Safety Data Sheet

ACTIVASE® Vials (50 mg)

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

1.1. Product identifier

Product name		ACTIVASE® Vials (50 mg)
Product code		SAP-10053299
Synonyms	-	ACTIVASE 50mg

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

Use	-	pharmaceutical active substance (thrombolytic)	*1

1.3. Details of the supplier of the safety data sheet

Company information

Enquiries:
Genentech, Inc.
1 DNA Way
South San Francisco
USA-CA 94080
United States of America

Phone 001-(650) 225-1000
E-Mail info.sds@roche.com
US Chemtrec phone:
(800)-424-9300

Local representation:

1.4. Emergency telephone number

Emergency telephone number: US Chemtrec phone: (800)-424-9300

1 referring to: Alteplase

SECTION 2: Hazards identification

Emergency Overview

Form	lyophilized powder
Color	white to off-white

Classification of the substance or mixture / Label elements

GHS Classification: no classification and labelling according to GHS

Other hazards

Note	-	no information available

SECTION 3: Composition/information on ingredients

Characterization	0.5 M arginine phosphate buffer is used as a buffering agent to maintain pH at 7.3.

Ingredients	Concentration	GHS-Classification (pure ingredient)
Alteplase 105857-23-6	< 2.17 %	

1 referring to: Alteplase

SECTION 4: First aid measures

4.1. Description of first aid measures

Eye contact	-	rinse immediately with tap water for at least 20 minutes - open eyelids forcibly
Skin contact	-	remove immediately contaminated clothes, wash affected skin with water and soap - do not use any solvents
Inhalation	-	remove the casualty to fresh air and keep him/her calm - in the event of symptoms get medical treatment

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

Note	-	no information available

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

Note to physician	-	treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	-	adapt extinguishing media to surrounding fire conditions
Flash point (liquid)		not applicable
Unsuitable extinguishing media	-	full water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards	- no particular hazards known

5.3. Advice for firefighters

Protection of fire-fighters	- precipitate gases/vapours/mists with water spray - use self-contained breathing apparatus
Special method of fire-fighting	- if possible precipitate fire gases with a water jet

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	- ensure adequate ventilation

6.2. Environmental precautions

Environmental protection	- do not allow to enter drains or waterways

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	- collect solids (avoid dust formation) and hand over to waste removal

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Suitable materials	- glass

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	- 2 - 8 °C - protected from light
Validity	- see "best use before" date stated on the label, after opening the content should be used within a short period, any remaining reconstituted solution should be discarded
Packaging materials	- vials

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Threshold value (USA) air	- STEL: 3 mg/m3 (4 x 15 min) - ACGIH-TLV: 1 mg/m3	*2 *2
Threshold value (Roche) air	- IOEL (Internal Occupational Exposure Limit): 0.2 mg/m3	*1

8.2. Exposure controls

Respiratory protection	- Respiratory protection is recommended as a precaution to minimize exposure. Effective engineering controls are considered to be the primary means to control worker exposure. Respiratory protection should not substitute for feasible engineering controls. - in case of open handling or accidental release: particle mask or respirator with independent air supply
Hand protection	- protective gloves (neoprene, nitrile or butyl rubber)
Eye protection	- safety glasses

1 referring to: Alteplase
2 referring to: Phosphoric acid

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Color	white to off-white	
Form	lyophilized powder	
Molecular mass	~ 64 kDa	*1
Solubility	148’700 mg/l, water (20 °C)	*3
Partition coefficient	log P_{ow} -4.20 (octanol/water°C)	*3
pH value	7.3 (reconstituted solution)	

9.2. Other information

Note	- no information available

1 referring to: Alteplase
3 referring to: L-Arginine

SECTION 10: Stability and reactivity

10.1. Reactivity

Note - no information available

10.2. Chemical stability

Stability
- does not contain any antimicrobial preservative; therefore, care must be taken to ensure the sterility of the prepared reconstituted solution
- do not freeze the reconstituted solution

