1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE
COMPANY/UNDERTAKING

Identification

Product name: Dequest® FS 0536

Reference Number 00000008962 Date 14.02.2006

Type of product Preparation

Use of the substance or preparation

Cleaning Agent

Company/Undertaking Identification

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Emergency telephone

+32(0)3.568 5123 (Belgium)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Composition

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>EC Classification</th>
<th>% w/w</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylenetriamine penta(methylene phosphonic acid)</td>
<td>15827-60-8</td>
<td>239-931-4</td>
<td>Xi, R41</td>
<td>&gt;=20,0 - &lt;=26,0 %</td>
</tr>
<tr>
<td>&quot; phosphonic acid compound</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hydrogen chloride</td>
<td>7647-01-0</td>
<td>231-595-7</td>
<td>Xi, R36/38</td>
<td>&gt;=20,0 - &lt;=26,0 %</td>
</tr>
<tr>
<td>phosphonic acid</td>
<td>13598-36-2</td>
<td>237-066-7</td>
<td>C, Xi, R34, R37</td>
<td>&gt;=5,0 - &lt;=10,0 %</td>
</tr>
<tr>
<td>water</td>
<td>7732-18-5</td>
<td>231-791-2</td>
<td>C, Xn, R22, R35</td>
<td>&lt;4,0 %</td>
</tr>
</tbody>
</table>

Phosphonate component expressed as active acid.

¹ The specific chemical identity and/or concentration is being withheld because it is trade secret information of Solutia Inc.

See Section 16 for full text of R-phrases

3. HAZARDS IDENTIFICATION

Classification of the substance/preparation

EU Dangerous Preparations Directive 1999/45/EC.

Xi; R41
Xi; R38

Index Number (Annex I):

**Human health effects**

Risk of serious damage to eyes.
Irritating to skin.

**Environmental effects**

On the basis of available information, this material is not expected to produce any significant adverse environmental effects when recommended use instructions are followed.

**Other effects**

Attacks many metals.

### 4. FIRST AID MEASURES

**General**

Take off immediately all contaminated clothing.
Grossly contaminated clothing:
Wash before re-use.

**Eye contact**

Rinse immediately with plenty of water.
Continue for at least 15 minutes.
Obtain medical attention from an eye specialist.

**Skin contact**

Wash immediately with plenty of water.
Continue for at least 15 minutes.
Obtain medical advice.
Remove contaminated clothing.

**Inhalation**

Remove patient to fresh air.
Obtain medical advice.

**Ingestion**

Give water to drink.
Obtain medical attention immediately.

### 5. FIRE FIGHTING MEASURES

**Extinguishing media**

Water spray, foam, dry chemical, or carbon dioxide

**Exposure hazards**
Decomposes in a fire giving off irritant fumes.

Combustion products:
carbon monoxide (CO), carbon dioxide, nitrogen oxides (NOx), phosphorus oxides (PxOy), phosphines

Protective equipment

Firefighters, and others exposed, wear self-contained breathing apparatus.
Equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protection recommended in section 8.

Environmental precautions

Keep out of drains and water courses.

Methods for cleaning up

Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container. Neutralize washings with soda ash or lime. Flush spill area with water.

7. HANDLING AND STORAGE

Handling

Do not get in eyes, on skin, or on clothing.
Avoid breathing vapour or mist.
Do not taste or swallow.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.

Engineering measures

Provide local exhaust ventilation.

Storage

Keep in a cool, dry, well ventilated place.
Stable under normal conditions of handling and storage.

Temperature

> -18 C

Use these materials for equipment

glass lining, PVC, polypropylene, glass reinforced plastic, polyethylene

Unsuitable materials of construction

Do not use the following materials for equipment, mild steel, carbon steel, aluminum, other metals
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit

