

Safety data sheet

according to 1907/2006/EC, Article 31





Printing date 06.11.2012

Revision: 07.10.2012

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** BOP Reagent
- **Article number:** 60-1004-05
- **CAS Number:**
56602-33-6
- **EC number:**
260-279-1
- **Registration number**
A registration number is not available for this substance because the annual tonnage is less than that required for registration or the registration date is envisaged for a later registration deadline.
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Laboratory chemical
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Severn Biotech Ltd.
Unit 2,
Park Lane,
Kidderminster,
Worcestershire.
DY11 6TJ
UK
Tel: 0044 1562 825286
Fax: 0044 1562 825284
email: info@severnbiotech.com
- **Further information obtainable from:** Product safety department.
- **Emergency telephone number:** Tel: 0044 1562 825286 (not 24 hours)

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
-  GHS02 flame
 Flam. Sol. 2 H228 Flammable solid.
-  GHS07
 Skin Irrit. 2 H315 Causes skin irritation.
 STOT SE 3 H335 May cause respiratory irritation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
-  Xi; Irritant
 R37/38: Irritating to respiratory system and skin.
-  F; Highly flammable
 R11: Highly flammable.
- **Information concerning particular hazards for human and environment:** Not applicable.

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.11.2012

Revision: 07.10.2012

Trade name: BOP Reagent

(Contd. of page 1)

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms** GHS02, GHS07
- **Signal word** Warning
- **Hazard statements**
H228 Flammable solid.
H315 Causes skin irritation.
H335 May cause respiratory irritation.
- **Precautionary statements**
P260 Do not breathe dust.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
56602-33-6 tri(dimethylamino)benzotriazol-1-yloxyphosphonium hexafluorophosphate
- **Identification number(s)**
- **EC number:** 260-279-1

4 First aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
- **Information for doctor:** Treat symptomatically and supportively.
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **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

Printing date 06.11.2012

Revision: 07.10.2012

Trade name: BOP Reagent

(Contd. of page 2)

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
In case of fire, the following can be released:
Hydrogen fluoride (HF)
Nitrogen oxides (NO_x)
As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.
Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
- **Advice for firefighters**
- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
Wear fully protective suit.
Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Avoid formation of dust.
Ensure adequate ventilation
Keep ignition sources away - no smoking.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.
- **Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
- **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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Prevent formation of dust.
Ensure good ventilation/exhaustion at the workplace.
Safety showers and eye wash facilities should be available at the work area.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.

(Contd. on page 4)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.11.2012

Revision: 07.10.2012

Trade name: BOP Reagent

(Contd. of page 3)

- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Prevent any seepage into the ground.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
Select PPE appropriate for the operations taking place taking into account the product properties.
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not breath dust
Do not eat, drink, smoke or sniff while working.
Ensure that eyewash stations and safety showers are close to the workstation location.
A safe system of work must be formulated and followed to ensure safe working with this product.
Relevant workers must receive suitable and sufficient training and supervision.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **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.
- **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.

(Contd. on page 5)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.11.2012

Revision: 07.10.2012

Trade name: BOP Reagent

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

· Body protection: Protective work clothing

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Powder
Colour:	White
· Odour:	Mild
· Odour threshold:	Not determined.

· pH-value: Not applicable.

· Change in condition

Melting point/Melting range:	approx. 13 °C
Boiling point/Boiling range:	Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Highly flammable.

· Ignition temperature:

Decomposition temperature: Not determined.

· Self-igniting: Not determined.

· Danger of explosion: Product is not explosive. However, formation of explosive air/dust mixtures are possible.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure: Not applicable.

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with water:

Not determined.

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

· Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

· Other information: No further relevant information available.

GB

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.11.2012

Revision: 07.10.2012

Trade name: BOP Reagent

(Contd. of page 5)

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.
Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
- **Possibility of hazardous reactions**
BOP-reagent is a reagent commonly used in the synthesis of peptides. Coupling using BOP liberates HMPA which is carcinogenic. Therefore the product must only be used by trained experienced professionals under strictly controlled conditions.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Strong oxidising agents.
- **Hazardous decomposition products:**
Hydrogen fluoride
Nitrogen oxides (NO_x)
Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** biodegradable
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** Product is not expected to bioaccumulate.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.11.2012

Revision: 07.10.2012

Trade name: BOP Reagent

(Contd. of page 6)

- **European waste catalogue**

Waste key numbers in accordance with the European Waste catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.

- **Uncleaned packaging:**


- **Recommendation:**

Disposal must be made according to official regulations.

Container remains hazardous when empty. Continue to observe all precautions.

Containers, even those that are "empty," may contain residues that can develop flammable vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · ADR, IMDG, IATA 	UN1325
<ul style="list-style-type: none"> · UN proper shipping name · ADR · IMDG, IATA 	1325 FLAMMABLE SOLID, ORGANIC, N.O.S. (tri(dimethylamino)benzotriazol-1-yloxyphosphonium hexafluorophosphate) FLAMMABLE SOLID, ORGANIC, N.O.S. (tri(dimethylamino)benzotriazol-1-yloxyphosphonium hexafluorophosphate)
<ul style="list-style-type: none"> · Transport hazard class(es) · ADR, IMDG, IATA 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	4.1 Flammable solids, self-reactive substances and solid desensitised explosives. 4.1
<ul style="list-style-type: none"> · Packing group · ADR, IMDG, IATA 	II
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	No
<ul style="list-style-type: none"> · Special precautions for user 	Warning: Flammable solids, self-reactive substances and solid desensitised explosives.
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · ADR · Limited quantities (LQ) · Tunnel restriction code 	1 kg E

(Contd. on page 8)

GB

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

Printing date 06.11.2012

Revision: 07.10.2012

Trade name: BOP Reagent

(Contd. of page 7)

· UN "Model Regulation":	UN1325, FLAMMABLE SOLID, ORGANIC, N.O.S. (tri(dimethylamino)benzotriazol-1-yloxyphosphonium hexafluorophosphate), 4.1, II
--------------------------	---

15 Regulatory information

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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.

GB