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

1.1. Product identifier

Product name: CellCept(R) Lyophilized Vials (500 mg)
Product code: SAP-10051336
Synonyms: - CELLCEPT(R) Vials (500 mg)
- Mycophenolate mofetil (87%) plus excipients

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

Use: - pharmaceutical active substance (immunosuppressant)

1.3. Details of the supplier of the safety data sheet

Company information:
Genentech, Inc.
1 DNA Way
South San Francisco
USA-CA 94080
United States of America

Enquiries:
info.sds@roche.com

Local representation:

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
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.

3.5 Germ cell mutagenicity (Category 2)
   H341 Suspected of causing genetic defects.

3.7 Reproductive toxicity (Category 1B)
   H360D May damage the unborn child.

3.9 Specific target organ toxicity - Repeated exposure (Category 1)
   H372 Causes damage to organs through prolonged or repeated exposure.

Signalword: Danger

Label:

Precautionary statements:
- P201 Obtain special instructions before use.
- P273 Avoid release to the environment.
- P281 Use personal protective equipment as required.
- P309 + P311 IF exposed or you feel unwell: Call a POISON CENTER or doctor/physician.

Other hazards

Note
- no information available

SECTION 3: Composition/information on ingredients

Characterization
MycopHENolate mofetil and other ingredients

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Concentration</th>
<th>GHS-Classification (pure ingredient)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mycophenolate mofetil</td>
<td>87 %</td>
<td>- Combustible dust (No category), USH003</td>
</tr>
<tr>
<td>128794-94-5</td>
<td></td>
<td>- Acute toxicity (Category 4), H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Germ cell mutagenicity (Category 2), H341</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Reproductive toxicity (Category 1B), H360D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Specific target organ toxicity - Repeated exposure (Category 1), H372</td>
</tr>
</tbody>
</table>

*For the full text of the H-phrases 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 10 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
- 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
- after accidental exposure women should get medical advice from a physician

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
- water spray jet, dry powder, foam, carbon dioxide

Flash point (liquid)
not applicable

5.2. Special hazards arising from the substance or mixture

Specific hazards
- consider dust explosion hazard
- consider danger for the environment: dike spilled liquid
- 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

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  - if the substance reaches waters or the sewer system, inform the competent authority  
- dilute the leaked substance by a water spray jet as far as necessary in order to minimize the hazard; hold the draining water/mixture of substances back by all means available

### 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  
- collect spilled solutions with inert adsorbent and hand over to waste removal

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Technical measures  - processing in closed systems, if possible superposed by inert gas (e.g. nitrogen)  
- local exhaust ventilation necessary  
- avoid dust formation; consider dust explosion hazard  
- take precautionary measures against electrostatic charging

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions  - room temperature  
Validity  - see expiry date on the label

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Threshold value (Roche) air  - IOEL (Internal Occupational Exposure Limit): 0.01 mg/m³

#### 8.2. Exposure controls

General protective and hygiene measures  - instruction of employees mandatory

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

Hand protection  - protective gloves (neoprene, nitrile or butyl rubber)
CellCept(R) Lyophilized Vials (500 mg)

Eye protection - safety glasses
Body protection - protective clothing
Analytics - sampling on glass fibre filter, desorption with methanol; basify with NaOH, heat; neutralize with HCl, HPLC analysis

*1 referring to: Mycophenolate mofetil

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Color white to off-white
Form powder
Solubility ≤ 22 mg/l, water (~ 22 °C, pH 6.3, HPLC, 24 h)  
≤ 36 mg/l, aquatic ecotoxicity media (~ 22 °C, HPLC, 24 h)  
Partition coefficient log P_{ow} 1.45 (n-octanol/water) pH 7.4
Melting temperature 93 to 99 °C

9.2. Other information

Note - no information available

*1 referring to: Mycophenolate mofetil

SECTION 10: Stability and reactivity

10.1. Reactivity

Note - no information available

10.2. Chemical stability

Stability - stable under normal conditions

10.3. Possibility of hazardous reactions

Note - no information available

10.4. Conditions to avoid

Note - no information available

10.5. Incompatible materials

Materials to avoid - strong oxidizing agents

*1 Mycophenolate mofetil
### 10.6. Hazardous decomposition products

Note - no information available

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>( \text{LD}_{50} ) 353 mg/kg (oral, rat); females, &quot;trimmed Spearman-Karber method&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \text{LD}_{50} ) 500 mg/kg (oral, rat); males, &quot;trimmed Spearman-Karber method&quot;</td>
</tr>
<tr>
<td></td>
<td>( \text{LD}_0 ) 250 mg/kg (oral, rat)</td>
</tr>
<tr>
<td></td>
<td>( \text{LD}_{50} &gt; 4,000 ) mg/kg (oral, mouse)</td>
</tr>
<tr>
<td>Local effects</td>
<td>skin: non-irritant</td>
</tr>
<tr>
<td></td>
<td>eye: non-irritant</td>
</tr>
<tr>
<td>Sensitization</td>
<td>non-sensitizing</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>mutagenic (OECD No. 474 (Micronucleus Test)); threshold dose response</td>
</tr>
<tr>
<td></td>
<td>mutagenic (mouse lymphoma cell mutation test; OECD No. 476 (Mammalian Cell Gene Mutation Test))</td>
</tr>
<tr>
<td></td>
<td>does not induce chromosomal aberrations in vitro (OECD No. 473 (Mammalian Cytogenic Test))</td>
</tr>
<tr>
<td></td>
<td>not mutagenic (Ames test)</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>not carcinogenic (several species)</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>teratogenic (several species)</td>
</tr>
<tr>
<td>Note</td>
<td>immunosuppressive agent</td>
</tr>
<tr>
<td></td>
<td>average therapeutic dose 1 g twice daily</td>
</tr>
<tr>
<td></td>
<td>elimination half-life: 16-18 h</td>
</tr>
<tr>
<td></td>
<td>adverse effects at therapeutic dose: diarrhea, drop in white blood cell count, susceptibility to infections, vomiting</td>
</tr>
<tr>
<td></td>
<td>high doses may irritate the digestive tract</td>
</tr>
<tr>
<td></td>
<td>excretion predominantly renal</td>
</tr>
</tbody>
</table>

