



MATERIAL SAFETY DATA SHEET
 According to Regulation (EC) No. 1907/2006
 Version #2, Revision Date 2014/04/25

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

1.1 Product identifiers

| | |
|----------------|--|
| Product name | DIAMIN®BE PWD |
| Product number | 1149 |
| Brand | Protan AG |
| REACH No.: | A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline |

1.2 Relevant identified uses of the substance or mixture / uses advised against

| | |
|-----------------|-------------------------|
| Identified uses | Agriculture, Fertilizer |
|-----------------|-------------------------|

1.3 Details of the supplier of the safety data sheet

| | |
|---------------|--|
| Company | Protan Aktiengesellschaft – Runkelsstrasse 38, LI-9495 Triesen |
| Tel.: | +423 375 15 25 |
| Fax: | +423 375 15 26 |
| Email address | info@protan.li |

1.4 Emergency telephone number

| | |
|-----------------------|---|
| Protan AG | +423 375 15 25 (working hours) |
| Poison Emergency Call | +41 (0)44 251 51 51 or 145 (Centre Suisse d'information toxicologique) +49 30 / 30686 790 (Gift-Notruf Berlin, 24 hours, language EN and DE) |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to European Community Regulation 1272/2008/EC.
 This substance is not classified as dangerous according to directives 67/548/EEC and 1999/45/EEC.
 Handle in accordance with good industrial hygiene and safety practice.

2.2 Label elements

The product is not subject to any labelling obligation/classification according to EC directives 1272/2008/EC, 1999/45/EEC and German ordinance on hazardous substances (Gefahrstoffverordnung (GefStoffV))


2.3 Other hazards

none
 PBT and vPvB not applicable

SECTION 3: Composition/Information on ingredients

3.1 Substances

| | |
|---------------------------|--|
| Chemical characterization | Hydrolyzed Protein Powder |
| Chemical name; Synonyms | Hydrolyzed Collagen; Enzymatic Hydrolysed Collagen, water soluble |
| CAS No.: | 92113-31-0 |
| EINECS No.: | 295-635-5 |
| Hazardous ingredients | No components need to be disclosed according to the applicable regulations |

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SECTION 4: First aid measures
4.1 Description of first aid measures

| | |
|-------------------------|--|
| If inhaled | If breathed in, move concerned person to well-ventilated area. If not breathing, give artificial respiration. If keeps feeling unwell seek medical advice. |
| In case of skin contact | Wash off with soap and plenty of running water. |
| In case of eye contact | Remove contact lenses. Flush eyes thoroughly with running water. |
| If swallowed/Ingestion | Never give anything by mouth to an unconscious person. Rinse mouth with water. Drink plenty of water. Seek medical advice if swallowed in great quantity. |

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2.2 (labelling) and section 11.

4.3 Indication of any immediate medical attention and special treatment needed

There are no special measures known. Treat according to symptoms. In case of ingestion, it is possible to give activated charcoal in water or liquid paraffin medicine.

SECTION 5: Firefighting measures
5.1 Extinguishing media

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|------------------|---|
| Suitable media | Product is not flammable. Use <u>water spray</u> , CO ₂ , alcohol resistant foam, dry chemical, depending on the materials involved in the fire. |
| Unsuitable media | Use <u>water jets</u> only to cool the surfaces of the containers exposed. |

5.2 Special hazards arising from the substance or mixture

Nature of decomposing materials not known. Possible formation of toxic gases during heating or in case of fire.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Dispose of fire residues and contaminated firefighting water in accordance with official regulations.

SECTION 6: Accidental release measures
6.1 Personal precautions, protective equipment and emergency procedures


| | |
|----------------------------|---|
| For non-emergency personal | Avoid dust formation. Avoid breathing product dust. Leave the danger area. |
| For emergency responders | Wear protective clothing and avoid contact with eyes and skin. Provide sufficient ventilation. Evacuate the danger area. If necessary, consult an expert. |

6.2 Environmental precautions

Do not let product enter drains. If the product has entered a watercourse in sewers or has contaminated soil or vegetation, notify it to the authorities. Discharge the remains in compliance with the regulations.

6.3 Methods and material for containment and cleaning up

Sweep up and shovel. Recover the product for removal. Keep in suitable closed container for disposal in accordance with regulations.

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6.4 Reference to other sections

| | |
|-------------------------|----------------|
| For personal protection | see section 8 |
| For disposal | see section 13 |

SECTION 7: Handling and storage
7.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. No special precautions required when the product is used properly for the relevant identified use (section 1.2.). Handle in accordance with good industrial hygiene practice and observing general safety regulations for handling chemicals. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

| | |
|--|--|
| Requirements for storage rooms and containers | Keep dry in closed original packaging. Do not store in open or unlabelled packaging. |
| Storage compatibility | Stored separately from food and animal feed. |
| Additional disclosures on stock conditions | Store in a cool, dry and well ventilated place. |
| Storage class | - |
| Classification according to German Regulation BetrSichV and EC Regulation 2009/104/EEC | - |

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection
8.1 Control parameters

The product does not contain any relevant quantities of materials with critical value limits to be monitored. Apply general workplace control parameters. If airborne dust is generated in closed areas, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne dust level below recommended limits. Containment and ventilation of exposed areas is the most reliable technical protection measure if exposure cannot be eliminated. The extent of protection measures depends on the actual risks in use. If necessary, seek advice of workplace health specialists. No further information apart from section 7.