hydrogen chloride

ACGIH TLV: 2 ml/m³ ; ceiling
EU : ILV: 5 ml/m³ ; 8 mg/m³ ; 8-hr TWA
EU : ILV: 10 ml/m³ ; 15 mg/m³ ; 15-min STEL
Austria : MAK (Maximum concentration in workplace): 5 ml/m³ ; 8 mg/m³ ; 8-hr TWA
Belgium: KORTETIJDSWAARDE / VALEUR COURTE DURÉE (15 min): 10 ml/m³ ; 15 mg/m³ ;
Belgium: GRENSWAARDE / VALEUR LIMITE (8h): 5 ml/m³ ; 8 mg/m³ ;
Cyprus - Occupational Exposure Limits: 10 ml/m³ ; 15 mg/m³ ; 15-min STEL
Cyprus - Occupational Exposure Limits: 5 ml/m³ ; 8 mg/m³ ; 8-hr TWA
Czech Republic - Occupational Exposure Limits: 15 mg/m³ ; 8-hr TWA
Czech Republic - Occupational Exposure Limits: 5 ml/m³ ; 8 mg/m³ ; 15-min STEL
Estonia - Occupational Exposure Limits: 10 ml/m³ ; 15 mg/m³ ; 15-min STEL
Estonia - Occupational Exposure Limits: 5 ml/m³ ; 8 mg/m³ ; 8-hr TWA
Finland : Työministeriö, Kemian Työsuojeluneuvottelukunta (15-minute): 5 ml/m³ ; 7 mg/m³ ;
France : VLE (Exposure limit value): 5 ml/m³ ; 7,5 mg/m³ ;
Germany : MAK (Maximum concentration in workplace): 2 ml/m³ ; 3 mg/m³ ;
Greece : Occupational Exposure Limits: 5 ml/m³ ; 7 mg/m³ ; 15-min STEL
Greece : Occupational Exposure Limits: 5 ml/m³ ; 7 mg/m³ ; 8-hr TWA
Hungary - Occupational Exposure Limits: 16 mg/m³ ; 15-min STEL
Hungary - Occupational Exposure Limits: 8 mg/m³ ; 8-hr TWA
Ireland : OEL (Occupational Exposure Limit): 10 ml/m³ ; 14 mg/m³ ; 15-min STEL
Ireland : OEL (Occupational Exposure Limit): 5 ml/m³ ; 7 mg/m³ ; 8-hr TWA
Italy : Occupational Exposure Limits (OEL): 10 ml/m³ ; 15 mg/m³ ; 15-min STEL
Italy : Occupational Exposure Limits (OEL): 5 ml/m³ ; 8 mg/m³ ; 8-hr TWA
Latvia - Occupational Exposure Limits - TWAs (AERs): 10 ml/m³ ; 15 mg/m³ ; 15-min STEL
Latvia - Occupational Exposure Limits - TWAs (AERs): 5 ml/m³ ; 8 mg/m³ ; 8-hr TWA
Malta - Occupational Exposure Limits: 5 ml/m³ ; 8 mg/m³ ; 8-hr TWA
Norway : Administrative Norms for Contaminants in the Workplace (TLV): 5 ml/m³ ; 7 mg/m³ ; ceiling
Netherlands : MAC (Maximum concentration on workplace): 5 ml/m³ ; 8 mg/m³ ;
Poland : Occupational Exposure Limits: 10 mg/m³ ; 15-min STEL
Poland : Occupational Exposure Limits: 5 mg/m³ ; 8-hr TWA
Portugal : Occupational Exposure Limits (OEL): 5 ml/m³ ; ceiling
Slovak Republic - Occupational Exposure Limits: 15 mg/m³ ; ceiling
Slovak Republic - Occupational Exposure Limits: 5 ml/m³ ; 8 mg/m³ ; 8-hr TWA
Sweden : Arbetardskyddstyrelsen Hygieniska Gränsvärden (NGV): 5 ml/m³ ; 7 mg/m³ ;
Spain : Occupational Exposure Limits (VLA-EC): 10 ml/m³ ; 15 mg/m³ ;
Spain : Occupational Exposure Limits (VLA-ED): 5 ml/m³ ; 7,6 mg/m³ ;
UK : OES (Occupational Exposure Standard): 5 ml/m³ ; 8 mg/m³ ; 15-min STEL
UK : OES (Occupational Exposure Standard): 1 ml/m³ ; 2 mg/m³ ; 8-hr TWA

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment.

**Hand protection**

Wear impermeable gloves. Suitable materials: PVC, nitrile (rubber).

