Safety Data Sheet

BONIVA(R) F. C. Tablets (150 mg)

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

1.1. Product identifier

Product name	BONIVA(R) F. C. Tablets (150 mg)
Product code	SAP-10069261
Synonyms	- BONVIVA Film Coated Tablets - BONVIVA F.C. Tablets

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

Use	- pharmaceutical active substance (postmenopausal osteoporosis) *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: Ibandronate

SECTION 2: Hazards identification

Classification of the substance or mixture / Label elements

GHS Classification

Health Hazards:

3.9 Specific target organ toxicity - Repeated exposure (Category 2)

H373 May cause damage to organs through prolonged or repeated exposure.

Signalword: Warning

Label:

Precautionary statements:
- P273 Avoid release to the environment.
- P314 Get medical advice/attention if you feel unwell.

Other hazards

Note - no information available

SECTION 3: Composition/information on ingredients

Characterization: Ibandronate and other inactive ingredients

Ingredients	**Concentration**	**GHS-Classification (pure ingredient)**
Ibandronate 138926-19-9	36.3 %	- Combustible dust (No category), USH003 - Acute toxicity (Category 4), H302 - Skin corrosion/irritation (Category 1B), H314 - Specific target organ toxicity - Repeated exposure (Category 2), H373
Microcrystalline cellulose 9004-34-6	12.9 %	
Stearic acid purified fine grade 57-11-4	2 %	
Silicon dioxide colloidal (Aerosil 200, silica) 7631-86-9	1 %	

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 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

5.2. Special hazards arising from the substance or mixture

Specific hazards	- formation of toxic and corrosive combustion gases (nitrous oxides, phosphorous oxides) possible - consider dust explosion hazard - consider danger for the environment: dike spilled liquid

5.3. Advice for firefighters

Protection of fire-fighters	- precipitate gases/vapours/mists with water spray
Special method of fire-fighting	- for reasons of environmental protection hold the extinguishing agent back

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 - if the substance reaches waters or the sewer system, inform the competent authority

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 - provide suitable exhaust ventilation at the processing machines
Suitable materials	- glass, enamel, polyethylene, stainless steel

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	- protected from heat and light - protected from humidity

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Threshold value (USA) air	- ACGIH-TLV: 10 mg/m3	*2
	- OSHA-PEL: 15 mg/m3 (total dust)	*2
	- OSHA-PEL: 5 mg/m3 (respirable fraction)	*2
	- NIOSH-REL: 10 mg/m3 (total dust)	*2
	- NIOSH-REL: 5 mg/m3 (respirable fraction)	*2
	- ACGIH-TLV: 3 mg/m3 (respirable fraction)	*3
	- ACGIH-TLV: 10 mg/m3 (inhalable fraction)	*3
	- OSHA-PEL: 6 mg/m3	*3
	- NIOSH-REL: 6 mg/m3	*3
Threshold value (Roche) air	- IOEL (Internal Occupational Exposure Limit): 0.002 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 - 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:	Ibandronate
2	referring to:	Microcrystalline cellulose
3	referring to:	Silicon dioxide colloidal (Aerosil 200, silica)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Color	white to cream-colored	
Form	oblong biconvex tablets	
Odor	odourless	
Solubility	103’100 mg/l, water (20 °C)	*1
Melting temperature	165 to 175 °C (with decomposition)	*1

9.2. Other information

Note	-	no information available

1	referring to:	Ibandronate

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} 811 mg/kg (oral, rat)	*1
Local effects	-	skin, eyes, mucous membranes: corrosive	*1
Sensitization	-	non-sensitizing (guinea pig)	*1
Mutagenicity	-	not mutagenic (various in vivo and in vitro test systems)	*1
Carcinogenicity	-	not carcinogenic (several species)	*1
Reproductive toxicity	-	not teratogenic, not embryotoxic (several species)	*1
	-	does not lower parental fertility (several species)	*1
STOT-single exposure	-	no information available	
STOT-repeated exposure	-	no information available	
Aspiration hazard	-	no information available	
Note	-	inhibits mechanisms reducing bone mass by long-term binding to bone tissue	*1
	-	high doses cause: liver damages, kidney damages	*1
	-	decrease in serum calcium level possible	*1
	-	dosage (oral): 2.5 to 50 mg/d	*1
	-	dosage (i.v.): 0.5 mg/3 months to 2.5 mg/day	*1
Potential Health Effects	-	Exposure: Ingestion	
	-	Carcinogenicity: formulation not listed by NTP, IARC or OSHA	
	-	Carcinogenicity: IARC Gr3 not classifiable	*3
Additional Health Information	-	Conditions Aggravated: Hypersensitivity to this material and other materials in its chemical class. Uncorrected hypocalcemia. Severe renal impairment.	

