Safety Data Sheet

HERCEPTIN Vials 60 mg

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

1.1. Product identifier

Product name	HERCEPTIN Vials 60 mg
Product code	SAP-10090887

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

Use	- pharmaceutical active substance (antineoplastic)	*1
	- active substance in Herceptin	*1

1.3. Details of the supplier of the safety data sheet

Company information	Enquiries: Roche Products Pty Limited Level 8, 30-34 Hickson Road Millers Point NSW 2000 Australia Phone 0061-2-9454-9624 Fax 0061-2-9971-7401 E-Mail info.sds@roche.com	Local representation:

1.4. Emergency telephone number

Emergency telephone number	Phone	0061-2-9454-9624

1 referring to: Trastuzumab

SECTION 2: Hazards identification

2.1. / 2.2. Classification of the substance or mixture / Label elements

GHS Classification	no classification and labelling according to GHS	
Australian Remark	- Not listed on the Australian Inventory of Chemical Substances (AICS)	*1
	- Poisons Schedule - Schedule 4	*1
	- Not classified as hazardous according to the Criteria of Worksafe Australia	

2.3. Other hazards

Note - no information available

1 referring to: Trastuzumab

SECTION 3: Composition/information on ingredients

Characterization: recombinant humanised monoclonal antibody (Trastuzumab) with excipients

Synonyms - HERCEPTIN lyophilized Vials 60 mg

Ingredient	Concentration	GHS-Classification (pure ingredient)
Trastuzumab 180288-69-1	51.3 %	
L-Histidine 71-00-1		
L-Histidine hydrochloride monohydrate 5934-29-2		
Trehalose dihydrate 6138-23-4		
Polysorbate 20 9005-64-5		

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 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

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	- no special precautions required

6.2. Environmental precautions

Environmental protection	- no special environmental precautions required

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 - flush afterwards with plenty of water

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 - do not freeze following reconstitution or dilution

Validity	- 2 to 8 °C, in the unopened original container, see "best use before" date stated on the label	

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Threshold value (Roche) air	- IOEL (Internal Occupational Exposure Limit): 0.1 mg/m3	*1

8.2. Exposure controls

Respiratory protection	- respiratory protection not necessary during normal operations - breathing apparatus in case of aerosol mist formation	
Hand protection	- protective gloves (eg made of neoprene, nitrile or butyl rubber)	
Eye protection	- safety glasses	

1 referring to: Trastuzumab

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Colour	white to pale yellow	
Form	lyophilisate	
pH value	5.4 to 6.6	*2

9.2. Other information

Note	- no information available	

2 referring to: Herceptin Vials (2% Trastuzumab solution with excipients)

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 solution	*2
	- do not dilute with glucose since there cause aggregation of the protein	*2
	- do not freeze the reconstituted solution	*2

10.3. Possibility of hazardous reactions

Note - no information available

10.4. Conditions to avoid

Conditions to avoid - warming

10.5. Incompatible materials

Note - no information available

10.6. Hazardous decomposition products

Note - do not shake the solution, formation of foam *2

2 referring to: Herceptin Vials (2% Trastuzumab solution with excipients)

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	- MTD	> 94	mg/kg	(i.v., mouse)	*1
	- MTD	> 47	mg/kg	(i.v., Rhesus monkey)	*1
	- TD_{lo}	16’000	mg/kg	(oral, rat)	*3
	- LD_{50}	> 15’000	mg/kg	(oral, rat)	*4

Local effects - no information available

Sensitization anaphylactic reactions may occur following the intravenous application of proteins; rare cases of hypersensitivity have been described *1

Mutagenicity - no information available

Carcinogenicity - no information available

Reproductive toxicity - parenteral administration to pregnant women can cause fetal harm *1

STOT-single exposure - no information available

STOT-repeated exposure - no information available

Aspiration hazard - no information available

Note
- infusions should not be administered through IV line containing dextrose solutions
- Trastuzumab is a humanised monoclonal antibody that targets selectively the extracellular domain of the human epidermal growth factor receptor (HER2) *1
- elimination half-life (after multiple dose): 1.7 to 32.8 days *1

