin III (A) Buffer Solution	Contains Thrombin. May produce an allergic reaction. Safety data sheet available on request. Not applicable. Not applicable.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent Berichrom® Antithrombin III (A) Substrate Reagent Berichrom® Antithrombin III (A) Buffer Solution	Not applicable. Not applicable. Not applicable.
<b>2.3 Other hazards</b>		
<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent  Berichrom® Antithrombin III (A) Substrate Reagent  Berichrom® Antithrombin III (A) Buffer Solution	This mixture does not contain any substances that are assessed to be a PBT or a vPvB. This mixture does not contain any substances that are assessed to be a PBT or a vPvB. This mixture does not contain any substances that are assessed to be a PBT or a vPvB.



Berichrom® Antithrombin III (A)

**SECTION 2: Hazards identification**

**Other hazards which do not result in classification** : Berichrom® Antithrombin III (A) Thrombin Reagent None known.  
 Berichrom® Antithrombin III (A) Substrate Reagent None known.  
 Berichrom® Antithrombin III (A) Buffer Solution None known.

**Additional information** : Not available.

Sodium azide may react with lead or copper plumbing to form highly explosive metal azides.

**SECTION 3: Composition/information on ingredients**

**3.1 Substances** : Berichrom® Antithrombin III (A) Thrombin Mixture Reagent  
 Berichrom® Antithrombin III (A) Substrate Mixture Reagent  
 Berichrom® Antithrombin III (A) Buffer Mixture Solution

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.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

**Eye contact** : Berichrom® Antithrombin III (A) Thrombin Reagent Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.  
 Berichrom® Antithrombin III (A) Substrate Reagent Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.  
 Berichrom® Antithrombin III (A) Buffer Solution Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : Berichrom® Antithrombin III (A) Thrombin Reagent Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.  
 Berichrom® Antithrombin III (A) Substrate Reagent Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.  
 Berichrom® Antithrombin III (A) Buffer Solution Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.



**SECTION 4: First aid measures**

<b>Skin contact</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Berichrom® Antithrombin III (A) Substrate Reagent	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Berichrom® Antithrombin III (A) Buffer Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Berichrom® Antithrombin III (A) Substrate Reagent	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Berichrom® Antithrombin III (A) Buffer Solution	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
<b>Protection of first-aiders</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	No action shall be taken involving any personal risk or without suitable training.
	Berichrom® Antithrombin III (A) Substrate Reagent	No action shall be taken involving any personal risk or without suitable training.
	Berichrom® Antithrombin III (A) Buffer Solution	No action shall be taken involving any personal risk or without suitable training.

**4.2 Most important symptoms and effects, both acute and delayed****Over-exposure signs/symptoms**

<b>Eye contact</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	No specific data.
	Berichrom® Antithrombin III (A) Substrate Reagent	No specific data.
	Berichrom® Antithrombin III (A) Buffer Solution	No specific data.
<b>Inhalation</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	No specific data.
	Berichrom® Antithrombin III (A) Substrate Reagent	No specific data.
	Berichrom® Antithrombin III (A) Buffer Solution	No specific data.
<b>Skin contact</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	No specific data.
	Berichrom® Antithrombin III (A) Substrate Reagent	No specific data.
	Berichrom® Antithrombin III (A) Buffer Solution	No specific data.



**SECTION 4: First aid measures**

<b>Ingestion</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	No specific data.
	Berichrom® Antithrombin III (A) Substrate Reagent	No specific data.
	Berichrom® Antithrombin III (A) Buffer Solution	No specific data.

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

<b>Notes to physician</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Berichrom® Antithrombin III (A) Substrate Reagent	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Berichrom® Antithrombin III (A) Buffer Solution	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Specific treatments</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	No specific treatment.
	Berichrom® Antithrombin III (A) Substrate Reagent	No specific treatment.
	Berichrom® Antithrombin III (A) Buffer Solution	No specific treatment.
	Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	Berichrom® Antithrombin III (A) Buffer Solution	Not available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	: Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: None known.

