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

1.1. Product identifier

Product name ESBRIET® F.C. Tablets (267 mg)
Product code SAP-10163800
Synonyms - RO022-0912/F09

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

Use - pharmaceutical active substance *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

1.4. Emergency telephone number

Emergency telephone number US Chemtrec phone: (800)-424-9300

*1 referring to: Pirfenidone
SECTION 2: Hazards identification

Classification of the substance or mixture / Label elements

GHS Classification

Health Hazards:
- 3.1 Acute toxicity (Category 4)
  H302 Harmful if swallowed.

Signalword: Warning

Label:

Precautionary statements:
- P273 Avoid release to the environment.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.

Other hazards

Note
- no information available

SECTION 3: Composition/information on ingredients

Ingredients | Concentration | GHS-Classification (pure ingredient)
--- | --- | ---
Pirfenidone 53179-13-8 | 81.2 % | - Combustible dust (No category), USH003
 |  | - Acute toxicity (Category 4), H302
Microcrystalline cellulose 9004-34-6 | 6.0 % | 
Povidone K30 9003-39-8 | 4.5 % | 
Colloidal Silicon dioxide 7631-86-9 | 2.4 % | 
Croscarmellose sodium 74811-65-7 | 1.8 % | 
Polyvinyl alcohol 9002-89-5 | 1.5 % | 

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

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>- rinse with tap water for 20 minutes - open eyelids forcibly</td>
</tr>
<tr>
<td>Skin contact</td>
<td>- remove immediately contaminated clothes, wash affected skin with water and soap - do not use any solvents</td>
</tr>
<tr>
<td>Inhalation</td>
<td>- in the event of symptoms get medical treatment</td>
</tr>
<tr>
<td>Ingestion</td>
<td>- get medical treatment</td>
</tr>
</tbody>
</table>

#### 4.2. Most important symptoms and effects, both acute and delayed

| Note side effects | - possible side effects: nausea, vomiting, dizziness, rash, dyspepsia, arthralgia, inappetence |

#### 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)         | 152 °C *1 |

#### 5.2. Special hazards arising from the substance or mixture

| Specific hazards | - formation of toxic and corrosive combustion gases (nitrogen oxides (NOx)) possible |

#### 5.3. Advice for firefighters

| Protection of fire-fighters | precipitate gases/vapours/mists with water spray |

*1 referring to: Pirfenidone

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

| Personal precautions | - avoid exposure |

#### 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 - take up mechanically and dispose of

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Technical measures - no special measures necessary if stored and handled as prescribed

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions - do not store above 30°C

Validity - see "best use before" date stated on the label

Packaging materials - high density polyethylene (HDPE) bottles with a child-resistant polypropylene screw cap

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Threshold value (USA) air - ACGIH-TLV: 10 mg/m³ (inhalable particulate) *2
- ACGIH-TLV: 3 mg/m³ (respirable particulate) *2
- OSHA-PEL: 5 mg/m³ (respirable dust) *2
- OSHA-PEL: 15 mg/m³ (total dust) *2
- ACGIH-TLV: 10.0 mg/m³ (total dust) *3
- OSHA-PEL: 6.00 mg/m³ (total dust) *3
- ACGIH-TLV: 10 mg/m³ *4
- OSHA-PEL: 5 mg/m³ (respirable dust fraction) *4
- OSHA-PEL: 15 mg/m³ (total dust) *4
- NIOSH-REL: 5 mg/m³ (respirable dust fraction) *4
- NIOSH-REL: 10 mg/m³ (total dust) *4

Threshold value (Roche) air - IOEL (Internal Occupational Exposure Limit): 2 mg/m³ *1

PNEC - 1.06 mg/l, surface waters
- 9.4 mg/l, ground water *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)
ESBRIET® F.C. Tablets (267 mg)

Eye protection - safety glasses

*1 referring to: Pirfenidone
*2 referring to: Croscarmellose sodium
*3 referring to: Silicon dioxide [SiO2]
*4 referring to: Microcrystalline cellulose

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Color yellowish white to pale yellow
Form oval, biconvex tablet
Solubility 18'200 mg/l, water (pH 3.9)  |
17'900 mg/l, water (pH 8.7)  |
Partition coefficient log P<sub>ow</sub> 0.9 (octanol/water)
Melting temperature 106 to 112 °C

9.2. Other information

Note - no information available

*1 referring to: Pirfenidone

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

Conditions to avoid - temperatures above 30 °C
- light
- humidity
### 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**
- $LD_{50}$ 1'295 mg/kg (oral, rat) $^1$
- $LD_{50}$ 580 mg/kg (oral, mouse) $^1$

**Local effects**
- no irritating effect known (skin) $^1$
- no irritating effect known (eye) $^1$

**Sensitization**
- no information available

**Mutagenicity**
- no information available

**Carcinogenicity**
- no information available

**Reproductive toxicity**
- no indication for teratogenicity $^1$
- no indication for adverse effects on fertility $^1$

**STOT-single exposure**
- no information available

**STOT-repeated exposure**
- no information available

**Aspiration hazard**
- no information available

**Note**
- possible side effects: nausea, rash, dizziness, dyspepsia, vomiting, inappetence, arthralgia $^1$

**Potential Health Effects**
- Exposure: Inhalation, Ingestion, Skin contact, Eye contact
  - Carcinogenicity: not listed by NTP, IARC or OSHA
  - Carcinogenicity: IARC Gr3 not classifiable $^3$

$^1$ referring to: Pirfenidone

$^3$ referring to: Silicon dioxide [SiO2]
12.1. Toxicity

Ecotoxicity - moderately toxic for algae (Pseudokirchneriella subcapitata)
  \( \text{ErC}_{50} \) (72 h) 67.1 mg/l
  \( \text{EbC}_{50} \) (72 h) 44.0 mg/l
  NOEC (72 h) 18.3 mg/l
  (OECD No. 201) \(^1\)

- daphnid reproduction test (Daphnia magna)
  NOEC (21 d) 94 mg/l (average measured concentration)
  (OECD No. 211 (semi-static)) \(^1\)

- fish early life stage test (fathead minnow)
  NOEC (28 d) 10.6 mg/l (average measured concentration)
  (OECD No. 210) \(^1\)

- barely inhibitory on aerobic bacterial respiration (activated sludge)
  NOEC (3 h) 100 mg/l
  \( \text{EC}_{20} \) (3 h) 578 mg/l
  (Activated Sludge Respir. Inhib. Test, OECD No. 209) \(^1\)

12.2. Persistence and degradability

Ready biodegradability - not readily biodegradable
  9 %, 29 d
  (CO₂ Evolution Test, Modified Sturm Test, OECD No. 301B) \(^1\)

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

PBT/vPvB - not PBT, not vPvB \(^1\)

12.6. Other adverse effects

Note - no information available

\(^1\) referring to: Pirfenidone
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

Safety-lab number
- BS10571

Full text of H-Statements referred to under section 3
H302 Harmful if swallowed.
USH003 May form combustible dust concentrations in the air

Edition documentation
- first edition

*1 referring to: Pirfenidone

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.