- Herceptin administration (in therapeutic doses) can result in the development of ventricular dysfunction and congestive heart failure *5
- side effect(s) during therapy: dyspnoea, hypotension, tachycardia, bronchspasm, wheezing, reduced oxygen saturation *5

1 referring to: Trastuzumab
3 referring to: Trehalose dihydrate
4 referring to: L-Histidine
5 referring to: Diluted Herceptin infusion solution (approx. 0.06% Trastuzumab)

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity
- monoclonal antibodies are proteins with highly specific affinity to a certain antigen; therefore, no appreciable ecotoxic potential is to be expected *1

12.2. Persistence and degradability

Ready biodegradability
- globular proteins are generally well biodegradable *1
- readily biodegradable
  65 % BOD/ThOD, 14 d
  (Manometric Respirometry Test, OECD No. 301 F) *1
- readily biodegradable
  87 % BOD/ThOD, 14 d
  (Manometric Respirometry Test, OECD No. 301 F) *6

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: Trastuzumab
6 referring to: Trastuzumab 2.4% solution with excipients

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues	- observe local/national regulations regarding waste disposal - drain very small quantities into wastewater treatment plant

SECTION 14: Transport information

Australian Remark	- ADG Code: This product is not classified as a dangerous good. No special transport conditions are necessary unless required by other regulations.

SECTION 15: Regulatory information

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

Water hazard class (Germany)	1: weakly hazardous for water (according to directive AwSV of 18.04.2017)

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 15

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.

Safety Data Sheet

HERCEPTIN® Vials 150 mg

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

1.1. Product identifier

Product name	HERCEPTIN® Vials 150 mg
Product code	SAP-10046108

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

Use	- pharmaceutical active substance (antineoplastic)	*1
	- active substance in Herceptin	*1

1.3. Details of the supplier of the safety data sheet

Company information	Enquiries: Roche Products Pty Limited Level 8, 30-34 Hickson Road Millers Point NSW 2000 Australia Phone 0061-2-9454-9624 Fax 0061-2-9971-7401 E-Mail info.sds@roche.com	Local representation:

1.4. Emergency telephone number

Emergency telephone number	Phone	0061-2-9454-9624

1 referring to: Trastuzumab

SECTION 2: Hazards identification

2.1. / 2.2. Classification of the substance or mixture / Label elements

GHS Classification	no classification and labelling according to GHS	
Australian Remark	- Not classified as hazardous according to the Criteria of Worksafe Australia	
	- Not listed on the Australian Inventory of Chemical Substances (AICS)	*1
	- Poisons Schedule - Schedule 4	*1

2.3. Other hazards

Note - no information available

1 referring to: Trastuzumab

SECTION 3: Composition/information on ingredients

Characterization: recombinant humanised monoclonal antibody (Trastuzumab) with excipients

Synonyms - HERCEPTIN lyophilized Vials 150 mg

Ingredient	Concentration	GHS-Classification (pure ingredient)
Trastuzumab 180288-69-1	51.3 %	
L-Histidine 71-00-1		
L-Histidine hydrochloride monohydrate 5934-29-2		
Trehalose dihydrate 6138-23-4		
Polysorbate 20 9005-64-5		

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 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

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	- no special precautions required

6.2. Environmental precautions

Environmental protection	- no special environmental precautions required

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 - flush afterwards with plenty of water

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 - do not freeze following reconstitution or dilution

Validity	- 2 to 8 °C, in the unopened original container, see "best use before" date stated on the label	

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Threshold value (Roche) air	- IOEL (Internal Occupational Exposure Limit): 0.1 mg/m3	*1

8.2. Exposure controls

Respiratory protection	- respiratory protection not necessary during normal operations - breathing apparatus in case of aerosol mist formation	
Hand protection	- protective gloves (eg made of neoprene, nitrile or butyl rubber)	
Eye protection	- safety glasses	

1 referring to: Trastuzumab

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Colour	white to pale yellow	
Form	lyophilisate	
pH value	5.4 to 6.6	*2

9.2. Other information

Note	- no information available	

2 referring to: Herceptin Vials (2% Trastuzumab solution with excipients)

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 solution	*2
	- do not dilute with glucose since there cause aggregation of the protein	*2
	- do not freeze the reconstituted solution	*2