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

<b>Hazards from the substance or mixture</b>	: In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous combustion products</b>	: Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds metal oxide/oxides

**5.3 Advice for firefighters**

<b>Special protective actions for fire-fighters</b>	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
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## SECTION 5: Firefighting measures

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## SECTION 6: Accidental release measures

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

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.



## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

No DNELs/DMELs available.

#### PNECs

No PNECs available

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body 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.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance



Berichrom® Antithrombin III (A)

**SECTION 9: Physical and chemical properties**

<b>Physical state</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Solid.													
	Berichrom® Antithrombin III (A) Substrate Reagent	Solid.													
	Berichrom® Antithrombin III (A) Buffer Solution	Liquid.													
<b>Colour</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	White to yellowish.													
	Berichrom® Antithrombin III (A) Substrate Reagent	White to yellowish.													
	Berichrom® Antithrombin III (A) Buffer Solution	Colourless.													
<b>Odour</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Odourless.													
	Berichrom® Antithrombin III (A) Substrate Reagent	Odourless.													
	Berichrom® Antithrombin III (A) Buffer Solution	Odourless.													
<b>Odour threshold</b>	: Not relevant/applicable due to nature of the product.														
<b>Melting point/freezing point</b>	: Not relevant/applicable due to nature of the product.														
<b>Softening point</b>	: Not relevant/applicable due to nature of the product.														
<b>Sublimation temperature</b>	: Not relevant/applicable due to nature of the product.														
<b>Initial boiling point and boiling range</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.													
	Berichrom® Antithrombin III (A) Substrate Reagent	Not available.													
	Berichrom® Antithrombin III (A) Buffer Solution	Not available.													
<b>Flammability (solid, gas)</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not relevant/applicable due to nature of the product.													
	Berichrom® Antithrombin III (A) Substrate Reagent	Not relevant/applicable due to nature of the product.													
	Berichrom® Antithrombin III (A) Buffer Solution	Not relevant/applicable due to nature of the product.													
<b>Upper/lower flammability or explosive limits</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not applicable.													
	Berichrom® Antithrombin III (A) Substrate Reagent	Not applicable.													
	Berichrom® Antithrombin III (A) Buffer Solution	Not available.													
<b>Flash point</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	[Product does not sustain combustion.]													
	Berichrom® Antithrombin III (A) Substrate Reagent	[Product does not sustain combustion.]													
	Berichrom® Antithrombin III (A) Buffer Solution	[Product does not sustain combustion.]													
<b>Auto-ignition temperature</b>	:														
<table><tr><th>Ingredient name</th><th>°C</th><th>°F</th><th>Method</th></tr><tr><td>Berichrom® Antithrombin III (A) Buffer Solution</td><td></td><td></td><td></td></tr><tr><td>sodium azide</td><td>309</td><td>588.2</td><td>EU A.16</td></tr></table>				Ingredient name	°C	°F	Method	Berichrom® Antithrombin III (A) Buffer Solution				sodium azide	309	588.2	EU A.16
Ingredient name	°C	°F	Method												
Berichrom® Antithrombin III (A) Buffer Solution															
sodium azide	309	588.2	EU A.16												
<b>Decomposition temperature</b>	: Not relevant/applicable due to nature of the product.														
<b>pH</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not applicable.													
	Berichrom® Antithrombin III (A) Substrate Reagent	Not applicable.													
	Berichrom® Antithrombin III (A) Buffer Solution	8.2													



Berichrom® Antithrombin III (A)

**SECTION 9: Physical and chemical properties**

**Viscosity** : Berichrom® Antithrombin III (A) Not applicable.  
Thrombin Reagent  
Berichrom® Antithrombin III (A) Not applicable.  
Substrate Reagent  
Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Solubility(ies)** :  
Not available.