8.2 Exposure controls

| | |
|---------------------------------|---|
| Appropriate engineering control | Handle in accordance with good industrial hygiene practice and the usual precautionary measures for handling chemicals. |
| Personal protective equipment: | |
| - Eye/face protection | Handle with tightly sealed goggles .Use tested and approved equipment for eye protection EN 166 (EU). |
| - Skin protection | Handle with protective gloves. Product does not require the use of chemical resistant gloves. PVC gloves as protection from splashes recommended. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it: For full and splash contact we advise the use of "Nitrile Rubber Gloves", minimum layer thickness of 0.11 mm. |



| | |
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| - Body protection | <p>General and product-independent recommendation: Select gloves based on the physical characteristics of the job. The glove material has to be impermeable and resistant to the product / the substance / the preparation. Select the right glove material considering the permeability and degradation time of the gloves material as specified by the manufacturer. Inspect gloves before use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with the product. Dispose contaminated gloves after use in accordance with applicable laws and good laboratory practice. Wash and dry hands. If the product is used in solution, or mixed with other substances, contact the supplier for approved gloves. This recommendation is advisory only. Evaluate recommendation by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by the customers.</p> <p>Work clothing. Dust proof work clothing recommended for long term exposure.</p> |
| - Respiratory protection | <p>General and product-independent recommendation: Choose body protection in relation to work exposure, to the concentration and amount of dangerous substances, and to the specific work place.</p> <p>Respiratory protection is not required. AX Filter recommended for short-term use. Where protection from nuisance levels of dust are desired, use type P1 (EN 143) dust mask. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).</p> |
| Control of environmental exposure | Minimize product release in the environment. Do not let product enter |

SECTION 9: Exposure controls/personal protection
9.1 Information on basic physical and chemical properties


| | | | |
|--|-------------------|---|-----------------------------|
| Appearance, form | powder | Vapour pressure | not determined |
| Appearance, colour | beige, brown | Vapour density | not determined |
| Odour | characteristic | Relative density | 350 – 450 kg/m ³ |
| Odour threshold | not applicable | Water solubility (ies) | soluble |
| pH value (10% water solution 20°C) | 6.5 – 7.5 | Partition coefficient: n-octanol/water | not determined |
| Melting - / freezing point | not determined | Auto-ignition temperature | not determined |
| Initial boiling point and boiling range | not applicable | Decomposition temperature | not determined |
| Flash point | not applicable | Viscosity (dynamic at 20°C) | 600-800 mPas |
| Evaporation rate | not determined | Explosive properties | not determined |
| Flammability (solid, gas) | not self-igniting | Oxidising properties | not determined |
| Upper/lower flammability or explosive limits | not explosive | Vapour pressure | not determined |

9.2 Other safety information

No further relevant information available.

SECTION 10: Stability and reactivity
10.1 Reactivity

No data available.

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10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Avoid moist warehousing conditions. Close packaging after use.

10.5 Incompatible materials

With strong oxidant agents like oxidants mineral acids, organic peroxides, organic water peroxides, elementary metals, exothermic reactions can occur. Apply cautiously in combination with copper, mineral oil based products and sulphur products.

10.6 Hazardous decomposition products


In the event of fire, see section 5.

SECTION 11: Toxicological information
11.1 Information on toxicological effects

| | |
|--|---|
| Acute toxicity | no data available |
| Skin corrosion/irritation | no data available |
| Serious eye damage or irritation | no data available |
| Respiratory or skin sensitisation | no data available |
| Germ cell mutagenicity | no data available |
| Carcinogenicity | IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| Reproductive toxicity | no data available |
| Specific target organ toxicity - single exposure | no data available |
| Specific target organ toxicity - repeated exposure | no data available |
| Aspiration hazard | no data available |
| Additional information | RTECS No. not available. The product is free of pathogens, in accord with 1999/129/EC. The product is not subject to classification according to 1272/2008/EC (GHS regulation) and according to the German Ordinance on Hazardous Substances (Gefahrstoffverordnung (GefStoffV)). For our experience and information, the product does not have adverse health effects if used and handled according to specifications. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. |

SECTION 12: Ecological information
12.1 Toxicity

The product is a fertilizer and therefore does not cause adverse effects in the environment if used according to the recommended dosage and conditions of use. Low concentrations discharged correctly into adapted biological

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sewage treatment plants do not interfere with degradation activity of activated sludge. No further relevant data available.