1	referring to:	Ibandronate
3	referring to:	Silicon dioxide colloidal (Aerosil 200, silica)

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

- strongly toxic for algae (Selenastrum capricornutum)
  EbC_{50} (72 h) 1.4 mg/l
  ErC_{50} (72 h) 4.7 mg/l
  NOEC (72 h) 0.22 mg/l
  (OECD No. 201) *1
- highly toxic for algae (Scenedesmus (=Desmodesmus) subspicatus)
  EbC_{50} (72 h) 0.218 mg/l (nominal concentration)
  ErC_{50} (72 h) 0.390 mg/l (nominal concentration)
  NOEC (72 h) < 0.1 mg/l (nominal concentration)
  (OECD No. 201) *1
- barely toxic for planktonic crustaceans (Daphnia magna)
  NOEC (48 h) 100 mg/l
  EC_{50} (48 h) > 180 mg/l
  (OECD No. 202) *1
- no adverse influence on substrate biodegradation (activated sludge)
  concentration (28 d) 41.5 mg/l
  (OECD No. 301B, Modified Sturm Test) *1
- barely inhibitory on aerobic bacterial reproduction (activated sludge)
  NOEC (5 h) 1300 mg/l
  (growth test) *1
- barely toxic for fish (carp)
  LC_{50} (96 h) 200 mg/l
  LC_0 (96 h) 86 mg/l
  (OECD No. 203) *1
- highly toxic for algae (Scenedesmus (=Desmodesmus) subspicatus)
  EC_{50} (14 d) 0.5 mg/l (nominal concentration)
  NOEC (14 d) 0.1 mg/l (nominal concentration)
  (OECD No. 201) *1
- no adverse influence on substrate biodegradation
  concentration (28 d) 100 mg/l
  (Manometric Respirometry Test, OECD No. 301 F) *1

12.2. Persistence and degradability

Ready biodegradability

- not readily biodegradable
  ≤ 3 %, 28 d
  (CO_2 Evolution Test, Modified Sturm Test, OECD No. 301B) *1
- not readily biodegradable
  0 %, 28 d
  (Manometric Respirometry Test, OECD No. 301 F) *1

Inherent biodegradability

- not inherently biodegradable
  < 10 %, 1 d
  < 10 %, 15 d
  < 10 %, 28 d
  (Zahn-Wellens test, OECD No. 302 B) *1
- not inherently biodegradable
  < 10 %, 28 d
  (Zahn-Wellens test, OECD No. 302 B) *1

Abiotic degradation	-	stable in water, no photodegradation 200 mg/l, water < 2 %, 14 d, ~ 22 °C, under illumination *1

12.3. Bioaccumulative potential

Note	-	no information available

12.4. Mobility in soil

Note	-	no information available
Mobility	-	no significant adsorption (, 28 d, ~22 °C) K_d = 1210 l/kg (activated sludge) (Adsorption to activated sludge in biodegradability test) *1

12.5. Results of PBT and vPvB assessment

Note	-	no information available

12.6. Other adverse effects

Note	-	no information available
Note	-	after the regular 28 days in the Zahn-Wellens test, without significant degradation and still 400 mg DOC/l, 200 mg DOC/l benzoate was added as a well degradable substrate; after 5 days, only 150 mg DOC/l was left, showing some cometabolic degradation *1

1 referring to: Ibandronate

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

IATA	Class	UN/ID	PG		PI	Label	Mark
	9	3077	III		956/956	9	EHS

IMDG	Class	UN	PG	EmS	PI	Label	Mark
	9	3077	III	F-A S-F	P002/IBC08	9	marine pollutant

RID/ADR	Class	UN	PG	Haz.no	PI	Label	Mark	Classif. code
	9	3077	III	90	P002/IBC08	9	EHS	M7

DOT	Class	UN/ID	PG	PI	RQ	Label	Haz.no
	9	3077	III			9	

DOT Remark: - NON-REGULATED IN NON-BULK PACKAGINGS TRANSPORTED BY MOTOR VEHICLES, RAIL CARS OR AIRCRAFT (49CFR 171.4(c)).

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Technical name: Ibandronate

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 enter a waterway or into soil, or 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

Safety-lab number:
- BS-9383 *1
- BS-9382 *1
- BS-9301 *1

Full text of H-Statements referred to under section 3

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
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

1 referring to: Ibandronate

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.