**Solubility in water** : Not relevant/applicable due to nature of the product.

**Miscible with water** : Not relevant/applicable due to nature of the product.

**Partition coefficient: n-octanol/ water** : Not relevant/applicable due to nature of the product.

**Vapour pressure** :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Berichrom® Antithrombin III (A) Buffer Solution						
water	23.8	3.2				

**Evaporation rate** : Not relevant/applicable due to nature of the product.

**Relative density** : Berichrom® Antithrombin III (A) Not available.  
Thrombin Reagent  
Berichrom® Antithrombin III (A) Not available.  
Substrate Reagent  
Berichrom® Antithrombin III (A) Buffer Solution 1

**Density** : Berichrom® Antithrombin III (A) Not available.  
Thrombin Reagent  
Berichrom® Antithrombin III (A) Not available.  
Substrate Reagent  
Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Vapour density** : Berichrom® Antithrombin III (A) Not applicable.  
Thrombin Reagent  
Berichrom® Antithrombin III (A) Not applicable.  
Substrate Reagent  
Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Explosive properties** : Berichrom® Antithrombin III (A) Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and oxidising materials.  
Thrombin Reagent  
  
Berichrom® Antithrombin III (A) Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and oxidising materials.  
Substrate Reagent  
  
Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Oxidising properties** : Berichrom® Antithrombin III (A) Not available.  
Thrombin Reagent  
Berichrom® Antithrombin III (A) Not available.  
Substrate Reagent  
Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

**9.2 Other information**

Date of issue/Date of revision

: 12/13/2022

Date of previous issue

: No previous validation

Version : 1

9/20



Berichrom® Antithrombin III (A)

**SECTION 9: Physical and chemical properties**

<b>Fire point</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	Berichrom® Antithrombin III (A) Buffer Solution	Not available.
<b>Burning time</b>	: Not relevant/applicable due to nature of the product.	
<b>Fundamental burning velocity</b>	: Not relevant/applicable due to nature of the product.	
<b>Burning rate</b>	: Not relevant/applicable due to nature of the product.	
<b>SADT</b>	: Not relevant/applicable due to nature of the product.	
<b>SAPT</b>	: Not relevant/applicable due to nature of the product.	
<b>Heat of reaction</b>	: Not relevant/applicable due to nature of the product.	
<b>Heat of combustion</b>	: Not relevant/applicable due to nature of the product.	
<b>Flow time (ISO 2431)</b>	: Not relevant/applicable due to nature of the product.	
<b>Molecular weight</b>	: Not relevant/applicable due to nature of the product.	

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: No specific data.
<b>10.5 Incompatible materials</b>	: No specific data.
<b>10.6 Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

<b>Conclusion/Summary</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	Berichrom® Antithrombin III (A) Buffer Solution	Not available.

**Acute toxicity estimates**

N/A

**Irritation/Corrosion****Conclusion/Summary**

<b>Skin</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	Berichrom® Antithrombin III (A) Buffer Solution	Not available.



**SECTION 11: Toxicological information**

**Eyes** : Berichrom® Antithrombin III (A) Thrombin Reagent Not available.  
 Berichrom® Antithrombin III (A) Substrate Reagent Not available.  
 Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Respiratory** : Berichrom® Antithrombin III (A) Thrombin Reagent Not available.  
 Berichrom® Antithrombin III (A) Substrate Reagent Not available.  
 Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Sensitisation****Conclusion/Summary**

**Skin** : Berichrom® Antithrombin III (A) Thrombin Reagent Not available.  
 Berichrom® Antithrombin III (A) Substrate Reagent Not available.  
 Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Respiratory** : Berichrom® Antithrombin III (A) Thrombin Reagent Not available.  
 Berichrom® Antithrombin III (A) Substrate Reagent Not available.  
 Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Mutagenicity****Conclusion/Summary**

: Berichrom® Antithrombin III (A) Thrombin Reagent Not available.  
 Berichrom® Antithrombin III (A) Substrate Reagent Not available.  
 Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Carcinogenicity****Conclusion/Summary**

: Berichrom® Antithrombin III (A) Thrombin Reagent Not available.  
 Berichrom® Antithrombin III (A) Substrate Reagent Not available.  
 Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Reproductive toxicity****Conclusion/Summary**

: Berichrom® Antithrombin III (A) Thrombin Reagent Not available.  
 Berichrom® Antithrombin III (A) Substrate Reagent Not available.  
 Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Teratogenicity****Conclusion/Summary**

: Berichrom® Antithrombin III (A) Thrombin Reagent Not available.  
 Berichrom® Antithrombin III (A) Substrate Reagent Not available.  
 Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.



