

## Customer Information

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With respect to,

### CORONA-Virus Epidemics

Dear Customers and partners,

The current corona virus in China and Europe is an unpredictable event.

Italy, where we currently manufacture most of our products, is particularly affected among the European countries. We are currently working on a risk assessment on the production and raw material supply chain. Some products are already out of stock.

We update the list in the appendix with all products periodically. At the current level of information, we have no indication of possible improvements in the next few weeks. Since the spreading of corona virus has not stopped, and the situation changes daily, there is no way of knowing how the future developments will be.

The general lead time of PROTAN AG, depending on the product and quantity, is two weeks after receipt of orders. Due to the current situation, these lead times have been extended by at two additional weeks. PROTAN AG is in direct communication with the potentially affected suppliers and logistic providers. We will provide you with more news as soon as more information is available.

On this occasion we may ask you for your active consent to receive the corresponding PROTAN news by email; otherwise it is not possible for us to inform you regularly about the product availability.

PROTAN AG  
March 2020

## Appendix – Delivery delays

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Powder	Actual situation	Product alternatives
AMINOPOOL	Out of stock until May	PROTAN KF80-L (MIN. 35% FAA)
AMINOPOOL 60	Out of stock now	PROTAN KF80-L (MIN. 35% FAA)
AMINOPOOL-LS	Out of stock until May - June	PROTAN KF80-L (MIN. 35% FAA)
AMINOPOOL 80	Discontinued / Terminado	PROTAN KF80-L (MIN. 35% FAA)
AMINO ACID POWDER-LS	Out of stock until May - June	PROTAN KF80-L (MIN. 35% FAA)
DIAMIN Plus PWD	7'000 kg of stock available until June	
PROTAN N14	Out of stock until May	DIAMIN BE PWD (enzymatic)
liquid	Actual situation	Product alternatives
PROTAN N9	Delivery delays / min. 5 weeks	DIAMIN BE (enzymatic)
DIAMIN Plus	Delivery delays / min. 5 weeks	DIAMIN N9B Plus

We attach the specification of PROTAN-KF80-L as alternative for customer in the need of low molecular weight products.

## Product Data Sheet

### PROTAN® KF80-L

Art. No.: 1549

Chemical name: Hydrolysed Keratin  
CAS no.: 69430-36-0  
EINECS no.: 274-001-1

® = registered trademark of PROTAN AG

#### 1. Product key points:

- Natural, liquid, water-soluble keratin protein
- Almost all amino acids available in free form
- Stable composition
- European origin raw material and production
- GMO Free
- Product is suitable for the use in Organic Agriculture according to regulation EC/834/2007 and EC/ 889/2008



#### 2. General characterisation:

Chemical description	Hydrolysed Liquid Keratin based on feathers and hair sourced in the European Community; Product is salt reduced by membrane technology. Technical grade.
Characters	Easily dissolvable in water, practically insoluble in ethanol and methanol
Labelling information	Hydrolysed Keratin in water solution

#### 3. Product description:

Due to its composition, PROTAN KF80-L is a hair and wool identical protein hydrolysate. The aminogram is proof for the natural origin of the product. Compared to other proteins, keratin has the highest content of Cystine.

PROTAN KF80-L is GMO free and has a characteristic chelation ability in combination with microelement ions. The product is intended for use as technical ingredient.

Product Data Sheet   PDS	Page 1 of 3	Technicals
Revision: 1.0		Valid since: 01.01.2020

All information and advice in whatever form regarding possibilities of processing or using our products, as well as presentations or otherwise providing information, also in respects of possible rights of third parties, is given to the best of our knowledge based on research work and experience. It is not, however, binding on us and all liability on our part is excluded. The purchaser is not released from the burden of carrying out his own tests and experiments. Furthermore, our sales and delivery conditions will apply accordingly. The product data sheet is reviewed at regular intervals as part of our quality assurance program. The specification stated in the Technical Data Sheet and the Certificate of Analysis finally and conclusively describe the properties of the product. Warranty of any kind, either express or implied, by fact or law, including warranties of merchantability or fitness for a particular purpose is excluded.

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## Product Data Sheet

### PROTAN® KF80-L

Art. No.: 1549

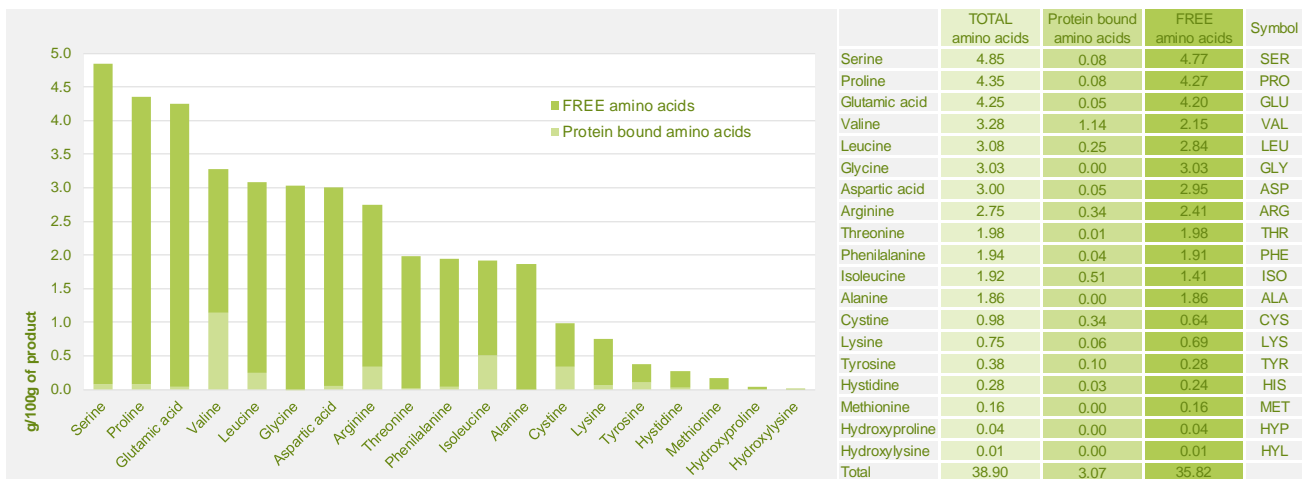
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#### 3.1. Active ingredient information:

Ingredient	CAS no:	Remarks
Hydrolyzed Keratin	69430-36-0	> 38%

#### 3.2. Aminogram



Average amino acid composition per 100 g of protein. Values given must to be seen within natural deviations

#### 4. Product properties:

##### Chemical composition

Free amino acids (EC/152/2009) > 35%  
Total amino acids > 38%  
Chlorides (Cl<sup>-</sup>) ≤ 5.5%  
pH 5.0 ± 0.2

##### Physical Characteristics

Density 1,18 g/cm<sup>3</sup> /20°C  
Consistence Liquid, 5cP /20°C  
Odour Spicy  
Colour Amber  
Suspension substances < 500 ppm

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Storage and Handling	Non-hazardous and non-flammable. Store in Inox salt resistant or polyester tank.
Storage temperature	Between + 10 °C and + 30 °C.
Shelf life	Can be stored at room temperature in well-closed original packaging for minimum six month.
Packaging	Bulk, 1'000 litre IBC and tank lorry

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