



**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 30.01.2015

Version: 3

Revision: 30.01.2015

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name:** BIOTOWER 24 MARK**Article number:** EU42101**1.2 Relevant identified uses of the substance or mixture and uses advised against****Sector of Use**

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

**Product category** PC37 Water treatment chemicals**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

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**1.4 Emergency telephone number:****Customer Service**

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**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

Skin Sens. 1 H317 May cause an allergic skin reaction.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Xi; Sensitising

R43: May cause sensitisation by skin contact.

N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

**Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

(Contd. on page 2)

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(Contd. of page 1)

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07 GHS09

- **Signal word** Warning
- **Hazard-determining components of labelling:**  
A mixture of tetrasodium-phosphonoethane-1,2-dicarboxylate and hexasodium-phosphonobutane-1,2,3,4-tetracarboxylate
- **Hazard statements**  
H317 May cause an allergic skin reaction.  
H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**  
P261 Avoid breathing dust.  
P280 Wear protective gloves.  
P273 Avoid release to the environment.  
P363 Wash contaminated clothing before reuse.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 25988-97-0	N,N-Dimethyl-2-hydroxypropylammonium chloride polymer Xn R22 N R50/53 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302	2.5-5%
CAS: 143239-08-1 ELINCS: 410-800-5	A mixture of tetrasodium-phosphonoethane-1,2-dicarboxylate and hexasodium-phosphonobutane-1,2,3,4-tetracarboxylate Xi R43 N R51/53 Aquatic Chronic 2, H411 Skin Sens. 1, H317	2.5-5%

- **Ingredients according to Detergents Regulation 648/2004/EC** For the wording of the listed risk phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**  
If skin irritation continues, consult a doctor.  
Immediately wash with water and soap and rinse thoroughly.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

GB

(Contd. on page 3)

## Safety data sheet

### according to 1907/2006/EC, Article 31

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(Contd. of page 2)

#### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

#### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** Inform respective authorities in case of seepage into water course or sewage system.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

#### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

#### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Immediately remove all soiled and contaminated clothing
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.  
The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
- **Not suitable are gloves made of the following materials:** Strong material gloves

(Contd. on page 4)

GB

**Safety data sheet**  
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Version: 3

Revision: 30.01.2015

Trade name: BIOTOWER 24 MARK

(Contd. of page 3)

· Eye protection: Goggles recommended during refilling

**SECTION 9: Physical and chemical properties**

## · 9.1 Information on basic physical and chemical properties

## · General Information

## · Appearance:

Form:	Liquid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.

· pH-value at 20 °C: 9.5

## · Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

## · Ignition temperature:

Decomposition temperature: Not determined.

· Self-igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

## · Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure at 20 °C: 23 hPa

Density at 20 °C:	1.047 g/cm <sup>3</sup>
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

· Solubility in / Miscibility with water: Insoluble.

· Partition coefficient (n-octanol/water): Not determined.

## · Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

## · Solvent content:

Organic solvents: 0.0 %

Solids content: 3.2 %

· 9.2 Other information: No further relevant information available.

**SECTION 10: Stability and reactivity**

## · 10.1 Reactivity

## · 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions: No dangerous reactions known.

· 10.4 Conditions to avoid: No further relevant information available.

· 10.5 Incompatible materials: No further relevant information available.

· 10.6 Hazardous decomposition products: No dangerous decomposition products known.

GB

(Contd. on page 5)

**Safety data sheet**  
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(Contd. of page 4)

**SECTION 11: Toxicological information**

- 11.1 Information on toxicological effects
- Acute toxicity:

- LD/LC50 values relevant for classification:

143239-08-1 A mixture of tetrasodium-phosphonoethane-1,2-dicarboxylate and hexasodium-phosphonobutane-1,2,3,4-tetracarboxylate

Oral	LD50	>5000 mg/kg (Rat)
Dermal	LD50	>2000 mg/kg (Rat)
	EC 50 / 48 h (static)	>1000 mg/ltr (Daphnia magna (water flea))
	LC50 / 96 h (static)	>100 mg/ltr (Oncorhynchus mykiss (Rainbow trout))

- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitisation: Sensitisation possible through skin contact.
- Additional toxicological information:  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Irritant

**SECTION 12: Ecological information**

- 12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- Ecotoxicological effects:
- Remark: Toxic for fish
- Additional ecological information:
- General notes:  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms
- 12.5 Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

**SECTION 13: Disposal considerations**

- 13.1 Waste treatment methods
- Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

**SECTION 14: Transport information**

- 14.1 UN-Number
- ADR, IMDG, IATA UN3082
- 14.2 UN proper shipping name
- ADR 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (N,N-Dimethyl-2-hydroxypropylammonium chloride polymer, A mixture of tetrasodium-phosphonoethane-1,2-dicarboxylate and hexasodium-phosphonobutane-1,2,3,4-tetracarboxylate)

(Contd. on page 6)

GB

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(Contd. of page 5)

· <b>IMDG</b>	<i>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (N,N-Dimethyl-2-hydroxypropylammonium chloride polymer, A mixture of tetrasodium-phosphonoethane-1,2-dicarboxylate and hexasodium-phosphonobutane-1,2,3,4-tetracarboxylate), MARINE POLLUTANT</i>
· <b>IATA</b>	

· **14.3 Transport hazard class(es)**· **ADR**

· <b>Class</b>	9 (M6) Miscellaneous dangerous substances and articles.
· <b>Label</b>	9

· **IMDG, IATA**

· <b>Class</b>	9 Miscellaneous dangerous substances and articles.
· <b>Label</b>	9

· **14.4 Packing group**

· <b>ADR, IMDG, IATA</b>	III
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· **14.5 Environmental hazards:**· **Marine pollutant:**· **Special marking (ADR):**· **Special marking (IATA):**

*Product contains environmentally hazardous substances: N,N-Dimethyl-2-hydroxypropylammonium chloride polymer*  
*Yes*  
*Symbol (fish and tree)*  
*Symbol (fish and tree)*  
*Symbol (fish and tree)*

· **14.6 Special precautions for user**· **Danger code (Kemler):**· **EMS Number:**

*Warning: Miscellaneous dangerous substances and articles.*  
*90*  
*F-A,S-F*

· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code***Not applicable.*· **Transport/Additional information:**· **ADR**· **Limited quantities (LQ)**· **Excepted quantities (EQ)**· **Transport category**· **Tunnel restriction code**

*5L*  
*Code: E1*  
*Maximum net quantity per inner packaging: 30 ml*  
*Maximum net quantity per outer packaging: 1000 ml*  
*3*  
*E*

· **IMDG**· **Limited quantities (LQ)**· **Excepted quantities (EQ)**

*5L*  
*Code: E1*  
*Maximum net quantity per inner packaging: 30 ml*  
*Maximum net quantity per outer packaging: 1000 ml*

· **UN "Model Regulation":**

*UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (N,N-Dimethyl-2-hydroxypropylammonium chloride polymer, A mixture of tetrasodium-phosphonoethane-1,2-dicarboxylate and hexasodium-phosphonobutane-1,2,3,4-tetracarboxylate), 9, III*

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(Contd. on page 7)

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(Contd. of page 6)

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations:**
- **Waterhazard class:** Water danger class 3 (Self-assessment): extremely hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Relevant phrases**

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

R22 Harmful if swallowed.

R43 May cause sensitisation by skin contact.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Department issuing MSDS:**

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- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

- **\* Data compared to the previous version altered.**