

Safety Data Sheet

INVIRASE(R) F. C. Tablets (500 mg)

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

1.1. Product identifier

Product name INVIRASE(R) F. C. Tablets (500 mg)
 Product code 10064943
 Synonyms - INVIRASE Film Coated Tablets
 - INVIRASE F.C. Tablets

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

Use - pharmaceutical active substance (HIV-protease inhibitor) *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:
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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 further information available

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SECTION 3: Composition/information on ingredients

Characterization Saquinavir mesylate and other inactive ingredients

Ingredients	Concentration	GHS-Classification (pure ingredient)
Saquinavir mesylate 149845-06-7	~ 71 %	- Combustible dust (No category), USH003 - Serious eye damage/eye irritation (Category 2A), H319
Microcrystalline cellulose 9004-34-6	~ 12 %	
Croscarmellose sodium 74811-65-7	~ 6 %	

For the full text of the 'Hazard statements' mentioned in this Section, see Section 16.

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 - consult a physician
Skin contact	- remove immediately contaminated clothes, wash affected skin with plenty of water
Inhalation	- remove the casualty to fresh air and keep him/her calm - 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	- water spray jet, dry powder, foam, carbon dioxide, adapt extinguishing media to surrounding fire conditions
Flash point (liquid)	not applicable

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5.2. Special hazards arising from the substance or mixture

Specific hazards - Toxic emissions may be given off in a fire

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 - 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

Technical measures - avoid formation and deposition of dust

Suitable materials - high density polyethylene (HDPE)

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions - below 30 °C
- protected from light and humidity

Validity - see expiry date on the label

Packaging materials - tightly closing
- high density polyethylene (HDPE) bottles with a child-resistant polypropylene screw cap
- polyethylene bag in metal drum

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Threshold value (USA) air - ACGIH-TLV: 10 mg/m³

*2

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- OSHA-PEL: 5 mg/m³ (respirable dust fraction) *2
- OSHA-PEL: 15 mg/m³ (total dust) *2
- NIOSH-REL: 5 mg/m³ (respirable dust fraction) *2
- NIOSH-REL: 10 mg/m³ (total dust) *2
- ACGIH-TLV: 10 mg/m³ (inhalable particulate) *3
- ACGIH-TLV: 3 mg/m³ (respirable particulate) *3
- OSHA-PEL: 5 mg/m³ (respirable dust) *3
- OSHA-PEL: 15 mg/m³ (total dust) *3

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
- in case of open handling or accidental release:
particle mask or respirator with independent air supply

Hand protection - protective gloves (eg made of neoprene, nitrile or butyl rubber)

Eye protection - safety glasses

- *1 referring to: Saquinavir mesylate
- *2 referring to: Microcrystalline cellulose
- *3 referring to: Croscarmellose sodium

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Color	light orange to brownish-orange	
Form	oval, cylindrical and biconvex tablet	
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

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SECTION 10: Stability and reactivity

10.1. Reactivity

Note - no information available

10.2. Chemical stability

Stability - stable under the conditions mentioned in chapter 7

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	- LD ₅₀ > 5'000 mg/kg (oral, rat)	*1
	- LD ₅₀ > 5'000 mg/kg (oral, mouse)	*1
	- LD ₅₀ > 2'000 mg/kg (oral, marmoset)	*1
Chronic toxicity	- low toxicity (oral, several species)	*1
Local effects	- skin: non-irritant (man)	*1
	- eye: irritant (man)	*1
	- skin: non-irritant (rabbit)	*1
	- mucous membranes: irritant (man)	*1
Sensitization	- not sensitizing (man)	*1
Mutagenicity	- not mutagenic (various in vivo and in vitro test systems)	*1
Carcinogenicity	- not carcinogenic	*4
Reproductive toxicity	- not teratogenic, not embryotoxic (several species)	*1
STOT-single exposure	- no information available	

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STOT-repeated exposure	- no information available	
Aspiration hazard	- no information available	
Note	<ul style="list-style-type: none">- 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- bioavailability 4% (poor absorption, pronounced first pass effect) *1- metabolism and excretion via liver/faeces *1- plasma concentrations after a single dose of 600 mg: 3-35 ng/ml *1- side effects at full therapeutic dose: only mild gastrointestinal disturbances *1	
Potential Health Effects	<ul style="list-style-type: none">- Exposure: Ingestion- Carcinogenicity: not listed by NTP, IARC or OSHA	
*1 referring to:	Saquinavir mesylate	
*4 referring to:	Saquinavir mesylate milled (NS)	

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity	<ul style="list-style-type: none">- 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) EC₅₀ (72 h) > 400 mg/l (nominal concentration) EyC₅₀ (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) EC₅₀ (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) LC₅₀ (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	
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- 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)
EC₅₀ (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*)
LC₅₀ (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
(CO₂ Evolution Test, Modified Sturm Test, OECD No. 301B) *1

12.3. Bioaccumulative potential

- Bioconcentration - no tendency for bioaccumulation *1

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
- Air pollution - observe local/national regulations *1

*1 referring to: Saquinavir mesylate

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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 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

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, 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.