

Material Safety Data Sheet

Conforms to 93/112/EC and ISO 11014-1

Responsible Name MSDS Specialist

? Section 1. Chemical Product and Company Identification**Product Name** **Aprotinin****Product no.** 78432 1890245 1891661 1892434**Supplier** In USA:
Thermo Fisher Scientific
P.O. Box 117
Rockford, IL 61105
USA
815.968.0747 or
1.800.874.3723In Europe:
Perbio Science
Industriezone III
Industrielaan 27
9320 Erembodegem-Aalst
Belgium
Tel:+32 53 83 44 04
Fax:+32 53 83 76 38**Manufacturer** Pierce
3747 N. Meridian Road
P.O. Box 117
Rockford, IL 61105
USA
815.968.0747 or
1.800.874.3723
(815)968-7316 fax
www.thermo.com**In case of emergency** CHEMTREC:
800.424.9300
OUTSIDE US:
703.527.3887**Print date** 3/26/2007**Validation date** **3/26/2007****MSDS#** 7602**Synonyms** Pancreatic trypsin inhibitor; pancreatic basic trypsin inhibitor; Antagosan; Antikrein; Antilysine; Fosten; Iniprol; Kir Richter; Repulson; Trasylol; Trazinin; Zymofren; Bayer A-128; Kallikrein-trypsin inactivator; Onquinin; Repulson; Riker 52G; RP-9921;**Use of the substance/preparation** Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.**Section 2. Composition, Information on Ingredients****Substance/preparation** : Substance

No hazardous ingredient according to 29 CFR 1910.1200 Hazard Communication Standard (USA) and Directives 1999/45/EC-2001/59/EC (EU)

Section 3. Hazards identification**United States** Review the most current and approved institutional guideline, protocol, standard operating procedure(s) and MSDS(s) for the proper handling of institutional materials/equipment associated with the use of this product.**Emergency overview** No specific hazard.**Routes of entry** Eye contact. Inhalation. Ingestion.**Potential acute health effects****Eyes** Slightly irritating to the eyes.**Skin** Slightly irritating to the skin.**Inhalation** No known significant effects or critical hazards.**Ingestion** No known significant effects or critical hazards.**Potential chronic health effects****Carcinogenic effects** **CARCINOGENIC EFFECTS:** Classified None. by OSHA, None. by NIOSH.**MUTAGENIC EFFECTS:** Not available.**TERATOGENIC EFFECTS:** Not available.**Medical conditions aggravated by overexposure** Repeated or prolonged exposure is not known to aggravate medical condition.**Over-exposure signs/symptoms** Not available.**Europe****Classification** Not classified.**Physical/chemical hazards** Not applicable.**Human health hazards** Not applicable.**Continued on Next Page**

Environmental hazards Not applicable.

See toxicological Information (section 11)

+ Section 4. First aid measures

Effects and symptoms

Inhalation Not available.

Ingestion Not available.

Skin contact Slightly hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Eye contact Slightly hazardous in case of eye contact (irritant).

Aggravating conditions Repeated or prolonged exposure is not known to aggravate medical condition.

First-Aid measures

Inhalation If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Skin contact In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Eye contact In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Notes to physician Not available.

Protection of first-aiders Not available.

🔥 Section 5. Fire fighting measures

Flammability of the product May be combustible at high temperature.

Flash Points Not available.

Fire hazards in presence of various substances Not available.

Fire fighting media and instructions Use an extinguishing agent suitable for surrounding fires.

Protective clothing (fire) Be sure to use an approved/certified respirator or equivalent.

Hazardous thermal decomposition products These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...), sulfur oxides (SO₂, SO₃...).

Section 6. Accidental release measures

Personal precautions Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Environmental precautions and clean-up methods Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Small spill and leak Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

◇ Section 7. Handling and storage

Handling Wash thoroughly after handling.

Storage Keep container tightly closed. Keep container in a cool, well-ventilated area.

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

Packaging materials

Suitable / Not suitable Use original container.

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Section 8. Exposure Controls, Personal Protection

Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Exposure Limit Values

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
United States	

Personal Protection

Eyes Safety glasses.

Body Lab coat.

Protective Clothing
(Pictograms)



Section 9. Physical and chemical properties

Physical State Solid. (Powdered solid.)

Color White.

