

**TECHNICAL DATA SHEET**Effective date: 04.2019  
Rev.1**Silk Protein****INFORMATION ON SUBSTANCE / MIXTURE**

INCI	Aqua, Silk amino acids
Description	Protein derivatives are a range of functional materials manufactured by the hydrolysis of pure silk fibers under carefully controlled conditions, composed principally of the free amino acids occurring in silk. As naturally hygroscopic materials silk amino acids exhibit excellent moisture binding properties, producing a deep conditioning effect on skin and improving the softness and handling characteristics of hair.
Raw material category	Active ingredient, conditioning agent

**TECHNICAL DATA****Composition**

Typical amino acid profile	% w/w
Alanine	28.4
Arginine	1.5
Aspartic acid	4.7
Cystine	0.1
Glutamic acid	4.1
Glycine	34.7
Histidine	0.8
Isoleucine	0.8
Leucine	1.2
Lysine	1.4
Methionine	0.2
Phenylalanine	0.9
Proline	1.2
Serine	15.4
Threonine	1.9
Tyrosine	0.6
Valine	2.0

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Appearance	Liquid																		
Color	Yellow to amber																		
Odor	Characteristic, mild																		
pH	3,7 - 4,5																		
Nitrogen	1,8 - 2,5 %																		
Protein (N x 6.25)	11,2 – 15,6 %																		
Total solids	27,0 - 31,0 %																		
Total ash	12,0 – 16,0 %																		
Molecular weight	150																		
Solubility	Soluble in water, insoluble in oil and ethanol <table border="1"><thead><tr><th>% Addition level</th><th>Water</th><th>Ethanol/ water 25:75</th><th>Ethanol/ water 50:50</th><th>Ethanol/ water 75:25</th><th>Ethanol</th></tr></thead><tbody><tr><td>1.0</td><td>Soluble</td><td>Soluble</td><td>Soluble</td><td>Insoluble</td><td>Insoluble</td></tr><tr><td>2.0</td><td>Soluble</td><td>Soluble</td><td>Soluble</td><td>Insoluble</td><td>Insoluble</td></tr></tbody></table> At pH 7.0	% Addition level	Water	Ethanol/ water 25:75	Ethanol/ water 50:50	Ethanol/ water 75:25	Ethanol	1.0	Soluble	Soluble	Soluble	Insoluble	Insoluble	2.0	Soluble	Soluble	Soluble	Insoluble	Insoluble
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**Biological parameters**

Total plate count	Max 100 cfu/g
Yeasts and molds	Max 100 cfu/g
Gram negative bacteria	Absent/ g
Staphylococcus aureus	Absent/ g

**TRANSPORT, STORAGE and SHELF LIFE**

Storage conditions	Store in tightly closed original container, protected from light and moisture. May precipitate during storage.
Shelf Life	36 months under good storage conditions
Custom tariff	-

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**LEGISLATION**

Certification	-
EINECS	-
CAS	-

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