**Eye protection**

Wear chemical goggles.

**Skin protection**

Wear suitable protective clothing.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**General information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>amber</td>
</tr>
<tr>
<td>Odour</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

**Important health, safety and environmental information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>0.8 @ 10 g/l @ 25 C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>110 C</td>
</tr>
<tr>
<td>Flash point</td>
<td>Non flammable aqueous solution</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.37</td>
</tr>
<tr>
<td>Water solubility</td>
<td>completely miscible</td>
</tr>
</tbody>
</table>

**Other information**

### 10. STABILITY AND REACTIVITY

**Conditions to avoid**

None known

**Materials to avoid**

Corrosive to aluminum and mild steel. Contact with strong oxidizing agents.

**Hazardous reactions**

Hazardous polymerization does not occur.

**Hazardous decomposition products**

Decomposition products: carbon monoxide (CO), carbon dioxide, nitrogen oxides (NOx), phosphorus oxides (PxOy), phosphines

### 11. TOXICOLOGICAL INFORMATION
This product has not been tested for toxicity, but data obtained on similar products are summarized below:

### Acute animal toxicity data

- **Oral**
  - LD50, rat, > 2.000 mg/kg
- **Dermal**
  - LD50, rat, > 2.000 mg/kg
- **Eye irritation**
  - rabbit, Irritating to eyes. 24 h
- **Skin irritation**
  - rabbit, Irritating to skin.

### 12. ECOLOGICAL INFORMATION

This product has not been tested for environmental toxicity, but data obtained on similar products are summarized below:

#### Environmental Toxicity

<table>
<thead>
<tr>
<th>Category</th>
<th>48 h EC50</th>
<th>Test Species</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invertebrates</td>
<td></td>
<td>Water flea (Daphnia magna)</td>
<td>&gt; 100 mg/l</td>
</tr>
<tr>
<td>Fish</td>
<td>96 h</td>
<td>Rainbow trout (Oncorhynchus mykiss)</td>
<td>&gt; 100 mg/l</td>
</tr>
<tr>
<td></td>
<td>96 h</td>
<td>Bluegill sunfish (Lepomis macrochirus)</td>
<td>&gt; 100 mg/l</td>
</tr>
<tr>
<td>Algae</td>
<td>96 h</td>
<td>Algae (Selenastrum capricornutum)</td>
<td>&gt; 10 mg/l</td>
</tr>
</tbody>
</table>

#### Environmental fate

- **Biodegradation**
  - 60 d Biodegrades slowly in the environment.
- **Bioconcentration factor (BCF)**
  - not expected to bioaccumulate.

### 13. DISPOSAL CONSIDERATIONS

#### Disposal considerations

**Incineration**

- All local and national regulations should be followed.
- Small quantities: Adjust pH between 6 and 9 and flush away with plenty of water.
- Large quantities:
  - Send to special chemical waste disposal facility.

### 14. TRANSPORT INFORMATION

#### ROAD/RAIL

- **Proper shipping name**: UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. phosphonic acid, hydrogen chloride
- **ADR/RID Class**: 8
- **Packing Group**: III
- **Hazchemcode**: 2X Kemler 80
SEA

UN Class 8  UN No. 3265

Packing Group III

AIR

ICAO/IATA Class 8

15. REGULATORY INFORMATION

EC label

EU Dangerous Preparations Directive 1999/45/EC.

Xi - Irritant

R41 - Risk of serious damage to eyes.
R38 - Irritating to skin.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 - After contact with skin, wash immediately with plenty of water.
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Contains:

Other regulation

Germany - WGK (Wassergefährdungsklasse) : 1

16. OTHER INFORMATION

Prepared by the Solutia Hazard Communication Group.

Data sheets prepared or revised since August 2002 have been completed in accordance with the European Communities Directive 2001/58.

Reason for revision: New Product

R-phrases

R41 - Risk of serious damage to eyes.
R36/38 - Irritating to eyes and skin.
R34 - Causes burns.
R37 - Irritating to respiratory system.
R22 - Harmful if swallowed.
R35 - Causes severe burns.

Number format: ",," used as decimal separator.

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