

# Safety Data Sheet

According to Regulation (EC) 1907/2006



## 3537 Tetrahydrofuran \*stabilized with ~ 300 ppm of BHT

### 1. Identification of the substance/preparation and of the company or firm

#### 1.1 Identification of the substance or preparation

Name:

Tetrahydrofuran \*stabilized with ~ 300 ppm of BHT

#### Synonym:

Diethylene Oxide, Tetramethylene Oxide, THF

**REACH Registration Number:** 01-2119444314-46-XXXX

#### 1.2 Use of the substance/preparation:

For laboratory utilisation, analysis, research and fine chemistry.

#### 1.3 Identification of the company or firm:

PANREAC QUIMICA S.L.U.

C/Garraf 2

Polígono Pla de la Bruguera

E-08211 Castellar del Vallès

(Barcelona) Spain

Tel. (+34) 937 489 400

e-mail: [product.safety@panreac.com](mailto:product.safety@panreac.com)

#### 1.4 Emergency telephone:

Single telephone number for emergency calls: 112 (EU)

Tel.: (+34) 937 489 499

### 2. Identification of dangers

Classification of the substance or the mixture.

**Classification Regulation (CE) n° 1272/2008.**

Flam. Liq. 2

Eye Irrit. 2

STOT SE 3

Carc. 2

#### Hazard Pictograms



**Signal word**

Danger

**Hazard statements**

H225 Highly flammable liquid and vapour.

EUH019 May form explosive peroxides.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

**Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents/container according to Directive 94/62/CE or 2008/98/CE.

**Classification (67/548/CEE or 1999/45/CE).**

**F** Highly flammable

**Xn** Harmful

R11

R19

R36/37

R40

For the full text of the R-phrases mentioned in this section, see section 16.

**3. Component Composition/Information**

Name: Tetrahydrofuran \*stabilized with ~ 300 ppm of BHT

Formula: C<sub>4</sub>H<sub>8</sub>O M.= 72,11 CAS [109-99-9]

EC number (EINECS): 203-726-8

EC index number: 603-025-00-0

REACH Registration Number: 01-2119444314-46-XXXX

**4. First aid****4.1 General indications:**

Never provide drink or induce vomiting in the event of loss of consciousness.

**4.2 Inhaling:**

Take the person out into the fresh air.

**4.3 Contact with the skin:**

Wash with plenty of water. Remove contaminated clothing.

#### **4.4 Eyes:**

Wash with plenty of water (for at least 15 minutes), keeping eyelids open. In the event of irritation, seek medical assistance.

#### **4.5 Swallowing:**

Drink large amounts of water. Seek medical assistance.

### **5. Fire-fighting means**

#### **5.1 Suitable fire-extinguishing means:**

Atomized water. Carbon dioxide (CO<sub>2</sub>). Foam. Dry powder.

#### **5.2 Fire-fighting means which must NOT be used:**

Running water.

#### **5.3 Special risks:**

Flammable. Keep away from sources of ignition. The fumes are heavier than air, so they may spread at floor level. May form explosive mixtures with the air.

#### **5.4 Protective equipment:**

Suitable clothing and footwear. Self-contained breathing equipment.

### **6. Measures to be taken in the event of accidental spillage**

#### **6.1 Individual precautions:**

Do not inhale the fumes. Avoid contact with the skin, eyes or clothing.

#### **6.2 Precautions for care of the environment:**

Do not allow it to enter the drainage system. Avoid pollution of the soil, water supplies and drains.

#### **6.3 Methods for collection/cleaning:**

Collect up with absorbent materials (Panreac General Absorbent, Kieselguhr, etc.) or, if none available, dry sand or earth, and deposit in waste containers for subsequent elimination in accordance with current legislation. Clean any remains with plenty of water.

### **7. Handling and storage**

#### **7.1 Handling:**

Avoid the formation of electrostatic charges. Ensure good ventilation and renewal of the air in the premises.

#### **7.2 Storage:**

Well sealed containers. In well ventilated premises. Away from light. Away from sources of ignition and heat. Room temperature.

### **8. Staff exposure/protection controls**

#### **8.1 Technical protective measures:**

Ensure good ventilation and renewal of the air in the premises. Do not inhale the fumes.

## **8.2 Exposure limit control:**

VLA-EC: 100 ppm - 300 mg/m<sup>3</sup> dermal resorption,  
VLA-ED: 50 ppm - 150 mg/m<sup>3</sup> dermal resorption,  
PNECFreshwater: , 4,32mg/l  
PNECMarine water: , 0,432mg/l  
PNECSporadic release: , 21,6mg/l  
PNECPurifying plant: , 4,6mg/l  
PNECSediment: Freshwater, 23,3mg/kg  
PNECSediment: Marine water, 2,33mg/kg  
PNECSoil: , 2,13mg/kg  
PNECOral use (secondary poisoning): , 67mg/kg  
DNELWorkers Inhalation, long term (local): 150 mg/m<sup>3</sup> ,  
DNELWorkers Inhalation, long term (systemic): 50 ppm ,  
DNELWorkers Dermal, long exposure (systemic): , 25mg/kg  
DNELPopulation Inhalation, long term (systemic): 62 mg/m<sup>3</sup> ,  
DNELPopulation, Dermal, long exposure (systemic): , 15mg/kg  
DNELPopulation Inhalation, acute (local): 150 mg/m<sup>3</sup> ,  
DNELPopulation Inhalation, acute (systemic): 150 mg/m<sup>3</sup> ,

## **8.3 Respiratory protection:**

In the event of fumes forming/aerosols, use suitable respiratory protection. Filter A. Filter P.

