

**1. PRODUCT AND COMPANY IDENTIFICATION**Product Identifier

**Product Name:** CO+ Probiotic Biosurfactant Degreaser & Cleaner  
**Product Code:** ZB/CO+/xxxx (xxxx signifies container size)  
**Other means of identification:** None

Recommended use of the chemical and restrictions on use

**Recommended Use:** Cleaning agent  
**Uses advised against:** Use only as stated on label  
**Product Dilution:** Heavy soil 1:5 to 1:10; Normal soil 1:20; to 1:32 Light soil 1:40 to 1:64

Details of the supplier of the safety data sheet

**Manufactured by / Distributed by:**  
 Z BioScience Inc.  
 800 S. Ohio St.  
 Tuscola, IL 61953 USA

Telephone numbers:


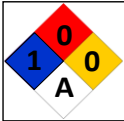
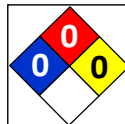
24 Hour Emergency Phone Number: INFOTRAC (800) 535-5053  
 Company Phone Number: (310) 643-1402

**2. HAZARDS IDENTIFICATION**

Appearance: Clear, slightly hazy

Physical state: Liquid

Odor: Slightly soapy

Classification	Concentrated Product	Product Diluted >1:10
Acute toxicity - Oral	Category 4	No significant hazards
Eye irritation	Slight irritation possible	Slight irritation possible
Respiratory sensitization	No significant hazards	No significant hazards
Skin sensitization	No significant hazards	No significant hazards
Label Elements	Signal Word: Warning	Signal Word: None
Hazard statements:	Harmful if concentrate is swallowed May cause eye irritation  	<b>Product Diluted &gt;1:10</b> This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR1910.1200). 

**Emergency Overview - Concentrated Product****GENERAL STATEMENT: IN ALL CASES OF DOUBT OR WHEN SYMPTOMS PERSIST, ALWAYS SEEK MEDICAL ATTENTION!**Precautionary Statements - Response: Specific Treatment (See Section 4 in the SDS)

**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
**IF ON SKIN:** Wash with plenty of soap and water. Wash contaminated clothing before reuse.  
**IF INHALED:** If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms contact a doctor/physician.  
**IF SWALLOWED:** Call a Poison Center or doctor/physician if you feel unwell.

Precautionary Statements - Disposal

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Precautionary Statements - Storage

Keep out of reach of children.

Hazards not otherwise classified (HNOC)

None known.

Other information

Unknown Acute Toxicity: 0% of the mixture consists of ingredient(s) of unknown toxicity

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	Common name and synonyms	CAS number	%*
Glycerol		56-81-5	5 - < 15*
Sodium Citrate		6132-04-3	0.9 - < 5*
Other components below reportable levels			80 - < 95*

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

**4. FIRST-AID MEASURES**

	<b>Concentrated Product</b>	<b>Diluted Product &gt;1:10</b>
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a doctor/physician if you feel unwell.	Non-reactive. No First-aid needed
<b>Skin Contact</b>	Take off all contaminated clothing. Wash off with soap and water. Call physician if you feel unwell. Wash contaminated clothing before reuse.	Non-irritating. No First-aid needed
<b>Eye Contact</b>	Immediately flush eyes with plenty of water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Contact a physician immediately.	May be slightly irritating. Rinse thoroughly with plenty of water. If irritation persists contact physician.
<b>Ingestion</b>	Call physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from physician or poison control center. If vomiting occurs, keep head low so that stomach content does not get into the lungs.	Non-toxic. No First-aid needed.
<b>Symptoms/effects, acute and delayed</b>	Prolonged exposure may cause chronic effects.	None
<b>Special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.	None anticipated.
<b>General information</b>	Follow directions above. If you feel unwell seek medical advice. Show label and SDS to attending First-aid giver and/or physician if possible.	

**5. FIRE-FIGHTING MEASURES**

	<b>Concentrated Product</b>	<b>Diluted Product &gt;1:10</b>
<b>Suitable extinguishing media</b>	Alcohol resistant foam. Dry powder. Carbon dioxide (CO <sub>2</sub> )	Does not burn.
<b>Unsuitable extinguishing media</b>	Do not use water jet as extinguisher may spread the fire.	None
<b>Specific hazards arising from the burning of chemicals</b>	During fire, gases hazardous to health may be formed.	Does not burn.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.	Does not burn.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.	
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.	

**6. ACCIDENTAL RELEASE MEASURES**

	<b>Concentrated Product</b>	<b>Diluted Product &gt;1:10</b>
<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away from spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Floor may be slippery. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see Section 8 of the SDS	None needed. Caution floor may be slippery.
<b>Methods and materials for containment and cleaning up</b>	This product is miscible in water. Large spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water. Small spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.	Where possible, vacuum spilled liquid to recover material. Rinse water may be disposed of down a sanitary sewer system if authorized by the local municipality.
<b>Environmental precautions</b>	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.	None needed - non-toxic, non-hazardous in diluted form.

