Safety Data Sheet

PHESGO™ (pertuzumab, trastuzumab & hyaluronidase-zzxf) Injection (60 mg/ml, 60 mg/ml)

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

1.1. Product identifier

Product name	PHESGO™ (pertuzumab, trastuzumab & hyaluronidase-zzxf) Injection (60 mg/ml, 60 mg/ml)	
Product code	RO719-8574-F04	
Roche number	RO0452317-000	*1
	RO4368451-000	*2
	RO5221651-000	*3
Synonyms	- Trastuzumab, Pertuzumab Fixed Dose Combination (60mg/ml, 60mg/ml) Maintenance Dose	
	- pertuzumab, trastuzumab & hyaluronidase Injection (60 mg/ml, 60 mg/ml)	
	- HERCEPTIN® SC (Trastuzumab)*1, PERJETA® SC (Pertuzumab)*2	
	- HER2 (human epidermal growth factor receptor 2 protein)	*1
	- rhuMAb 2C4	*2
	- 36-482-Hyaluronoglucosaminidase PH20 (human)	*3

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: Trastuzumab
2 referring to: Pertuzumab
3 referring to: Hyaluronidase (rHuPH20)

SECTION 2: Hazards identification

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	recombinant humanized monoclonal antibody	*1
	recombinant humanized monoclonal antibody	*2
	glycosylated polypeptide with 447 amino acids	*3

Ingredients	Concentration	GHS-Classification (pure ingredient)
Trastuzumab 180288-69-1	6 %	
Pertuzumab 380610-27-5	6 %	
Hyaluronidase (rHuPH20) 757971-58-7	0.003 %	
Sucrose 57-50-1	3.423 %	

1 referring to: Trastuzumab
2 referring to: Pertuzumab
3 referring to: Hyaluronidase (rHuPH20)

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 - 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

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 liquids by means of sand, earth or another suitable material - flush afterwards with plenty of water

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Suitable materials	- PVC, polyethylene, glass

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	- 2 - 8 °C - keep container tightly closed - protected from light
Packaging materials	- vials

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Threshold value (USA) air	- ACGIH-TLV: 10 mg/m3	*4
	- OSHA-PEL: 5 mg/m3 (respirable fraction)	*4
	- OSHA-PEL: 15 mg/m3 (total dust)	*4
	- NIOSH-REL: 5 mg/m3 (respirable fraction)	*4
	- NIOSH-REL: 10 mg/m3 (total dust)	*4
Threshold value (Roche) air	- IOEL (Internal Occupational Exposure Limit): 0.1 mg/m3	*1
	- IOEL (Internal Occupational Exposure Limit): 0.04 mg/m3	*2
	- IOEL (Internal Occupational Exposure Limit): 60 ng/m3	*3

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. - 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
2	referring to:	Pertuzumab
3	referring to:	Hyaluronidase (rHuPH20)
4	referring to:	Sucrose

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Color	colorless
Form	liquid
pH value	5.2 to 5.8

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

10.3. Possibility of hazardous reactions

Note	- no information available

10.4. Conditions to avoid

Note	- no information available

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
	- not bioavailable by oral administration	*1
	- not bioavailable by oral administration	*2
	- not bioavailable by oral administration	*3
Subacute toxicity	- NOAEL 250 mg/kg/w (s.c., cynomolgus monkey, 4 weeks)	*2
Subchronic toxicity	- LD_{lo} 50 mg/kg/w (i.v., cynomolgus monkey; 26 weeks)	*2
	- NOAEL 2 mg/kg/w (s.c., cynomolgus monkey; 39 weeks)	*3
Local effects	- no information available	
Sensitization	anaphylactic reactions may occur following the application of proteins; rare cases of hypersensitivity have been described	*1
	anaphylactic reactions may occur following the intravenous application of proteins; rare cases of hypersensitivity have been described with other monoclonal antibodies	*2
	with enzymes, repeated inhalation of dust or aerosols as well as direct contact may cause sensitization and allergic reactions in predisposed individuals	*3
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	-	Herceptin administration (in therapeutic doses) can result in the development of ventricular dysfunction and congestive heart failure. *1
	-	Trastuzumab is a humanized 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
Potential Health Effects	-	Exposure: Inhalation, Ingestion, Skin contact, Eye contact
	-	Carcinogenicity: not listed by NTP, IARC or OSHA

1 referring to: Trastuzumab
2 referring to: Pertuzumab
3 referring to: Hyaluronidase (rHuPH20)

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
	-	monoclonal antibodies are proteins with highly specific affinity to a certain antigen; therefore, no appreciable ecotoxic potential is to be expected *2

12.2. Persistence and degradability

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

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3	referring to:	Hyaluronidase (rHuPH20)

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

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 and to local officials. - State and local regulations vary and may impose additional reporting requirements.

SECTION 16: Other information

Note	- none
Edition documentation	- changes from previous version in sections 3, 7

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.