## **8.4 Hand protection:**

Use suitable gloves (neopren, PVC, nitrile)

## **8.5 Eye protection:**

Use suitable goggles.

## **8.6 Individual hygiene measures:**

Remove contaminated clothing. Use suitable work clothing. Wash hands and face before breaks and when the job is done.

## **8.7 Environmental exposure controls:**

Fulfill the commitments under local environmental protection legislation.

# **9. Physical and chemical properties**

Appearance: liquid

Colour: Colourless

Granulometry: N/A

Odour: Characteristic.

pH: 7,0

Melting point/freezing point: -108,5 °C

Initial boiling point and boiling range: 66 °C

Flash point: - 22 °C

Flammability (solid, gas):

N/A

Upper/lower flammability or explosive limits: 12,7 %(V) / 2,3 %(V)

Vapour pressure: 173 hPa (20 °C)

Vapour density: N/A

Relative density: (20/4) 0,889

Solubility: Miscible with water

Partition coefficient: n-octanol/water:

N/A

Auto-ignition temperature: 230 °C

Decomposition temperature: 110 °C  
Kinematic viscosity:N/A  
Dynamic viscosity:0,456 mPa.s(25 °C)

## **10. Stability and reactivity**

### **10.1 Conditions which should be avoided:**

High temperatures.

### **10.2 Matter which should be avoided:**

Oxidant agents. Alkaline hydroxides. Hydrides. Air Oxygen

### **10.3 Hazardous decomposition products:**

Peroxides.

### **10.4 Complementary information:**

Light-sensitive. Exposure to air encourages decomposition. The gases/fumes can form explosive mixtures with the air. Can form explosive peroxides.

## **11. Toxicological information**

### **11.1 Acute toxicity:**

LD50 oral rat : 1.650 mg/kg  
LD50 skn rat : > 2.000 mg/kg (OECD 402)  
LC50 inh rat : >14,7 mg/l 6h

### **11.2 Dangerous effects for health:**

Systemic effects: Irritations to the respiratory tracts. narcosis Through contact with the eyes: Serious injuries Animal testing., Not classified as toxic for reproduction., mutagenic effect., Not classified. No damage is anticipated to the foetus, provided the VLA values are respected (maximum admissible concentration in the workplace). Carcinogenic in animal testing.

## **12. Environmental information**

### **12.1 Toxicity:**

Fish LC50 2160 mg/l (96h)  
(Daphnia magna) EC50 3485 ppm (48h)  
Algae NOEC 3700 mg/l (8d)

### **12.2 Persistence and Degradability :**

Biodegradable product.

### **12.3 Bioaccumulative potential:**

Non-bioaccumulable product.  
log Kow: 0,45 (25°C)

### **12.4 Mobility in soil :**

Product has a low potential for adsorption.

### **12.5 Assessment PBT and MPMB :**

According to Annex XIII of Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): Does not meet the criteria for PBT (persistent / bioaccumulative / toxic).According to Annex XIII of Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): Does not meet the criteria vPvB (very persistent / very bioaccumulative).

### **12.6 Other possible effects on the environment:**

No interferences are to be anticipated in treatment plants if use correctly.

## **13. Considerations regarding elimination**

### **13.1 Substance or preparation:**

In the European Union, there are no homogeneous standards established for elimination of chemical waste, which is waste of a special nature, and treatment and elimination of same is subject to the domestic legislation in each country.

In view of this, in each case, you should contact the competent authority or those companies legally authorized for elimination of waste.

2001/573/EC: Council Decision of 23 July 2001 amending Commission Decision 2000/532/EC as regards the list of wastes. Council Directive 91/156/EEC of 18 March 1991 amending Directive 75/442/EEC on waste.

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### **13.2 Contaminated containers:**

Contaminated containers and packaging of dangerous substances or preparations must be treated in the same manner as the actual products contained in them.

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.

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## **14. Information concerning transport**

Overland (ADR):

Technical name: TETRAHYDROFURAN

UN 2056 Class: 3 Packaging group: II (D/E)

By sea (IMDG):

Technical name: TETRAHYDROFURAN

UN 2056 Class: 3 Packaging group: II

By air (ICAI-IATA):

Technical name: Tetrahydrofuran

UN 2056 Class: 3 Packaging group: II

Packaging instructions: CAO 364 PAX 353

## **15. Regulatory information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

## **16. Other information**

### **Other precautionary statements**

### **Labelling (65/548/CEE or 1999/45/CE)**

R-phrase(s):    **R11** Highly flammable.  
                      **R19** May form explosive peroxides.  
                      **R36/37** Irritating to eyes and respiratory system.  
                      **R40** Limited evidence of a carcinogenic effect.

S-phrase(s):    **S16** Keep away from sources of ignition - No smoking.  
                      **S29** Do not empty into drains.  
                      **S33** Take precautionary measures against static discharges.  
                      **S36/37** Wear suitable protective clothing and gloves.

Version and revision date : 5 24.9.2012

Remplaced: 29.6.2012

In respect of the previous review, changes have been made to the following sections: 2, 8

The information included in this Safety Data Sheet is based on our most up-to-date knowledge, and is solely intended to inform regarding aspects of safety; the properties and characteristics indicated herein are not guaranteed.