

## Safety Data Sheet

1,2,3,6-Tetrahydrophthalic anhydride solid

Version: 02.01.2007 / EN

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### 1. Identification of the substance/preparation and of the company/undertaking

Trade name : 1,2,3,6-Tetrahydrophthalic anhydride solid  
Molecular formula : C<sub>8</sub>H<sub>8</sub>O<sub>3</sub>

Street address : Polynt SpA  
Stabilimento di Ravenna  
Via Baiona 192  
IT – 48100 Ravenna, (RA)  
Telephone: ++39 0544 457 011

Emergency telephone number : Telephone: ++39 0544 457 011 (24h)

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### 2. Composition/information on ingredients

Components / EC Label	Concentration
1,2,3,6-Tetrahydrophthalic anhydride (CAS-No.: 85-43-8) (EEC-No.: 201-605-4) Xn; R41, R42/43, R52/53	> 99,5 % (*)
Maleic anhydride (CAS-No.: 108-31-6) (EEC-No.: 203-571-6) C; R22, R34, R42/43	<= 0,05 % (*)

R-phrases(s) see chapter 16

(\*) Components with workplace control parameters see chapter 8

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### 3. Hazards identification

#### Classification

Risk of serious damage to eyes.

May cause sensitization by inhalation and skin contact.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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### 4. First aid measures

Inhalation : Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration.

Skin contact : After contact with skin, wash immediately with plenty of soap and water. Consult a physician.

Eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Call a physician immediately.

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Ingestion : If accidentally swallowed obtain immediate medical attention. Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

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### 5. Fire-fighting measures

Suitable extinguishing media : dry powder, water spray, foam

Specific hazards during fire fighting : Heating or fire can release toxic gas.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

Additional advice : Use water spray to cool unopened containers.

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### 6. Accidental release measures

Personal precautions : Avoid dust formation. Use personal protective equipment.

Environmental precautions : Do not flush into surface water or sanitary sewer system.

Methods for cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.

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### 7. Handling and storage

#### Handling

Safe handling advice: : Avoid formation of respirable particles. Provide sufficient air exchange and/or exhaust in work rooms. Avoid contact with skin and eyes.

Advice on protection against fire and explosion : Avoid dust formation. Take precautionary measures against static discharges.

#### Storage

Requirements for storage areas and containers : In preference maintain the product with inert gas (nitrogen) when it's stored to the molten state. Keep in a dry, cool and well-ventilated place.

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### 8. Exposure controls / personal protection

#### Components with workplace control parameters

**1,2,3,6-Tetrahydrophthalic anhydride** (CAS-No.: 85-43-8)

US ACGIH

Remarks : no data available

**Maleic anhydride** (CAS-No. 108-31-6):

US ACGIH

Exposure limit(s) : 0,1 ml/m<sup>3</sup>  
Carcinogenicity: group A4

#### Personal protective equipment

Hygiene measures : Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing.

Respiratory protection : Avoid breathing dust.

Hand protection : Wear suitable gloves.

Eye protection : Chemical resistant goggles must be worn.

Skin and body protection : Wear suitable protective clothing and gloves.  
Wear as appropriate: dust impervious protective suit

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### 9. Physical and chemical properties

#### Appearance

State of aggregation : solid  
Colour : white  
Odour : aromatic

#### Safety data

pH : 2,1 (1 g/l)  
Melting point/range : 101,5 °C  
Boiling point/range : 195 °C  
Flash point : open cup : 157 °C  
Ignition temperature : 450 °C  
deposited dust  
Lower explosion limit : 30 g/m<sup>3</sup>  
Vapour pressure : 0,013 hPa (20 °C)  
13,3 hPa (150 °C)  
Density : 1,375 g/cm<sup>3</sup> (25 °C)  
1,147 g/cm<sup>3</sup> (140 °C)  
Water solubility : 36,2 g/l (20 °C)  
Relative vapour density : 5,25