10.3. Possibility of hazardous reactions

Note	- no information available	

10.4. Conditions to avoid

Conditions to avoid	- warming	

10.5. Incompatible materials

Note	- no information available	

10.6. Hazardous decomposition products

Note	- do not shake the solution, formation of foam	*2

2 referring to: Herceptin Vials (2% Trastuzumab solution with excipients)

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	- MTD	> 94	mg/kg	(i.v., mouse)	*1
	- MTD	> 47	mg/kg	(i.v., Rhesus monkey)	*1
	- TD_{lo}	16’000	mg/kg	(oral, rat)	*3
	- LD_{50}	> 15’000	mg/kg	(oral, rat)	*4
Local effects	- no information available				
Sensitization	anaphylactic reactions may occur following the intravenous application of proteins; rare cases of hypersensitivity have been described				*1
Mutagenicity	- no information available				
Carcinogenicity	- no information available				
Reproductive toxicity	- parenteral administration to pregnant women can cause fetal harm				*1
STOT-single exposure	- no information available				
STOT-repeated exposure	- no information available				
Aspiration hazard	- no information available				
Note	- infusions should not be administered through IV line containing dextrose solutions				
	- Trastuzumab is a humanised monoclonal antibody that targets selectively the extracellular domain of the human epidermal growth factor receptor (HER2)				*1
	- elimination half-life (after multiple dose): 1.7 to 32.8 days				*1

- Herceptin administration (in therapeutic doses) can result in the development of ventricular dysfunction and congestive heart failure *5
- side effect(s) during therapy: dyspnoea, hypotension, tachycardia, bronchspasm, wheezing, reduced oxygen saturation *5

1 referring to: Trastuzumab
3 referring to: Trehalose dihydrate
4 referring to: L-Histidine
5 referring to: Diluted Herceptin infusion solution (approx. 0.06% Trastuzumab)

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity
- monoclonal antibodies are proteins with highly specific affinity to a certain antigen; therefore, no appreciable ecotoxic potential is to be expected *1

12.2. Persistence and degradability

Ready biodegradability
- globular proteins are generally well biodegradable *1
- readily biodegradable
  65 % BOD/ThOD, 14 d
  (Manometric Respirometry Test, OECD No. 301 F) *1
- readily biodegradable
  87 % BOD/ThOD, 14 d
  (Manometric Respirometry Test, OECD No. 301 F) *6

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: Trastuzumab
6 referring to: Trastuzumab 2.4% solution with excipients

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues	- observe local/national regulations regarding waste disposal - drain very small quantities into wastewater treatment plant

SECTION 14: Transport information

Australian Remark	- ADG Code: This product is not classified as a dangerous good. No special transport conditions are necessary unless required by other regulations.

SECTION 15: Regulatory information

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

Water hazard class (Germany)	1: weakly hazardous for water (own classification according to directive VwVwS of 27.07.2005)

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 1, 3

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.

Safety Data Sheet

Herceptin s.c. 120 mg/ml

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

1.1. Product identifier

Product name	Herceptin s.c. 120 mg/ml
Product code	SAP-10112127

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

Use	- pharmaceutical active substance (antineoplastic)	*1
	- active substance in Herceptin	*1

1.3. Details of the supplier of the safety data sheet

Company information	Enquiries: Roche Products Pty Limited Level 8, 30-34 Hickson Road Millers Point NSW 2000 Australia Phone 0061-2-9454-9624 Fax 0061-2-9971-7401 E-Mail info.sds@roche.com	Local representation:

1.4. Emergency telephone number

Emergency telephone number	Phone	0061-2-9454-9624

1 referring to: Trastuzumab

SECTION 2: Hazards identification

2.1. / 2.2. Classification of the substance or mixture / Label elements

GHS Classification	no classification and labelling according to GHS	
Australian Remark	- Not classified as hazardous according to the Criteria of Worksafe Australia	
	- Poisons Schedule - Schedule 4	*1
	- Not listed on the Australian Inventory of Chemical Substances (AICS)	*1

2.3. Other hazards

Note - no information available

1 referring to: Trastuzumab

SECTION 3: Composition/information on ingredients

Characterization: solution of Trastuzumab with exciepients for subcutaneous injection

