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**1. PRODUCT AND COMPANY IDENTIFICATION****1.1 Product identifiers**

Product name: **Chitosan Biotin**, MW 200kDa & 85% DDA/ 95% DDA, 10-50 cP/ 200-500 cP & 85% DDA

Product Number: CS-307, CS-308, CS-311, CS-313

Brand: Creative PEGWorks

CAS No.: Unknown for the specific derivative product

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses: Laboratory research chemicals, Synthesis of substances

**1.3 Details of the supplier of the safety data sheet**

Company: Creative PEGWorks

Address: PO BOX 16863, Chapel Hill, NC 27516 USA

Phone: (+1) 919-748-3734

Fax: (+1) 919-287-2759

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**2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

Not a hazardous substance or mixture.

**2.2 GHS Label elements, including precautionary statements**

Not a hazardous substance or mixture. No data available on precautionary statements

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS – none**

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**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Component	Classification	Concentration
Hyaluronic Acid		>=98%, <=100%

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**4. FIRST AID MEASURES****4.1 Description of first aid measures****If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

**In case of skin contact**

Wash off with soap and plenty of water. Remove contaminated clothing.

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**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water.

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**4.2 Most important symptoms and effects, both acute and delayed**

No data available. The most important known symptoms and effects may be described in the labeling (see section 2.2) and/or in section 11.

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

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**5. FIREFIGHTING MEASURES****5.1 Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2 Special hazards arising from the substance or mixture**

No data available

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**

No data available

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**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Avoid breathing vapors, mist or gas.

For personal protection see section 8.

**6.2 Environmental precautions**

No special environmental precautions required.

**6.3 Methods and materials for containment and cleaning up**

Sweep up and shovel. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

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**7. HANDLING AND STORAGE****7.1 Precautions for safe handling**

Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a cool place.

Storage class: Non Combustible Solids or Semi-solids.

**7.3 Specific end use(s)**

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

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters**

**Components with workplace control parameters**

No data available for Hyaluronic Acid produces derivatives

**8.2 Exposure controls****Appropriate engineering controls**

General industrial hygiene practice

**Personal protective equipment****Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

**Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Full contact**

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: No data available

**Splash contact**

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: No data available

This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Body Protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

Where protection from nuisance levels of dusts is desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**

No special environmental precautions required.

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**9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

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|--|---|
| a) Appearance                              | Form: powder or semi-solid<br>Color: white or off-white |
| b) Odor                                    | No data available                                       |
| c) Odor Threshold                          | No data available                                       |
| d) pH                                      | No data available                                       |
| e) Melting point/freezing point            | No data available                                       |
| f) Initial boiling point and boiling range | No data available                                       |
| g) Flash point                             | No data available                                       |

h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Relative density	1.1-1.3 g/mL at 25 °C (77 °F)
n) Water solubility	> 1.0 mg/mL
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

**9.2 Other safety information**

No data available

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**10. STABILITY AND REACTIVITY****10.1 Reactivity**

No data available

**10.2 Chemical stability**

Stable under recommended storage conditions

**10.3 Possibility of hazardous reactions**

No data available

**10.4 Conditions to avoid**

No data available

**10.5 Incompatible materials**

Strong acids, Strong bases, Strong oxidizing agents

**10.6 Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

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**11. TOXICOLOGICAL INFORMATION**

**NO DATA AVAILABLE FOR THIS POLYSACCHARIDE DERIVATIVE PRODUCT.**

**Information on toxicological effects****Acute toxicity**

No data available

Inhalation: No data available

Dermal: No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**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: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

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**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

No data available

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**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION****NO DATA AVAILABLE FOR THIS POLYSACCHARIDE DERIVATIVE PRODUCT.****DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

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**15. REGULATORY INFORMATION**

**SARA 302 Components**

This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

**SARA 313 Components**

This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

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**16. OTHER INFORMATION**

**NO DATA AVAILABLE FOR THIS POLYSACCHARIDE DERIVATIVE PRODUCT.**

**HMIS Rating**

Health hazard: 0

Chronic Health Hazard:

Flammability: 1

Physical Hazard 0

**NFPA Rating**

Health hazard: 0

Fire Hazard: 1

Reactivity Hazard: 0

**Further information**

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**Preparation Information**

Creative PEGWorks

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