12.2 Persistence and degradability

The organic substances contained in the product are completely biodegradable. No further relevant data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in the soil

The product used in large quantities can contaminate ground and surface waters. Handle in accordance with good industrial hygiene and safety practice to prevent the spread of concentrate product and penetration into the soil and surface waters.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not carried out.

12.6 Other adverse effects

Generally not hazardous for water. No further relevant data available.

SECTION 13: Disposal considerations
13.1 Waste treatment methods

Unused product

“European Waste Catalogue and Hazardous Waste List” classification
2000/532/EC
2001/118/EC
2001/119/EC
2001/537/EC

Recommendation: follow the local regulations for the disposal and dispose through a licensed disposal company.
Handle in accordance with good industrial hygiene practice and the usual precautionary measures for handling chemicals.
02 00 00 WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 01 00 wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 02 animal-tissue waste

Contaminated packaging

Dispose of as unused product

SECTION 14: Transport information
14.1 UN number

ADR/RID: not applicable

IMDG: not applicable

IATA: not applicable

14.2 UN Proper shipping name

ADR/RID: no dangerous goods

IMDG: no dangerous goods

IATA: no dangerous goods

14.3 Transport hazard class(es)

ADR/RID: not applicable

IMDG: not applicable

IATA: not applicable

14.4 Packaging group

ADR/RID: not applicable

IMDG: not applicable

IATA: not applicable

14.5 Environmental hazards

ADR/RID: no

IMDG: Marine pollutant: no

IATA: no



14.6 Special precautions for users

Not applicable.

14.7 Transport in bulk according to annex II of MARPOL73/78 and the IBC code

Not applicable.

14.8 Transport / additional disclosures

No dangerous goods according to regulations mentioned above.

14.9 UN "model regulation"

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SECTION 15: Regulatory information

Not a hazardous substance or mixture according to EC directives 67/548/EEC and 1999/45/EC. This safety data sheet complies with the requirements of Article 31 of Regulation EC No 1907/2006 (REACH regulation) and the information contained herein is displayed in the order prescribed in Annex II to that regulation as amended 2010. The purpose of this Safety Data Sheet is to facilitate the carrying out of a risk assessment. We remind employers of their duty to carry out such an assessment and subsequently to provide an appropriate working environment, to make available to those who are required to use this product all necessary personal protective equipment and to ensure that such equipment is used.

15.1 Safety, health, and environmental regulation specific for the substance or mixture

| | |
|---|---|
| EU regulations | Commission Regulation 453/2010/EC amending Regulation 1907/2006/EC of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC Safety Data Sheets provided by suppliers of component substances. |
| German national regulations | Not classified according to German "BetrSichV" Water hazard class: Generally not hazardous for water. |
| Cautionary advise for label safety phrases: | Keep out of reach of children. Keep away from food, beverages and animal feed. |

15.2 Chemical safety assessment

For this product, a chemical safety assessment is not required or was not carried out.

SECTION 16: Other information

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|----------------------------------|---|
| Changes since last issue | Last release dated 2008/12/12. Changes in the following SECTIONS: - all - This version replaces all earlier. |
| Recommended restrictions on use | This product should be stored and handled in accordance with guidance given above. Use the substance only in the recommended manner and in conformity with all legal requirements. |
| Training advice | Those who are employed in the use of this product must be given training which highlights the need to handle and use it only in the recommended manner and at all times make use of the prescribed personal protective equipment. |
| Safety data sheet contact person | Protan AG, Christian DOBERS, Tel. Nr. +423 375 15 25 |
| Abbreviations and acronyms | ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road |



RID: Regulations Concerning the International Transport of Dangerous Goods by Rail
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 ICAO: International Civil Aviation Organization
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 RTECS: Registry of Toxic Effects of Chemical Substances
 GefStoffV: Gefahrstoffverordnung (German Ordinance on Hazardous Substances)
 BetrSichV; Betriebssicherheitsverordnung (German Regulation on Operational Safety)

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This Material Safety Data Sheet (MSDS) is additional to the Technical Data Sheet (TDS) but does not replace it. The MSDS contains guidance on the safe handling, use, processing, storage, transportation and disposal of the product DIAMIN®BE PWD. This document relates to the original product in the state in which it is delivered and may not be valid for the formulation or combination with other materials or in any process. DIAMIN®BE PWD has been developed for the specified uses and should not be used for any other purposes. Any other use may involve risks. The user will take sole responsibility for the precautions relating to the use of the product. The information in this MSDS is applicable to the product with regard to appropriate safety precautions and is not intended to guarantee any particular properties. This document is not to be considered a warranty or quality specification. The information in this document is reproduced according to the recommendation of the EFMA form (European Fertilizer Manufacturer's Association). The information does not pretend to be all-inclusive and is given to the best of our knowledge at the date of publication. Protan AG does not accept any liability with regard to the contents of this document and shall not be held liable for any damage resulting from unsafe handling or from contact with the product.

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