Safety Data Sheet

INVIRASE(R) Capsules (200 mg)

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

1.1. Product identifier

Product name		INVIRASE(R) Capsules (200 mg)
Product code		SAP-10039917
Synonyms	-	INVIRASE Capsules (hard) 200 mg

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

Use	-	pharmaceutical active substance (HIV-protease inhibitor, INVIRASE)	*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: Saquinavir mesylate

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	light brown and green, opaque hard gelatin capsules for oral administration 200 mg free base (Saquinavir) equivalent of the mesylate salt pharmaceutical active substance (HIV-protease inhibitor) *1

Ingredients	Concentration	GHS-Classification (pure ingredient)
Saquinavir mesylate 149845-06-7	45.3 %	- Combustible dust (No category), USH003 - Serious eye damage/eye irritation (Category 2A), H319
Microcrystalline cellulose 9004-34-6	11.9 %	
Talc 14807-96-6	5.5 %	
Sodium starch glycolate 9063-38-1	3.2 %	

For the full text of the H-phrases mentioned in this Section, see Section 16.

1 referring to: Saquinavir mesylate

SECTION 4: First aid measures

4.1. Description of first aid measures

Eye contact	- no special measures necessary
Skin contact	- no special measures necessary
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

Flash point (liquid)	not applicable

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 - avoid release to the environment

6.3. Methods and material for containment and cleaning up

Methods for cleaning up - take up mechanically and dispose of

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Suitable materials - glass, enamel, polyethylene *1

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions - 15 - 30 °C

Packaging materials - tightly closing

1 referring to: Saquinavir mesylate

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Threshold value (USA) air
- ACGIH-TLV: 2 mg/m3 (respirable fraction) *2
- ACGIH-TLV: (use asbestos TLV-TWA) *2
- ACGIH-TLV: (should not exceed 2mg/m3 respirable particulates) *2
- OSHA-PEL: 2 mg/m3 (respirable fraction) *2
- NIOSH-REL: 2 mg/m3 (respirable fraction) *2
- ACGIH-TLV: 10 mg/m3 *3
- OSHA-PEL: 5 mg/m3 (respirable fraction) *3
- OSHA-PEL: 15 mg/m3 (total dust) *3
- NIOSH-REL: 5 mg/m3 (respirable fraction) *3
- NIOSH-REL: 10 mg/m3 (total dust) *3
- ACGIH-TLV: 10 mg/m3 *4
- OSHA-PEL: 15 mg/m3 (total dust) *4
- OSHA-PEL: 5 mg/m3 (respirable fraction) *4
- NIOSH-REL: 10 mg/m3 (total dust) *4
- NIOSH-REL: 5 mg/m3 (respirable fraction) *4

Threshold value (Roche) air	-	IOEL (Internal Occupational Exposure Limit): 0.1 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.	
	-	respiratory protection not necessary during normal operations	
Hand protection	-	protective gloves (eg made of neoprene, nitrile or butyl rubber)	
Eye protection	-	safety glasses	
Analytics	-	sampling on glass fibre filter and gravimetric or chemical determination	*1

1	referring to:	Saquinavir mesylate
2	referring to:	Talc
3	referring to:	Sodium starch glycolate
4	referring to:	Microcrystalline cellulose

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Color	green light brown	
Form	capsules oblong	
Partition coefficient	log P_{ow} 2.12	*1
pH value	4.0 to 6.0 (1 % suspension in water)	*1
Melting temperature	241 °C (with decomposition)	*1

9.2. Other information

Note	-	no information available

1	referring to:	Saquinavir mesylate

SECTION 10: Stability and reactivity

10.1. Reactivity

Note	-	no information available

10.2. Chemical stability

Note	-	no information available

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	-	stable in normal conditions

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	-	LD_{50} > 5'000 mg/kg (oral, rat)	*1
Local effects	-	skin: non-irritant (man)	*1
	-	eye: irritant (man)	*1
Sensitization	-	not sensitizing (man)	*1
Chronic toxicity	-	low toxicity (oral, several species)	*1
Mutagenicity	-	not mutagenic (various in vivo and in vitro test systems)	*1
Carcinogenicity	-	not carcinogenic	*5
Reproductive toxicity	-	not teratogenic, not embryotoxic (several species)	*1
Note	-	inhibits HIV replication by inhibiting the viral proteinase	*1
	-	dosage: 600 mg three times daily p.o.	*1
	-	after ingestion of single doses of up to 8 g, only mild gastrointestinal effects were observed	*1
	-	half life 7 hours	*1
Potential Health Effects	-	Exposure: Inhalation, Ingestion, Skin contact, Eye contact	
	-	Carcinogenicity: formulation not listed by NTP, IARC or OSHA	
	-	Carcinogenicity: IARC Gr3 not classifiable	*2