**SECTION 11: Toxicological information****Aspiration hazard**

Not available.

**Information on likely routes of exposure** : Berichrom® Antithrombin III (A) Thrombin Reagent Not available.  
 Berichrom® Antithrombin III (A) Substrate Reagent Not available.  
 Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Potential acute health effects**

**Eye contact** : Berichrom® Antithrombin III (A) Thrombin Reagent No known significant effects or critical hazards.  
 Berichrom® Antithrombin III (A) Substrate Reagent No known significant effects or critical hazards.  
 Berichrom® Antithrombin III (A) Buffer Solution No known significant effects or critical hazards.

**Inhalation** : Berichrom® Antithrombin III (A) Thrombin Reagent No known significant effects or critical hazards.  
 Berichrom® Antithrombin III (A) Substrate Reagent No known significant effects or critical hazards.  
 Berichrom® Antithrombin III (A) Buffer Solution No known significant effects or critical hazards.

**Skin contact** : Berichrom® Antithrombin III (A) Thrombin Reagent No known significant effects or critical hazards.  
 Berichrom® Antithrombin III (A) Substrate Reagent No known significant effects or critical hazards.  
 Berichrom® Antithrombin III (A) Buffer Solution No known significant effects or critical hazards.

**Ingestion** : Berichrom® Antithrombin III (A) Thrombin Reagent No known significant effects or critical hazards.  
 Berichrom® Antithrombin III (A) Substrate Reagent No known significant effects or critical hazards.  
 Berichrom® Antithrombin III (A) Buffer Solution No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : Berichrom® Antithrombin III (A) Thrombin Reagent No specific data.  
 Berichrom® Antithrombin III (A) Substrate Reagent No specific data.  
 Berichrom® Antithrombin III (A) Buffer Solution No specific data.

**Inhalation** : Berichrom® Antithrombin III (A) Thrombin Reagent No specific data.  
 Berichrom® Antithrombin III (A) Substrate Reagent No specific data.  
 Berichrom® Antithrombin III (A) Buffer Solution No specific data.

**Skin contact** : Berichrom® Antithrombin III (A) Thrombin Reagent No specific data.  
 Berichrom® Antithrombin III (A) Substrate Reagent No specific data.  
 Berichrom® Antithrombin III (A) Buffer Solution No specific data.

**Ingestion** : Berichrom® Antithrombin III (A) Thrombin Reagent No specific data.  
 Berichrom® Antithrombin III (A) Substrate Reagent No specific data.  
 Berichrom® Antithrombin III (A) Buffer Solution No specific data.



**SECTION 11: Toxicological information****Delayed and immediate effects as well as chronic effects from short and long-term exposure****Short term exposure**

<b>Potential immediate effects</b>	:	Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	:	Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	:	Berichrom® Antithrombin III (A) Buffer Solution	Not available.
<b>Potential delayed effects</b>	:	Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	:	Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	:	Berichrom® Antithrombin III (A) Buffer Solution	Not available.

**Long term exposure**

<b>Potential immediate effects</b>	:	Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	:	Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	:	Berichrom® Antithrombin III (A) Buffer Solution	Not available.
<b>Potential delayed effects</b>	:	Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	:	Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	:	Berichrom® Antithrombin III (A) Buffer Solution	Not available.

**Potential chronic health effects**

Not available.