Odor Odorless.

Molecular weight 6511.54 g/mole

Taste Not available.

Molecular formula C₂₈₄H₄₃₂N₈₄O₇₉S₇

pH (1% Soln/Water) 5 to 7 (Conc. (% w/w): 1) [Acidic.]

Dispersion properties See solubility in water.

Solubility Soluble in cold water, hot water.



Section 10. Stability and reactivity

Stability and Reactivity The product is stable.

Conditions to avoid Not available.

Materials to avoid Reactive with oxidizing agents.

Hazardous polymerization Will not occur.

Hazardous Decomposition Products Not available.



Section 11. Toxicological information

Toxicity to Animals **Aprotinin**
LD50: Not available.
LC50: Not available.

Chronic Effects on Humans **CARCINOGENIC EFFECTS:** Classified None. by OSHA, None. by NIOSH.
DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female [POSSIBLE].

Other Toxic Effects on Humans Slightly hazardous in case of eye contact (irritant).

Special Remarks on Toxicity to Animals Not available.

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Special Remarks on Chronic Effects on Humans Exposure can cause stomach pains, vomiting and diarrhea.

Special Remarks on Other Toxic Effects on Humans May cause allergic reactions in certain individuals.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Reproductive toxicity No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation No known significant effects or critical hazards.

Ingestion No known significant effects or critical hazards.

Skin No known significant effects or critical hazards.



Section 12. Ecological information

Mobility Not available.

Persistence/degradability Not available.

Bioaccumulative potential Not available.

Ecotoxicity Not available.

Germany water class VCI WGK: No products were found.

Ecotoxicity data

Ingredient name

Species

Period

Other ecological information

Persistence/degradability

Ingredient name

BOD₅

COD

Ingredient name

Aquatic half-life

Photolysis

Bioaccumulative potential

Ingredient name

LogP_{ow}

BCF

Mobility : Not available.

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



Section 13. Disposal considerations

Waste Stream Not available.

Methods of disposal The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. 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.

European waste catalogue (EWC) Not available.

Hazardous waste To present knowledge of the supplier, this product is not regarded as hazardous waste as defined by EU Directive 91/689/EC.

Denmark – Carcinogenic waste Not available.

Denmark - Waste card number Not available.

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- Denmark - Waste group Not available.
- Sweden - thermoset plastic waste Not available.
- Sweden - Waste group Not available.
- Austria - Waste catalogue Not available.
- Norway - Waste number Not available.
- Norway - Hazardous waste To present knowledge of the supplier, this product is not regarded as hazardous waste as defined by SFT's Directive on special waste.
- Switzerland - Waste code Not available.

Section 14. Transport information

Contact the supplier for all information regarding the proper transportation method for this material.

Section 15. Regulatory information

Label Requirements (Europe)

This product is not classified according to the EU regulations.

HCS Classification --

- U.S. Federal Regulations** TSCA: No products were found.
 SARA 302/304/311/312 extremely hazardous substances: No products were found.
 SARA 302/304 emergency planning and notification: No products were found.
 SARA 302/304/311/312 hazardous chemicals: No products were found.
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.
 Clean Water Act (CWA) 307: No products were found.
 Clean Water Act (CWA) 311: No products were found.
 Clean air act (CAA) 112 accidental release prevention: No products were found.
 Clean air act (CAA) 112 regulated flammable substances: No products were found.
 Clean air act (CAA) 112 regulated toxic substances: No products were found.

State regulations No products were found.

WHMIS (Canada) Class D-2A: Material causing other toxic effects (VERY TOXIC).

No products were found.

International Regulations

EINECS Not available.

DSCL (EEC) This product is not classified according to the EU regulations.

International Lists Germany water class: Aprotinin

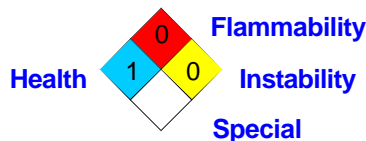
State Regulations No products were found.

Section 16. Other information

Hazardous Material Information System (U.S.A.)


Health	*	1
Fire hazard		0
Reactivity		0
Personal protection		C

National Fire Protection Association (U.S.A.)



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References Not available.

History of Document Changes Any information changes since last document version are marked with a triangle symbol. 

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

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Version 2

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.