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Version: 12

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## SECTION 1. IDENTIFICATION

**Product Name/Identifier** FSS Bio-Chelate VC  
**Product Code** FSS20369LNZ

**Recommended Use** Topical Cosmetic Use  
**Restrictions on Use** None

**Supplier/Manufacturing Site** Formulator Sample Shop, LLC  
**Address** 135 Joshua Court  
Lincolnton, NC 28092, USA

**Telephone No. (24hrs)** 1-704-276-7540

**Emergency Telephone #** 1-704-276-7540 (Mon-Fri: 8:00AM – 5:00PM EST)

## SECTION 2. HAZARD(S) IDENTIFICATION

### Classification:

#### GHS / CLP

**Basis for Classification:** Based on present data no classification and labeling is required according to GHS, taking into account the national implementation (United Nations version 2011)

#### USA

**OSHA Regulatory Status:** This material is non-hazardous as defined by the American OSHA Hazard Communication Standard (29 CFR 1910.1200).

#### Europe

**Basis for Classification:** -According to present data no classification and labeling is required according to Reg. (EC) No 1272/2008.  
-This product is not classified as hazardous to health or environment according to the CLP regulation.

### Labeling Elements:

**Pictograph:** No hazard symbol expected

**Hazard statements/Signal Word:** Not applicable

**Precautionary statements:** P233: Keep container tightly closed  
P281: Use personal protective equipment as required  
P402: Store in a dry place  
P404: Store in a closed container  
P410: Protect from sunlight  
P411: Store at temperatures not exceeding 32°C

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**Other hazards which do not result in classification:**

No particular fire or explosion hazard.

By mechanical effect: No particular hazards.

By hygroscopic effect: No particular hazards.

**US NFPA 704 (National Fire Protection Association) Hazard Rating System:**

Health hazard: Rating 0; Normal Material

Flammability: Rating 0, Will Not Burn

Reactivity: Rating 0, Stable

Other Hazard Information: None

**Results of PBT and vPvB assessment:**

-PBT: Not applicable

-vPvB: Not applicable

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**SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS****Common Chemical Name:** Ascorbic Acid/Orange/Citrus Limon/Citrus Aurantifolia Polypeptides**Generic name:****Chemical Family:** Vitamin**Description:** Mixture: consisting of the following components. This section describes all components of the mixture

<u>Substance</u>	<u>CAS Numbers</u>	<u>EC Numbers</u>	<u>Percentage</u>
Ascorbic Acid/Orange/Citrus Limon/Citrus Aurantifolia Polypeptides	167973-55-9	N/A	100.00%

**Formula:** Not applicable

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**SECTION 4. FIRST-AID MEASURES****General:** In all cases of doubt, or when symptoms persist, seek medical attention.**Inhalation:** Move to fresh air from exposure area. Get medical attention for any breathing difficulty.**Skin contact:** Rinse with soap and water. Get medical advice if irritation develops.**Eye contact:** Immediately rinse with plenty of water for at least 15 minutes, while keeping the eyes wide open. Consult with a physician.

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**Ingestion:** Consult with a physician.

**Protection of first-aiders:** No special protection required.

## SECTION 5. FIRE-FIGHTING MEASURES

**Fire and explosion hazards:** Not considered to be a fire and explosion hazard

**Extinguishing media:**

Suitable: Water, dry chemicals, foam and carbon dioxide

Not suitable: None known

**Fire fighting:** Move container from fire area if it can be done without risk.  
 Avoid inhalation of material or combustion by-products.  
 Stay upwind and keep out of low area

**Protection for fire-fighters:** Boots, gloves, goggles.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Avoid contact with eyes.  
 Personal Protective Equipment:  
 -Protective goggles

**Environmental precautions:** Prevent entry into sewers and waterways. Do not allow material to contaminate ground water system

**Methods for cleaning up:**

Recovery: Pick up free liquid for recycling or disposal. Residual liquid can be absorbed on an inert material. Sweep or vacuum up any powder and place in a clearly labeled waste container, avoiding dust formation.

Cleaning/Decontamination: Wash non-recoverable remainder with water.

Disposal: For disposal of residues refer to sections 8 & 13.

## SECTION 7. HANDLING AND STORAGE

**Handling**

**Technical measures:** Any container that has been opened should be rapidly used or repacked in sterile packaging, preventing any exposure to oxygen or moisture.  
 Labeling: Keep out of the reach of children.

**Measures:** For industrial use, only as directed.

**Safe handling advice:** Wash hands after use. Avoid storage near feed or food stuff.

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**Storage**

Technical measures:

Keep container closed.

Recommended Storage Conditions:

Store in a dry place at temperatures not exceeding 32°C. Based on stability studies, the optimum storage temperature for maximization of shelf life is 23 - 25°C. However, it may be stored at temperatures between 16 and 32°C if such specific temperature control is not available. Do not freeze. Please refer to stability data for effects heat or cold may have on the specifications of the product.