<b>Conclusion/Summary</b>	:	Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	:	Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	:	Berichrom® Antithrombin III (A) Buffer Solution	Not available.
<b>General</b>	:	Berichrom® Antithrombin III (A) Thrombin Reagent	No known significant effects or critical hazards.
	:	Berichrom® Antithrombin III (A) Substrate Reagent	No known significant effects or critical hazards.
	:	Berichrom® Antithrombin III (A) Buffer Solution	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	:	Berichrom® Antithrombin III (A) Thrombin Reagent	No known significant effects or critical hazards.
	:	Berichrom® Antithrombin III (A) Substrate Reagent	No known significant effects or critical hazards.
	:	Berichrom® Antithrombin III (A) Buffer Solution	No known significant effects or critical hazards.
<b>Mutagenicity</b>	:	Berichrom® Antithrombin III (A) Thrombin Reagent	No known significant effects or critical hazards.
	:	Berichrom® Antithrombin III (A) Substrate Reagent	No known significant effects or critical hazards.
	:	Berichrom® Antithrombin III (A) Buffer Solution	No known significant effects or critical hazards.



Berichrom® Antithrombin III (A)

**SECTION 11: Toxicological information**

<b>Reproductive toxicity</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	No known significant effects or critical hazards.
	: Berichrom® Antithrombin III (A) Substrate Reagent	No known significant effects or critical hazards.
	: Berichrom® Antithrombin III (A) Buffer Solution	No known significant effects or critical hazards.
<b>Interactive effects</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	: Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	: Berichrom® Antithrombin III (A) Buffer Solution	Not available.
<b><u>Toxicokinetics</u></b>		
<b>Absorption</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	: Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	: Berichrom® Antithrombin III (A) Buffer Solution	Not available.
<b>Distribution</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	: Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	: Berichrom® Antithrombin III (A) Buffer Solution	Not available.
<b>Metabolism</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	: Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	: Berichrom® Antithrombin III (A) Buffer Solution	Not available.
<b>Elimination</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	: Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	: Berichrom® Antithrombin III (A) Buffer Solution	Not available.
<b>Other information</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	: Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	: Berichrom® Antithrombin III (A) Buffer Solution	Not available.

**SECTION 12: Ecological information****12.1 Toxicity**

<b>Conclusion/Summary</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not available.
	: Berichrom® Antithrombin III (A) Substrate Reagent	Not available.
	: Berichrom® Antithrombin III (A) Buffer Solution	Not available.

**12.2 Persistence and degradability**



Berichrom® Antithrombin III (A)

**SECTION 12: Ecological information**

**Conclusion/Summary** : Berichrom® Antithrombin III (A) Thrombin Reagent Not available.  
 Berichrom® Antithrombin III (A) Substrate Reagent Not available.  
 Berichrom® Antithrombin III (A) Buffer Solution Not available.

**12.3 Bioaccumulative potential**

Not available.

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Berichrom® Antithrombin III (A) Thrombin Reagent Not available.  
 Berichrom® Antithrombin III (A) Substrate Reagent Not available.  
 Berichrom® Antithrombin III (A) Buffer Solution Not available.

**Mobility** : Berichrom® Antithrombin III (A) Thrombin Reagent Not available.  
 Berichrom® Antithrombin III (A) Substrate Reagent Not available.  
 Berichrom® Antithrombin III (A) Buffer Solution Not available.

**12.5 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**12.6 Other adverse effects** : No known significant effects or critical hazards.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.  
 Sodium azide may react with lead or copper plumbing to form highly explosive metal azides.

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.



**SECTION 14: Transport information****ADR/RID**

<b>14.1 UN number</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	Not regulated.
	Berichrom® Antithrombin III (A) Substrate Reagent	Not regulated.
	Berichrom® Antithrombin III (A) Buffer Solution	Not regulated.
<b>14.2 UN proper shipping name</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-
<b>14.3 Transport hazard class(es)</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-
<b>14.4 Packing group</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-
<b>14.5 Environmental hazards</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	No.
	Berichrom® Antithrombin III (A) Substrate Reagent	No.
	Berichrom® Antithrombin III (A) Buffer Solution	No.
<b>Additional information</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-