1 referring to: Saquinavir mesylate
2 referring to: Talc
5 referring to: Saquinavir mesylate milled (NS)

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

- acute ecotoxicity (algae, planktonic crustaceans, fish) was not observed at the maximum solubility in water *1
- barely toxic for algae (nominal concentration > 100 mg/l), test performed with water accommodated fractions, progressive decline of dissolved concentration over the test duration (Desmodesmus (=Scenedesmus) subspicatus)
  EC_{50} (72 h) > 400 mg/l (nominal concentration)
  EyC_{50} (72 h) > 37 mg/l (measured initial concentration)
  NOEC (72 h) 25.3 mg/l (average measured concentration)
  (OECD No. 201) *1
- barely toxic for bluegreen algae (nominal concentration > 100 mg/l), test performed using solubilisers (Anabaena flos-aquae)
  LOEC (72 h) 312 mg/l (highest tested concentration)
  NOEC (72 h) 156 mg/l (nominal concentration)
  (FDA Technical Assistance Document No. 4.02) *1
- barely toxic for planktonic crustaceans (nominal concentration = 100 mg/l), test performed using solubilisers (Daphnia magna)
  EC_{50} (48 h) > 100 mg/l (nominal concentration)
  NOEC (48 h) 36 mg/l
  (FDA Technical Assistance Document No. 4.08) *1
- barely toxic for fish (rainbow trout)
  LC_{50} (96 h) > 50 mg/l (nominal concentration)
  NOEC (96 h) 38.8 mg/l (average measured concentration)
  (FDA Technical Assistance Document No. 4.11) *1
- barely toxic for microorganisms (nominal concentration > 100 mg/l), test performed using solubilisers (bacteria, fungi, cyanobacteria in pure culture)
  NOEC (48 h) 156 mg/l (nominal concentration)
  (FDA Technical Assistance Document No. 4.02) *1
- moderately toxic for microorganisms (activated sludge)
  EC_{50} (3 h) > 59 mg/l (highest tested concentration)
  NOEC (3 h) 29.5 mg/l
  (Activated Sludge Respir. Inhib. Test, OECD No. 209) *1
- barely toxic for earthworms (Lumbricus terrestris)
  LC_{50} (28 d) > 882 mg/kg, limit dose
  LOEC (28 d) 686 mg/kg (average measured concentration)
  (FDA Technical Assistance Document No. 4.12) *1

12.2. Persistence and degradability

Ready biodegradability

- not readily biodegradable
  4 %, 28 days
  (CO_2 Evolution Test, Modified Sturm Test, OECD No. 301B) *1

12.3. Bioaccumulative potential

Note

- no information available

12.4. Mobility in soil

Mobility	-	low mobility (Soil-Water, 23 °C) K_{OC} = 10692 (silty loam) K_{OC} = 22919 (clay loam) K_{OC} = 13711 (loam) (FDA Technical Assistance Document No. 3.08) *1

12.5. Results of PBT and vPvB assessment

Note	-	no information available

12.6. Other adverse effects

Note	-	no information available

1 referring to: Saquinavir mesylate

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues	-	return to supplier or hand over to authorized disposal company - observe local/national regulations regarding waste disposal - incinerate in qualified installation with flue gas scrubbing - DO NOT FLUSH unused medications or POUR them down a sink or drain. If available in your area, use takeback programs run by household hazardous waste collection programs or community pharmacies to dispose of unused and expired medicines. If you don't have access to a takeback program, dispose of these medicines in the household trash by removing them from their original containers and mixing them with an undesirable substance, such as used coffee grounds or kitty litter.

SECTION 14: Transport information

Note	-	not classified by transport 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

Full text of H-Statements referred to under section 3

H319	Causes serious eye irritation.
USH003	May form combustible dust concentrations in the air

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, 3, 13, 16

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.