Incompatible products:

Avoid contact with strong oxidizers.

Refer to the detailed list of incompatible materials (Section 10 Stability/Reactivity)

Packaging:

Product may be packaged in normal commercial packaging.

Packaging materials:

Recommended - Polypropylene &amp; High Density Polyethylene

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Precautionary statements:**

Ensure adequate ventilation

**Control parameters**

Occupational exposure Limits:

France:

Not Determined

ACGIH:

Not Determined

Korea:

Not Determined

UK:

Not Determined

Surveillance procedures:

Not Determined

Engineering measures:

Not Determined

**Personal Protective Equipment:**

Respiratory protection:

Local exhaust

Hand protection:

Protective gloves made of rubber or neoprene.

Eye protection:

Safety glasses.

Collective emergency equipment:

Eye fountain.

Skin and Body Protection:

Suitable protective clothing

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice.

Measures related to the Environment: No particular measures.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:**

Free-flowing powder - Hygroscopic

**Color:**

Tan to brown

**Odor:**

Slight, characteristic

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<b>Loss on Drying (1g-3hrs in V @ 60-70°C):</b>	8.0% Maximum
<b>Ash (600°C):</b>	7.0% Maximum
<b>pH (2% in H<sub>2</sub>O):</b>	3.0 – 6.0
<b>Ascorbic Acid Content:</b> (AOAC, 15 <sup>th</sup> Edition pg. 1058; 6-Dichloroindophenol Titrimetric Method)	24.5 – 27.0%
<b>Polypeptide Content (Kjeldahl N x 6.25):</b>	15.0% Minimum
<b>Heavy Metals:</b>	< 20 ppm
<b>Lead:</b>	< 10 ppm
<b>Arsenic:</b>	< 2 ppm
<b>Cadmium:</b>	< 1 ppm
<b>Microbial Content:</b>	< 100 CFU/g; No pathogens
<b>Yeast &amp; Mold:</b>	< 100 CFU/g
<b>Gram Negative Bacteria:</b>	0 CFU/g
<b>Specific Gravity:</b>	0.6g/cc
<b>% Volatile by Vo.:</b>	5.0
<b>Vapor density:</b>	Not applicable
<b>Boiling Point:</b>	Not applicable
<b>Freezing Point:</b>	Not applicable
<b>Melting point:</b>	Not determined
<b>Flash point:</b>	Not applicable
<b>Oxidizing properties:</b>	Non oxidizing material according to EC criteria.
<b>Solubility:</b>	
In water:	Dispersible
In organic solvents:	Not determined
Log P:	Not determined

## SECTION 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under ordinary conditions of use and storage up to one year then re-test to full product specifications to extend shelf life
<b>Hazardous reactions:</b>	None known
<b>Conditions to avoid:</b>	No dangerous reactions known under use of normal conditions. Avoid extreme heat.

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**Materials to avoid:** No dangerous reaction known with common products.**Hazardous decomposition products:** None known

## SECTION 11. TOXICOLOGICAL INFORMATION

**Ingestion:** Not Determined  
**Dermal:** Not Determined  
**Ocular:** Not Determined  
**Inhalation:** Not Determined

**Acute toxicity data:** Non-Photo Irritant  
**Sensitization:** Non-Primary Sensitizers  
**Repeated dose toxicity:** No known effects  
**Subacute to chronic toxicity:** Not Determined

**Additional Toxicological Information:** This product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

### Specific effects:

**Carcinogenicity:** No known effects  
**Mutagenicity:** No known effects  
**Reproductive toxicity:** No known effects  
**Neuro-toxicity:** No known effects

**For more information:** Does not present any particular risk on handling under normal conditions of good occupational hygiene practice.

This product has not been tested for the following:

- Primary cutaneous and corrosive irritation
- Acute oral toxicity
- Mutagenicity/genotoxicity

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Effects on the aquatic environment:** EC10 (Freshwater Alga): 172.55 mg/L - Not harmful to aquatic organisms  
EC20 (Freshwater Alga): 249.31 mg/L - Not harmful to aquatic organisms

### Biodegradability:

**Persistence:** Readily Biodegradable (90.9% biodegradation after 28 days of testing)

### Bioaccumulation:

**Octanol / water partition coefficient:** Not Determined

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**Mobility:**

Precipitation:

Expected behavior of the product: Ultimate destination of the product: Soil &amp; sediment.

**Other Adverse Effects:**

None known

## SECTION 13. DISPOSAL CONSIDERATIONS

**Residues from product**

Prohibition:

Do not allow the product to be released into the Environment.

Destruction/Disposal:

Dispose of in accordance with relevant local regulations

**Contaminated packaging**

Decontamination/cleaning:

Cleaning is not required prior to disposal.

Destruction/Disposal:

Note: Take all necessary precautions when disposing of this product according to local regulations.