10.3. Possibility of hazardous reactions

Note - no information available

10.4. Conditions to avoid

Conditions to avoid
- temperatures above 30 °C
- light

10.5. Incompatible materials

Note - no information available

10.6. Hazardous decomposition products

Note - no information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	- not bioavailable by oral administration				*1
	- TD_{lo}	> 10	mg/kg	(i.v., rat)	*1
	- LD_{50}	1’530	mg/kg	(oral, rat)	*2
	- LC_{50}	> 850	mg/m3	(inhal., rat, 1 h)	*2
	- LD_{50}	2’740	mg/kg	(dermal, rabbit)	*2
	- LD_{50}	> 5’110	mg/kg	(oral, rat)	*3
Subacute toxicity	- LD_0	10	mg/kg/d	(i.v., several species, 14 d)	*1
Local effects	- skin: non-irritant (rabbit; OECD No. 404)				*3
	- eye: not severe irritant or corrosive				*3
	- skin: corrosive				*2
Sensitization	anaphylactic reactions may occur following the intravenous application of proteins				*1

Mutagenicity	-	does not induce chromosomal aberrations in vitro (OECD No. 473 (Mammalian Cytogenic Test)) *1
	-	negative (Ames test) *1
	-	negative, both with and without metabolic activation (in vitro test system; OECD No. 473 (Mammalian Cytogenic Test)) *3
Carcinogenicity	-	no information available
Reproductive toxicity	-	Alteplase has been shown to have an embryocidal effect in rabbits when intravenously administered at adose of 3 mg/kg, which is roughly twice the human dose for acute myocardial infarction *1
STOT-single exposure	-	no information available
STOT-repeated exposure	-	no information available
Aspiration hazard	-	no information available
Potential Health Effects	-	Exposure: Inhalation, Ingestion, Skin contact, Eye contact
	-	Carcinogenicity: not listed by NTP, IARC or OSHA

1 referring to: Alteplase
2 referring to: Phosphoric acid
3 referring to: L-Arginine

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity	-	barely toxic for fish (zebrafish) LC_{50} (96 h) 2800 mg/l NOEC (96 h) 1000 mg/l (OECD No. 203, semistatic) *3
	-	barely toxic for planktonic crustaceans (Daphnia magna) NOEC (24 h) 1000 mg/l (OECD No. 202) *3
	-	barely toxic for microorganisms (Pseudomonas putida) EC_{10} (16 h) > 10000 mg/kg (DIN 38'412, part 8) *3
	-	no information available *1
	-	moderately toxic for fish (fish, unspecified) LC_{50} 70 mg/l *2

12.2. Persistence and degradability

Ready biodegradability	-	globular proteins are generally well biodegradable *1
	-	readily biodegradable *3

12.3. Bioaccumulative potential

Note	-	no information available

12.4. Mobility in soil

Note	-	no information available

12.5. Results of PBT and vPvB assessment

Note	-	no information available

12.6. Other adverse effects

Note	-	no information available

1	referring to:	Alteplase
2	referring to:	Phosphoric acid
3	referring to:	L-Arginine

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues	-	observe local/national regulations regarding waste disposal

SECTION 14: Transport information

Note	-	not classified as Dangerous Good according to the Dangerous Goods Regulations, proper shipping name non-regulated

SECTION 15: Regulatory information

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

TSCA Status	-	FDA Exemption - not on inventory
Reporting Requirements	-	The United States Environmental Protection Agency (USEPA) has not established a Reportable Quantity (RQ) for releases of this material. - In New Jersey, report all releases which are likely to endanger the public health, harm the environment or cause a complaint to the NJDEPE Hotline (1-609-292-5560) and to local officials. - State and local regulations vary and may impose additional reporting requirements.

SECTION 16: Other information

Note	- Please note this Safety Data Sheet for the bulk product does not apply for the finished, packaged medicinal product intended for the final user.
Edition documentation	- changes from previous version in sections 2, 4, 5, 6, 12

The information in this safety data sheet is based on current scientific knowledge. It should not be taken as expressing or implying any warranty concerning product characteristics.