

**Theophylline, Reagent A**

Date 21.9.2007

Previous date: 17.3.2004

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING****1.1 Identification of the article****1.1.1 Commercial Product Name**

Theophylline, Reagent A

**1.1.2 Product code**

981649

**1.2 Use of the Substance/Preparation****1.2.1 Expressed in writing**

In vitro diagnostic reagent for the clinical chemistry analyser.

**1.3 Identification of the substance/preparation and the company/undertaking****1.3.1 Supplier**

Thermo Fisher Scientific Oy, Clinical Diagnostics Finland

**1.3.2 Contact information:**

Ratastie 2, P.O.Box 100  
FI-01621 Vantaa  
FINLAND  
+358-9-329 100  
+358-9-3291 0300  
FI09215470

**1.4 Emergency telephone number****1.4.1 Telephone number, name and address**

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**2. COMPOSITION/INFORMATION ON INGREDIENTS****2.1 Hazardous components**

<b>2.1.1</b>	<b>2.1.2</b>	<b>2.1.3</b>	<b>2.1.4</b>
<b>CAS number or other code</b>	<b>Chemical name of the substance</b>	<b>Concentration</b>	<b>Classification</b>
26628-22-8	Sodiumazide	< 1%	T+; R28;R32 N; R50/53 Very toxic, Dangerous for the environment

**2.1.7 Further information**

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**3. HAZARDS IDENTIFICATION**

Harmful by inhalation, in contact with skin and if swallowed.

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

**4. FIRST AID MEASURES****4.2 Inhalation**

If fumes from reactions are inhaled, move to fresh air immediately.

**4.3 Skin contact**

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If symptoms persist, call a physician.

**4.4 Eye contact**

Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.

**Theophylline, Reagent A**

Date 21.9.2007

Previous date: 17.3.2004

**4.5 Ingestion**

Do not induce vomiting. Drink plenty of water. Ingest activated charcoal. Call a physician immediately.

**5. FIRE-FIGHTING MEASURES****5.1 Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>), dry powder, water.

**5.3 Specific hazards**

Fire may cause produce fumes hazardous to health.

**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions**

Use personal protective equipment.

**6.2 Environmental precautions**

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**6.3 Methods for cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Flush into sewer with plenty of water.

**7. HANDLING AND STORAGE****7.1 Handling**

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**7.2 Storage**

Keep at temperatures between 2 and 8°C. Must be stored in cool place and away from acids.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****8.1 Exposure Limit Values****8.1.1 HTP values**

26628-22-8	Sodiumazide	0.1 mg/m <sup>3</sup> (8 h)	0.3 mg/m <sup>3</sup> (15 min)
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**8.2 Exposure controls****8.2.1 Occupational exposure controls**

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**8.2.1.1 Respiratory protection**

In the case of hazardous fumes, wear self contained breathing apparatus.

**8.2.1.2 Hand protection**

Protective gloves.

**8.2.1.3 Eye protection**

Goggles. Face-shield, if there is a risk of spalshing.

**8.2.1.4 Skin and body protection**

Lab coat.

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 General Information (appearance, odour)**

Orange, odourless., liquid.

**9.2 Important Health Safety and Environmental Information****9.2.1 pH**

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**9.2.2 Boiling point/range**

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**9.2.3 Flash point**

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**Theophylline, Reagent A**

Date 21.9.2007

Previous date: 17.3.2004

<b>9.2.5</b>	<b>Explosive properties</b>	
<b>9.2.5.1</b>	<b>Lower explosion limit</b>	-
<b>9.2.5.2</b>	<b>Upper explosion limit</b>	-
<b>9.2.7</b>	<b>Vapour pressure</b>	-
<b>9.2.8</b>	<b>Relative density</b>	-
<b>9.2.9</b>	<b>Solubility</b>	
<b>9.2.9.1</b>	<b>Water solubility</b>	-
<b>9.2.9.2</b>	<b>Fat solubility (solvent - oil to be specified)</b>	-
<b>9.2.10</b>	<b>Partition coefficient (n-octanol/water)</b>	-