Synonyms
- Herceptin SC
- Herceptin Vials 600 mg/5 ml
- MAB<HER2>SC-rH-13-10-IgG

Ingredient	Concentration	GHS-Classification (pure ingredient)
Trastuzumab 180288-69-1	120 mg/ml	
Hyaluronidase (rHuPH20) 757971-58-7	2000 I.U./ml	
L-Histidine 71-00-1	20 mM	
L-Histidine hydrochloride 5934-29-2		
L-Methionine 63-68-3	10 mM	
Polysorbate 20 9005-64-5	0.04 %	
Trehalose dihydrate 6138-23-4	210 mM	

water solution suitable for injection

SECTION 4: First aid measures

4.1. Description of first aid measures

Eye contact - rinse with tap water for 20 minutes - open eyelids forcibly

Skin contact - drench affected skin with water

Inhalation - 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

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions - no special precautions required

6.2. Environmental precautions

Environmental protection - no special environmental precautions required

6.3. Methods and material for containment and cleaning up

Methods for cleaning up - mop or flush the contaminated area with water

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
- do not freeze

Validity	- 18 months, 2 to 8 °C, after opening the content should be used within a short period, see expiry date on the label, in the unopened original container	
Packaging materials	- vials - keep it in the outer carton in order to protect from light	

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Threshold value (Roche) air	- IOEL (Internal Occupational Exposure Limit): 0.1 mg/m3	*1

8.2. Exposure controls

Respiratory protection	- respiratory protection not necessary during normal operations
Hand protection	- protective gloves (eg made of neoprene, nitrile or butyl rubber)
Eye protection	- safety glasses

1 referring to: Trastuzumab

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Colour	colourless to slightly yellow clear to opalescent
Form	liquid
pH value	5.5

9.2. Other information

Note	- no information available

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 solution - once transferred from the vial to the syringe, the product is physically and chemically stable at 2 to 8°C for 24 hours

10.3. Possibility of hazardous reactions

Note	- no information available

10.4. Conditions to avoid

Conditions to avoid	- warming - 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	- MTD	> 94	mg/kg	(i.v., mouse)	*1
	- MTD	> 47	mg/kg	(i.v., Rhesus monkey)	*1
Local effects	assessment of local tolerance after a single subcutaneous application of 60 mg/injection site (0.5 mL/injection site) showed no findings that were attributable to treatment with the test item (rabbit)				
Sensitization	anaphylactic reactions may occur following the application of proteins; rare cases of hypersensitivity have been described				*1
Mutagenicity	- no information available				
Carcinogenicity	- no information available				
Reproductive toxicity	- parenteral administration to pregnant women can cause fetal harm				*1
STOT-single exposure	- no information available				
STOT-repeated exposure	- no information available				
Aspiration hazard	- no information available				
Note	- Trastuzumab is a humanised monoclonal antibody that targets selectively the extracellular domain of the human epidermal growth factor receptor (HER2)				*1
	- elimination half-life (after multiple dose): 1.7 to 32.8 days				*1

1 referring to: Trastuzumab

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity	- monoclonal antibodies are proteins with highly specific affinity to a certain antigen; therefore, no appreciable ecotoxic potential is to be expected	*1

12.2. Persistence and degradability

Ready biodegradability	- globular proteins are generally well biodegradable	*1
	- readily biodegradable 65 % BOD/ThOD, 14 d (Manometric Respirometry Test, OECD No. 301 F)	*1
	- readily biodegradable 87 % BOD/ThOD, 14 d (Manometric Respirometry Test, OECD No. 301 F)	*2

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: Trastuzumab
2 referring to: Trastuzumab 2.4% solution with excipients

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

Australian Remark	- ADG Code: This product is not classified as a dangerous good. No special transport conditions are necessary unless required by other regulations.

SECTION 15: Regulatory information

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

Water hazard class (Germany)	1: weakly hazardous for water (own classification according to directive VwVwS of 17.05.1999)

SECTION 16: Other information

Note	- contains 2000 U/ml hyaluronidase; corresponds to 0.173 mg rHuPH20 (highest theoretical amount) - 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

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.