**Potential Health Effects**

- Exposure: Inhalation, Ingestion, Skin contact, Eye contact
- Carcinogenicity: not listed by NTP, IARC or OSHA

*1 referring to: Mycophenolate mofetil
*2 referring to: Mycophenolic acid
SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity
- barely toxic for planktonic crustaceans (nominal concentration = 100 mg/l), test performed with water accommodated fractions (Daphnia magna)
  $\text{EC}_{50}$ (48 h) > 100 mg/l (nominal concentration)
  NOEC (48 h) 27.7 mg/l (average measured concentration)
  (OECD No. 202)  
- highly toxic for algae (Scenedesmus (=Desmodesmus) subspicatus)
  $\text{ErC}_{50}$ (72 h) 0.6 mg/l (average measured concentration)
  $\text{EbC}_{50}$ (72 h) 0.2 mg/l (average measured concentration)
  NOEC (72 h) 0.1 mg/l (nominal concentration)
  (OECD No. 201)  
- adaptation/recovery of organisms upon prolongation of test duration (Scenedesmus (=Desmodesmus) subspicatus)
  LOEC (14 d) 1.6 mg/l (nominal concentration)
  (OECD No. 201, prolonged)  
- acute fish toxicity in a limit test is lower than daphnid or algal toxicity, hence not relevant for classification (guppy)
  NOEC (96 h) 1.7 mg/l (highest tested concentration)
  (OECD No. 203)  
- no adverse influence on substrate biodegradation (activated sludge)
  concentration (14 d) 100 mg/l (nominal concentration)
  (Manometric Respirometry Test, OECD No. 301 F)

12.2. Persistence and degradability

Ready biodegradability
- not readily biodegradable
  ~ 14 %, 64 d
  (FDA Technical Assistance Document No. 3.11)  
- not readily biodegradable
  primary degradation evidenced by HPLC
  < 6 %, 28 d
  (Manometric Respirometry Test, OECD No. 301 F)

Inherent biodegradability
- evidence for medium-term biodegradation in surface waters
  (analogous to OECD 308, Transformation in natural water/sediment systems)

Abiotic degradation
- rapid degradation, photodegradation, hydrolysis 22.3 mg/l, water; HPLC
  ~ 37 %, 120 h, ~ 22 °C, dark
  ~ 67 %, 120 h, ~ 22 °C, under illumination

12.3. Bioaccumulative potential

Note
- no information available

12.4. Mobility in soil

Note
- no information available
CellCept(R) Lyophilized Vials (500 mg)

12.5. Results of PBT and vPvB assessment

Note - no information available

12.6. Other adverse effects

Note - no information available

*1 referring to: Mycophenolate mofetil

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues - observe local/national regulations regarding waste disposal
- incinerate in qualified installation with flue gas scrubbing

SECTION 14: Transport information

<table>
<thead>
<tr>
<th>IATA</th>
<th>Class</th>
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<th>PG</th>
<th>PI</th>
<th>Label</th>
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<tr>
<td>9</td>
<td>3077</td>
<td>III</td>
<td>956/956</td>
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<td>EHS</td>
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<table>
<thead>
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<tbody>
<tr>
<td>9</td>
<td>3077</td>
<td>III</td>
<td>F-A S-F</td>
<td>P002/IBC08</td>
<td>9</td>
<td>marine pollutant</td>
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<table>
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<th>RID/ADR</th>
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<th>PG</th>
<th>Haz.no</th>
<th>PI</th>
<th>Label</th>
<th>Mark</th>
<th>Classif. code</th>
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<tbody>
<tr>
<td>9</td>
<td>3077</td>
<td>III</td>
<td>90</td>
<td>P002/IBC08</td>
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<td>EHS</td>
<td>M7</td>
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<table>
<thead>
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<th>RQ</th>
<th>Label</th>
<th>Haz.no</th>
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</thead>
<tbody>
<tr>
<td>9</td>
<td>3077</td>
<td>III</td>
<td>956/956</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 Mycophenolate mofetil
### SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

<table>
<thead>
<tr>
<th>TSCA Status</th>
<th>FDA Exemption - not on inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting Requirements</td>
<td>The United States Environmental Protection Agency (USEPA) has not established a Reportable Quantity (RQ) for releases of this material.</td>
</tr>
<tr>
<td></td>
<td>- 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.</td>
</tr>
<tr>
<td></td>
<td>- State and local regulations vary and may impose additional reporting requirements.</td>
</tr>
</tbody>
</table>

### SECTION 16: Other information

Full text of H-Statements referred to under section 3

<table>
<thead>
<tr>
<th>H302</th>
<th>Harmful if swallowed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>H341</td>
<td>Suspected of causing genetic defects.</td>
</tr>
<tr>
<td>H360D</td>
<td>May damage the unborn child.</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>USH003</td>
<td>May form combustible dust concentrations in the air</td>
</tr>
</tbody>
</table>

**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, 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.