#### Other data

Dust explosion class : Kst-value (Kmax-value) : 293 m.b./s (m.b./s = bar\*m\*s<sup>-1</sup>)  
maximum explosion pressure : max. 7,8 bar  
Minimum ignition energy : 1,4 - 1,6 mJ  
Additional advice : Rate of pressure rise:  
max. 1079 bar/s  
Specific electrical resistance:  
1.1 E+15 ohm\*cm

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### 10. Stability and reactivity

- Conditions to avoid: : no data available
- Materials to avoid : oxidizing agents, alkali metals
- Hazardous reactions : Stable under normal conditions.

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### 11. Toxicological information

- Acute oral toxicity (LD50) : 5 410 mg/kg  
Species: rat
- Human experience : This substance - coming in the form of steam, fume or powder - causes serious irritation of the mucous membranes and the respiratory organs. Accidental exposure to this substance provokes sneezing, coughing, and a burning sensation to nose and throat, with an increased secretion of the mucous membrane. Repeated or recurrent exposure may cause, in general, inflammation of the respiratory organs, ulceration of the nose tissues, haemorrhage/atrophy of the mucous membranes (reversible), loss of the olfactory faculties, hoarseness, etc.

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### 12. Ecological information

#### Further Information

- Additional advice : no data available

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### 13. Disposal considerations

- Waste from residues : Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.  
The organic ingredients can be incinerated in a suitable installation when in accordance with local regulations.
- Contaminated packaging : Where possible recycling is preferred to disposal or incineration.

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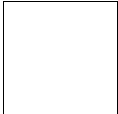
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### 14. Transport information

ADR : Not dangerous goods  
 RID : Not dangerous goods  
 IATA Cargo : Not dangerous goods  
 IATA Passenger : Not dangerous goods  
 IMDG-Code : Not dangerous goods

### 15. Regulatory information

Additional advice : Classification and labelling according to Directive 67/548/EEC, Annex I:

Symbol(s) :     
 : Harmful

R-phrase(s) R41: Risk of serious damage to eyes.  
 R42/43: May cause sensitization by inhalation and skin contact.  
 R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s) S 2: Keep out of the reach of children.  
 S22: Do not breathe dust.  
 S24: Avoid contact with skin.  
 S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S37/39: Wear suitable gloves and eye/face protection.  
 S61: Avoid release to the environment. Refer to special instructions/safety data sheets.

General advice : Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In Annex I, a general designation of the following type is sometimes used: "xylenol". In this case the manufacturer or any other person who markets such a substance must state on the label whether the substance is a specific isomer (a) or a mixture of isomers (b). Example: (a) 2,4-dimethylphenol (b) xlyenol (mixture of isomers).

#### National legislation

Water contaminating class (Germany) : WGK 1: slightly water endangering  
 Poison class (Switzerland) : GK 4

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### 16. Other information

Inventories : Australian Inventory of Chem. Subs. (AICS): y (positive listing)  
Canadian Domestic Subs. List (DSL): y (positive listing)  
China Inv. Existing Chemical Subs.: y (positive listing)  
Japanese List of Exist. and New Chem. Subs. (ENCS): y (positive listing), (3)-3435  
Inventory of Toxic Subs. Control Act (TSCA): y (positive listing)  
European Inv. of Existing Chem. Subs. (EINECS): y (positive listing), 201-605-4  
Korean Existing Chem. Inventory (KECI): y (positive listing), KE-33465  
Philippines Inventory of Chem. Subs. (PICCS): y (positive listing)  
CH INV: y (positive listing), G-6852

#### R-phrase(s)

R22 : Harmful if swallowed.  
R34 : Causes burns.  
R41 : Risk of serious damage to eyes.  
R42/43 : May cause sensitization by inhalation and skin contact.  
R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Changes since the last version will be highlighted in the margin. This version replaces all previous versions.

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