


MATERIAL SAFETY DATA SHEET

 According to Regulation (EC) No. 453/2010 and 1272/2008
 Version #1 of 15/01/2016

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

Product name	DIAMIN® Power LS
Product number	1168
Brand	Protan AG
REACH No.:	A registration number is not available for this substance as the substance or its uses are exempt 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, Plant Strengthenener
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1.3 Details of the supplier of the safety data sheet

Company	Protan Aktiengesellschaft – Runkelstrasse 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 Regulation 1272/2008/EC.
 This substance is not classified as dangerous according to EC 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	Mixture of organic acids (amino acids, betaine, humic acids). Contains natural fermented plant extracts and hydrolysed animal protein.
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

General recommendation	If feeling unwell after contact with the product, consult a physician. Show this safety data sheet.
If inhaled	Move concerned person to well-ventilated area if feels unwell. If keeps feeling unwell seek medical advice.
In case of skin contact	Remove contaminated clothing. Wash off with soap and plenty of running water. Consult doctor in case of persisting skin irritation.
In case of eye contact	Flush eyes thoroughly with running water. Remove contact lenses.
If swallowed/Ingestion	Rinse mouth with water. Drink plenty of water. Never give anything by mouth to an unconscious person. 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.

SECTION 5: Firefighting measures
5.1 Extinguishing media

Suitable media	Liquid 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	None known. 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. (CO, CO₂).

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	Leave the area surrounding the spill or release.
For emergency responders	Wear protective clothing and avoid contact with eyes and skin. Provide sufficient ventilation.

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.

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6.3 Methods and material for containment and cleaning up

Recover the product for removal, or, if possible for reuse. Possibly absorb it with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Keep in suitable closed container for disposal in accordance with regulations. Dispose diluted residues from cleaning through the sewage system.

6.4 Reference to other sections

For handling and storage	see section 7
For personal protection	see section 8
For disposal	see section 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special precautions required if product is used and processed for the identified purpose (section 1.2.). Handle in accordance with good industrial hygiene practice and observing general safety regulations for handling chemicals. Avoid eye contact and prolonged contact with the skin. Ensure adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and containers	Keep in original container closed tightly, upright and safe by avoiding the possibility of falls and collisions. Do not store in open or unlabelled containers. Preparation is concrete aggressive. Store in plastic container, coated steel or coated concrete silos.
Storage compatibility	Stored separately from food and animal feed.
Additional disclosures on stock conditions	Store in a cool place, protect from frost. Keep away from sources of heat and direct exposure of sunlight.
Storage class	12
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 monitor. Apply general workplace control parameters. 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 protective 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. We recommend PVC gloves as protection from splashes.

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- Body protection
- Respiratory protection

For full and splash contact we advise the use of "Nitrile Rubber Gloves", minimum layer thickness of 0.11 mm. Gloves made of leather and strong material are not suitable for handling the product.

Work clothing.

Unless the product is sprayed without adequate exhaust ventilation, respiratory protection is not required. We recommend AX Filter for short-term use and we suggest respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Minimize product release in the environment. Avoid product enter drains.

SECTION 9: Exposure controls/personal protection

9.1 Information on basic physical and chemical properties

Appearance, form	liquid	Vapour pressure	not determined
Appearance, colour	Dark brown	Vapour density	not determined
Odour	characteristic	Relative density	1,25 – 1,30 g/ml
Odour threshold	not applicable	Water solubility (ies)	soluble
pH value at 20°C	5 - 6	Partition coefficient: n-octanol/water	not determined
Melting - / freezing point	not determined / - 2 °C	Auto-ignition temperature	not determined
Initial boiling point and boiling range	> 100 °C	Decomposition temperature	not determined
Flash point	not applicable	Viscosity (dynamic at 20°C)	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 reactivity hazards.

10.2 Chemical stability


Stable under recommended storage conditions. Handle according to label directions. No decomposition associated with the proposed use. The product contains no preservatives and is stable when stored undiluted in clean containers.

10.3 Possibility of hazardous reactions

No hazardous reactions known.

10.4 Conditions to avoid

Avoid storage in open containers and with temperatures above +30 °C and less than +10°C.

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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, refer to section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity	Handle in accordance with good industrial hygiene practice and the usual precautionary measures for handling chemicals.
Skin corrosion/irritation	no data available
Serious eye damage or irritation	Contact with eyes may result in slight irritation
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 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 accordance 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 handled and used 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 sewage treatment plants do not interfere with degradation activity of activated sludge.

12.2 Persistence and degradability

The organic substances contained in the product are completely biodegradable.

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12.3 Bio accumulative potential

No bio-accumulation.

12.4 Mobility in the soil

No data available. Handle in accordance with good industrial hygiene and safety practice in order 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

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.

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

*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)
02 03 00 wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation*

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.

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14.8 Transport / additional disclosures

No dangerous goods according to regulations mentioned above. Not falling within the scope of Directive 96/86/EC implemented by the German legislation concerning the transport of dangerous goods by road (GGVS Gefahrgutverordnung Strasse). Therefore no special precautions are required.

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 EC Regulation 1907/2006/EC (REACH regulation) and the information contained herein is displayed in the order prescribed in Annex II to that regulation as amended in the year 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, 2001/60/CE 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

Changes since last issue	New release
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

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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)

Legal notice

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®Power LS. 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®Power LS 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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