**10. STABILITY AND REACTIVITY**

- 10.1 Conditions to avoid**  
Do not expose to temperatures above 90°C.
- 10.2 Materials to avoid**  
Metals.
- 10.3 Hazardous decomposition products**  
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**11. TOXICOLOGICAL INFORMATION**

- 11.1 Acute toxicity**  
Sodiumazide ( $\text{NaN}_3$ ):  
LD50/oral/rat = 27 mg/kg  
LD50/dermal/rabbit = 20 mg/kg  
LDLo/oral/human= 143 mg/kg  
Systemic effects: CNS disorders, cardiovascular failure, tachycardia, drop in blood pressure, coughing, dyspnea, spasms, headache, dizziness, nausea, vomiting, collapse, unconsciousness.
- 11.2 Primary irritation**  
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- 11.3 Sensitisation**  
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- 11.5 Human experience**  
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- 11.6 Other information of acute toxicity**  
Harmful by inhalation, in contact with skin and if swallowed.

**12. ECOLOGICAL INFORMATION**

- 12.1 Ecotoxicity**
- 12.1.1 Aquatic toxicity**  
Sodiumazide ( $\text{NaN}_3$ ):  
LC50/96 h/fish (*L. macrochirus*)= 0.7 mg/l  
EC50/96 h/daphnia = 4.2 mg/l  
IC50/mixed culture of green algae=272 mg/l
- 12.1.2 Toxicity to other organisms**  
Sodiumazide ( $\text{NaN}_3$ ):  
EC50/Photobacterium phosphoreum= 38.5 mg/l
- 12.2 Mobility**  
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**Theophylline, Reagent A**

Date 21.9.2007

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**12.3 Persistence and degradability****12.3.1 Biodegradation**

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**12.3.2 Chemical degradation**

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**12.4 Bioaccumulative potential**

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**13. DISPOSAL CONSIDERATIONS**

The product has to be disposed of as laboratory chemical in accordance with local regulations.

**14. TRANSPORT INFORMATION****14.3 Land transport****14.3.1 Class**

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**14.3.2 Risk No.**

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**14.3.3 Description of the goods**

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**14.3.4 Further Information**

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**14.4 Sea transport****14.4.1 IMDG**

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**14.4.2 Proper shipping name**

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**14.4.3 Further Information**

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**14.5 Air transport****14.5.1 ICAO/IATA**

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**14.5.2 Proper shipping name**

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**14.5.3 Further Information**

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**15. REGULATORY INFORMATION****15.1 Information on the warning label****EC Label**

247-852-1

**15.1.1 Letter code of the warning symbol and indications of danger for the preparation**

Xn

Harmful

**15.1.2 Names of the ingredients given on the warning label**

Sodiumazide

**15.1.3 R-phrases(s)**

R21/22

Harmful in contact with skin and if swallowed.

R52/53

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

**15.1.4 S-phrases(s)**

S28b

After contact with skin, wash immediately with plenty of water.

S45

In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

**15.1.5 Special regulations on certain preparations**

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**15.2 National regulatory information:**

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**16. OTHER INFORMATION**

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**16.1 List of the relevant R phrases**

R21/22	Harmful in contact with skin and if swallowed.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R28	Very toxic if swallowed.
R32	Contact with acids liberates very toxic gas.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**16.4 Additional information available from:**

Code of the Material Safety Data Sheet: D01895-03-03-MSDS-Theophylline (Reagent A)-EN  
Corporation mentioned in point 1.3.

The information in this datasheet is to our best knowledge correct and complete, and is offered in good faith as accurate. It characterizes the product with regard to the appropriate safety precautions. It does not guarantee properties of the product.

**16.5 Literary reference**

The MSDS of the manufacturer.

This product has been evaluated in accordance with the directives 1967/548/EEC, 199/45/EC and 2001/58/EC.

**16.6 Additions, Deletions, Revisions**

Changes in the sections 1.3 and 13.

**Date**

21.09.2007

**Signature**

LMKo