**ADN**

<b>14.1 UN number</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	Not regulated.
	Berichrom® Antithrombin III (A) Substrate Reagent	Not regulated.
	Berichrom® Antithrombin III (A) Buffer Solution	Not regulated.
<b>14.2 UN proper shipping name</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-
<b>14.3 Transport hazard class(es)</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-



Berichrom® Antithrombin III (A)

**SECTION 14: Transport information**

<b>14.4 Packing group</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-
<b>14.5 Environmental hazards</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	No.
	Berichrom® Antithrombin III (A) Substrate Reagent	No.
	Berichrom® Antithrombin III (A) Buffer Solution	No.
<b>Additional information</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-

**IMDG**

<b>14.1 UN number</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	Not regulated.
	Berichrom® Antithrombin III (A) Substrate Reagent	Not regulated.
	Berichrom® Antithrombin III (A) Buffer Solution	Not regulated.
<b>14.2 UN proper shipping name</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-
<b>14.3 Transport hazard class(es)</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-

<b>14.4 Packing group</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-
<b>14.5 Environmental hazards</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	No.
	Berichrom® Antithrombin III (A) Substrate Reagent	No.
	Berichrom® Antithrombin III (A) Buffer Solution	No.
<b>Additional information</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-

**IATA**

<b>14.1 UN number</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	Not regulated.
	Berichrom® Antithrombin III (A) Substrate Reagent	Not regulated.
	Berichrom® Antithrombin III (A) Buffer Solution	Not regulated.



Berichrom® Antithrombin III (A)

**SECTION 14: Transport information**

<b>14.2 UN proper shipping name</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-
<b>14.3 Transport hazard class(es)</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-
<b>14.4 Packing group</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-
<b>14.5 Environmental hazards</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	No.
	Berichrom® Antithrombin III (A) Substrate Reagent	No.
	Berichrom® Antithrombin III (A) Buffer Solution	No.
<b>Additional information</b>	Berichrom® Antithrombin III (A) Thrombin Reagent	-
	Berichrom® Antithrombin III (A) Substrate Reagent	-
	Berichrom® Antithrombin III (A) Buffer Solution	-
<b>14.6 Special precautions for user</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	<b>Transport within user's premises:</b> always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
	Berichrom® Antithrombin III (A) Substrate Reagent	<b>Transport within user's premises:</b> always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
	Berichrom® Antithrombin III (A) Buffer Solution	<b>Transport within user's premises:</b> always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
<b>14.7 Transport in bulk according to IMO instruments</b>	: Not applicable.	



**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****UK (GB) /REACH****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

**Ozone depleting substances**

Not listed.

**Prior Informed Consent (PIC)**

Not listed.

**Persistent Organic Pollutants**

Not listed.

<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not applicable.
	: Berichrom® Antithrombin III (A) Substrate Reagent	Not applicable.
	: Berichrom® Antithrombin III (A) Buffer Solution	Not applicable.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**National regulations****EU regulations**

<b>Industrial emissions (integrated pollution prevention and control) - Air</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not listed
	: Berichrom® Antithrombin III (A) Substrate Reagent	Not listed
	: Berichrom® Antithrombin III (A) Buffer Solution	Not listed
<b>Industrial emissions (integrated pollution prevention and control) - Water</b>	: Berichrom® Antithrombin III (A) Thrombin Reagent	Not listed
	: Berichrom® Antithrombin III (A) Substrate Reagent	Not listed
	: Berichrom® Antithrombin III (A) Buffer Solution	Not listed

**International regulations****Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**15.2 Chemical safety assessment** : Not applicable.



## SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms**

- : ATE = Acute Toxicity Estimate
- GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = GB CLP-specific Hazard statement
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- SGG = Segregation Group
- vPvB = Very Persistent and Very Bioaccumulative

### Procedure used to derive the classification

Not classified.

### Full text of abbreviated H statements

Not applicable.

### Full text of classifications

Not applicable.

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