



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **GREASE-X BIOZYME**

MANUFACTURER: **Epicore Bionetworks, Inc.**
ADDRESS: **4 Lina Lane
Eastampton, NJ 08060**

EMERGENCY PHONE: **609.267.9118**
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PRODUCT USE: **Grease cleaning**

SECTION 2: HAZARDS IDENTIFICATION

NOTE: *The hazardous properties of this substance have not been evaluated. The classifications are based on available information for materials of similar chemistry for dried, inhalable material.*

2.1 Classification of the substance or mixture (for dried forms only) *Classification according to Regulation (EC) No. 1272/2008 [CLP]*

For both CNC and CNF individually:

STOT SE 3 (H335: May cause respiratory irritation)

2.2 Label elements *Labelling according to Regulation (EC) No 1272/2008 [CLP]*

Hazard pictogram: GHS07: Exclamation mark

Signal word: WARNING

Hazard statements:

H335: May cause respiratory irritation

Precautionary statements:

Precautionary statements – prevention

P210: If dry, keep away from all ignition sources including heat, sparks, open flames. Prevent dust accumulations to minimize explosion hazard.

P261: Avoid breathing dust

P262: Do not get in eyes, on skin, or on clothing
P271: Use only outdoors or in a well-ventilated area
P280: Wear protective gloves/protective clothing/eye protection/face protection

Precautionary statements – response

P304+P340: IF INHALED Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338: IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.

Precautionary statements – disposal

P501: Dispose of contents/container in accordance with local/regional/national/international regulation.

2.3 Other hazards

Explosion hazard: Dry particles may form combustible dust in air at high concentrations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

CAS-No.: Cellulose (9004-34-6) (manufactured nano form)

SECTION 4: FIRST AID MEASURES

<i>Inhalation</i>	If dry powder, move to fresh air. Get medical attention if symptoms appear.
<i>Skin contact</i>	Soap wash. Get medical attention if irritation occurs.
<i>Eye contact:</i>	Remove any contact lenses. Irrigate immediately. Get medical attention if irritation occurs.
<i>Ingestion</i>	Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms appear.
<i>Acute effects</i>	Potential symptoms: (based on cellulose powders) irritation of eyes, skin, mucous membranes. Hoarseness, cough and phlegm. Exercise-induced dyspnea.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Explosion: Avoid generating dust; dispersed dust in air at sufficient concentrations and in the presence of an ignition source can create a severe explosion hazard. Manufactured nanoforms, particularly powders, might show unusually high reactivity, especially for fire, explosion and catalytic reactions, when compared with equivalent materials with larger particle sizes.

5.3 Advice for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For dry powders, remove any ignition sources and provide sufficient ventilation. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). No current guidelines available for nanoscale materials. Use current good practices. Wear full set of protective clothing and contained breathing apparatus for spills of solid material. Avoid inhalation of spilled powders, and avoid dermal contact with nano powders and solutions. See section 8.3 for more details on protective equipment.

6.2 Environmental precautions

In the case of accidental spill, keep away from drains, surface, and ground water.

6.3 Methods and materials for containment and cleaning up

For dry powders, ensure the product is not present at a concentration level above cellulose TLV (see section 8.1). Use HEPA-filtered vacuum cleaner or wet wiping methods and avoid re-dispersion of nanomaterial into the air. Clean liquid spills with absorbent materials/liquid traps. Immediately dispose of cleaning materials and do not dry and re-use contaminated materials.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Use exhaust ventilation system with HEPA filter when handling nanomaterials in powder state. See section 8.3 for recommended personal protective measures. The same precautions taken for handling and storage of dusts and fine powders should be implemented, with the additional consideration for the long settling time of nanomaterials.

7.2 Conditions for safe storage, including any compatibilities

Store in closed, tightly sealed containers in cool, well-ventilated area, away from sources of ignition, electrostatic sparks, and mechanical friction. Do not store food or beverages in areas where nanomaterials are handled. Do not smoke in work area where nanomaterials are stored

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.2.1 Engineering controls: If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. It is recommended that all dust control equipment contain explosion relief vents. Assess the most likely route of exposure and minimize risk. Refer to section 4.2.8.1 of ISO/TR 13329 for more information.

8.2.2 Personal protection equipment: At present, due to a lack of nanomaterial-specific data regarding PPM, good hygiene practices are recommended. Published reports suggest low exposure potential for nano forms of cellulose in air. However, in the absence of confirmatory measurements, inhalation exposure to dry forms should be avoided. Gloves, protective clothing, and goggles are recommended.

Gloves

Preliminary evidence suggests that butyl rubber gloves may be more protective than nitrile gloves. Regular disposal and replacement of gloves is recommended.

Protective Clothing

Cover skin to minimize dermal exposure, avoid direct contact with abraded or lacerated skin. Nanomaterials may penetrate woven materials, therefore non-woven protective clothing is preferable to woven fabric laboratory coats. Prolonged use or reuse should be avoided.

Respirators and filters

Some reports show that particles in the nano range have the highest penetrating ability for respirators (OECD 2009). Therefore, limiting dispersion of nano-powder into the air, minimizing handling of powders, containment of workers handling powders, and working with proper exhaust ventilation with HEPA filters is recommended.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Granular
ODOR:	Odorless
COLOR:	Light Brown
SOLUBILITY IN WATER:	Insoluble in water
FREEZING POINT:	n/a
BOILING POINT:	n/a

SECTION 10: STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: Thermally stable at typical use temperatures.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Active ingredient decomposes at elevated temperatures.

Incompatible materials: Avoid contact with: oxidizers.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials..

SECTION 11: TOXICOLOGICAL INFORMATION

Inhalation	Data are limited, however dust may be harmful if inhaled.
Ingestion	OECD 425 Acute oral toxicity study LD50 > 2000 mg/kg (O'Connor et al. 2014).
Dermal contact	OECD 429 Skin sensitization - local lymph node assay. Not considered a contact dermal sensitizer < 10.7% concentration. (O'Connor et al. 2014)
Eye contact	One study with MCC reported minimal irritation after acute ocular instillation in rabbit (unpublished report, WHO 1998).

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

Toxicity:
Nontoxic

Persistence and degradability
Biodegradability: Material is biodegradable

Bioaccumulative potential
Bioaccumulation: Nodata available.

Mobility in soil
No relevant data found.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: **Dispose of in manner consistent with federal, state, and local regulations.**

Not listed as a material banned from land disposal.

SECTION 14: TRANSPORT INFORMATION

DOT
Not regulated for transport

Classification for SEA transport (IMO-IMDG):
Not regulated for transport

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

OSHA Hazard Communication Standard

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Not a Health Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

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

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing

SECTION 16: OTHER INFORMATION

THE INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET, AS OF THE ISSUE DATE, IS BELIEVED TO BE TRUE AND CORRECT. HOWEVER, THE ACCURACY OF COMPLETENESS OF THIS INFORMATION AND ANY RECOMMENDATIONS OR SUGGESTIONS, ARE MADE WITHOUT WARRANTY OR GUARANTEE. SINCE THE CONDITIONS OF USE ARE BEYOND THE CONTROL OF OUR COMPANY, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE CONDITIONS OF SAFE USE OF THIS PRODUCT.

Hazard Rating System

NFPA

Health	Fire	Reactivity
1	1	0

This SDS is prepared by the Epicore Product Regulatory Services and Hazard Communications Group.

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