## SECTION 14. TRANSPORT INFORMATION

**UN Number:**

None

**UN Shipping Name:**

None

**Transport Hazard Class:**

Not classified as dangerous for transport

Land (rail/road):

Material is not restrictive for land transport and is not regulated by ADR/RID

Sea:

Material is not restrictive for sea transport and is not regulated by IMO/IMDG

Air:

Material is not restrictive for air transport and is not regulated by ICAO/IATA

**Marine Pollutant:**

No

**Transport/Additional Information:**

Not regulated for US DOT Transport in non-bulk containers

This material is not dangerous or hazardous

**Special Precautions for User:**

None known

The above regulatory prescriptions are those valid on the date of publication of this sheet. However, given the possible evolution of transport regulations for hazardous materials and in the event of the MSDS in your possession dating back more than 12 months, it is advisable to check their validity with your sales office.

## SECTION 15. REGULATORY INFORMATION

**Labeling:**

EC regulations:

This product does not need to be labeled in accordance with EC Directives or respective national laws

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## Further regulations

United Kingdom:	Handle in accordance with relevant British regulation: control of substance Hazardous to Health Regulations Environmental Hygiene Guidance: EH40 Workplace Exposure Limits (revised annually)
Korea regulations:	Industrial safety and hygiene regulation: No Hazardous material control regulation: No Fire prevention regulation: No

## Other regulations:

EINECS inventory status:	Ascorbic Acid/Orange/Citrus Limon/Citrus Aurantifolia Polypeptides: N/A
TSCA inventory status:	Exempt
AICS inventory status:	Not Listed: 167973-55-9
Canadian (CEPA DSL) inventory status:	Not Listed: Ascorbic Acid/Orange/Citrus Limon/Citrus Aurantifolia Polypeptides (167973-55-9)
Japan (MITI list):	Ascorbic Acid/Orange/Citrus Limon/Citrus Aurantifolia Polypeptides
Korea:	Ascorbic Acid/Orange/Citrus Limon/Citrus Aurantifolia Polypeptides**
China inventory status:	Not Listed: Ascorbic Acid/Orange/Citrus Limon/Citrus Aurantifolia Polypeptides
Philippines inventory status:	Not Listed: Ascorbic Acid/Orange/Citrus Limon/Citrus Aurantifolia Polypeptides (167973-55-9)

\*Listed on 2010 INCI Standard Chinese Name Directory

\*\*Not listed in 2004 CTFA Dictionary – Registered with Personal Care Products Council

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the products described in this sheet. The user's attention is drawn to the possible existence of additional provision which complete these regulations. Please refer to all applicable international, national and local regulations and provisions

## SECTION 16. OTHER INFORMATION

Prohibited uses:	For specific uses, food industry, ask the manufacturer for more information.
Last Revision Date:	03/25/2022
Preparation Date:	11/21/2022
MSDS summary of changes	<ul style="list-style-type: none"> <li>- Added Precautionary Statements - Section 2 (Hazards Identification) &amp; Heavy Metals &amp; Arsenic – Section 9 (Physical &amp; Chemical Properties)</li> <li>- Updated Transport Information – Section 14 (Transport Information)</li> <li>- Updated Code – Section 1 (Identification) &amp; Updated Color – Section 9 (Physical &amp; Chemical Properties)</li> <li>- Updated CAS#'s – Section 3 (Composition / Information on Ingredients) &amp; Section 15 (Regulatory Information)</li> </ul>

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- MSDS summary of changes (Cont.):
- Updated Microbial Content – Section 9 (Physical & Chemical Properties)
  - Added Acute Daphnia Data – Section 11 (Toxicological Information) & Added Biodegradability Data – Section 12 (Ecological Information)
  - Updated Technical Measures & Recommended Storage Conditions – Section 7 (Handling and Storage) & Added Lead & Cadmium – Section 9 (Physical & Chemical Properties)
  - Updated Precautionary Statement – Section 2 (Hazards Identification), Updated Recommended Storage Conditions – Section 7 (Handling & Storage), Updated Acute Toxicity Data – Section 11 (Toxicological Information) & Added Ecotoxicity Data – Section 12 (Ecological Information)
  - Added Acute Toxicity Data – Section 11 (Toxicological Information)
  - Updated Europe Basis for Classification -- Section 2 (Hazards Identification), Updated Recovery Methods for Cleaning Up – Section 6 (Accidental Release Measures) & Updated Color Parameter – Section 9 (Physical & Chemical Properties)
  - Updated Color & Ascorbic Acid Content Parameters – Section 9 (Physical & Chemical Properties)

The information given is based on our knowledge of this product, at the time of publication in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than which it was intended. This is not in any way excuse the user from knowing and applying all the regulations governing their activity. It is sole responsibility of the user to take all precautions required in handling the product. The purpose of mandatory regulation mentioned is to help the user to fulfill his obligations regarding the use of products. This information is not exhaustive, this is not exonerate the user from ensuring that legal obligations other than those mentioned, relating to the use and storage.