**7. HANDLING AND STORAGE**

<b>Precautions for safe handling</b>	Do not breath mist of vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.	Normal ventilation is adequate. Avoid contact with eyes. Wear safety glasses.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Keep away from children and pets. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).	

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Occupational exposure limits**

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Chemical Name	Type	Value	From
Glycerol (CAS 56-81-5)	PEL	5 mg/m <sup>3</sup> 15 mg/m <sup>3</sup>	Respirable fraction. Total dust

<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s)	No exposure limits.
<b>Appropriate engineering controls</b>	Good general ventilation should be used. Ventilation rates should be	Normal ventilation is adequate

**Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	Wear safety glasses with side shields or goggles	Safety glasses recommended
<b>Skin protection - hands/other</b>	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier. Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.	None normally required. If allergic wear gloves and appropriate clothing/apron.
<b>Respiratory protection</b>	Chemical respirator with organic vapor cartridge and full face piece if threshold limits are exceeded.	None normally required.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary	None needed
<b>General hygiene considerations</b>	Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective	Observe good hygiene practices

**9. PHYSICAL AND CHEMICAL PROPERTIES**

	<b>Concentrated Product</b>	<b>Diluted Product &gt;1:10</b>
Appearance	Clear; slightly hazy	Clear
Physical state	Liquid	Liquid
Form	Liquid	Liquid
Color	Light yellow	Clear
Odor	Soapy	Slightly soapy
Odor threshold	Not available	Not available
pH	7.5 - 8.5	Not available
Melting point/freezing point	23°F (-5°C) estimated	32°F (-0°C) estimated
Initial boiling point and boiling range	212 °F (100°C) estimated	212 °F (100°C) estimated
Flash point	Not available	Not available
Evaporation rate	Not available	Not available
Flammability (solid, gas)	Not available	Not available
Upper/lower flammability limits	Not available	Not available
Upper/lower explosive limits	Not available	Not available
Vapor pressure	0.01 hPa estimated	Not available
Vapor density	Not available	Not available
Relative density	Not available	Not available
Solubility(ies) in water	Complete	Complete
Partition coefficient (in n-octanol/water)	Not available	Not available
Auto-ignition temperature	739°F (393°C) estimated	>739°F (393°C) estimated
Decomposition temperature	Not available	Not available
Viscosity	Not available	Not available
Density	10.80 lbs/gal estimated	Not available
Explosive properties	Not explosive	Not explosive
Flammability class	IIIB - non-flammable, non-combustible	Non-flammable, Non-combustible
Oxidizing properties	Not oxidizing	Non oxidizing
Percent volatile	70.07%	Not available
Specific gravity	1.08	Not available
VOC (weight %)	14.13% estimated	Not available

**10. STABILITY AND REACTIVITY**

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use.	None known
<b>Chemical stability</b>	Material is stable under normal conditions	Stable
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use	None known
<b>Conditions to avoid</b>	Contact with incompatible materials	None known
<b>Incompatible materials</b>	Strong oxidizing agents	None known
<b>Hazardous decomposition</b>	No hazardous decomposition products are known.	None known

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

	<b>Concentrated Product</b>	<b>Diluted Product &gt;1:10</b>
<b>Inhalation</b>	Not classified	Not classified
<b>Skin contact</b>	No significant hazard	Not harmful
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation Sodium Citrate test Result: No irritation - Rabbit	Slight irritation possible
<b>Ingestion</b>	Not available	Not available

<b>Symptoms related to the physical,</b>	Direct contact with eyes may cause temporary irritation	Slight irritation possible
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**Information on toxicological effects**

<b>Acute toxicity</b>	Harmful if swallowed Oral: LD50* Species: Mouse Test Result: 5.4 mg/kg Species: Rat Test Result: 11.7 mg/kg * Estimates for product may be based on additional data not shown	No significant hazards
<b>Skin corrosion/irritation</b>	No significant hazard	Not harmful
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation Sodium Citrate test Result: No irritation - Rabbit	Slight irritation possible

**Respiratory or skin sensitization**

<b>Skin sensitization</b>	This product is not expected to cause skin sensitization	None expected
<b>Skin sensitization - Sodium Citrate</b>	OECD Result: No sensitization Species: Guinea pig OECD Result: No skin irritation Species: Rabbit	
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	None expected
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. <b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) - NOT LISTED</b>	None known
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.	None known
<b>Specific target organ toxicity - repeated exposure</b>	Not classified	None known
<b>Aspiration hazard</b>	Not an aspiration hazard	Not harmful

**12. ECOLOGICAL INFORMATION**

	<b>Concentrated Product</b>	<b>Diluted Product &gt;1:10</b>
<b>Ecotoxicity</b>	Not available	No significant hazards
<b>Persistence and degradability</b>	Not available	No significant hazards
<b>Mobility in soil</b>	Not available	No significant hazards
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	No significant hazards

**13. DISPOSAL CONSIDERATIONS**

	<b>Concentrated Product</b>	<b>Diluted Product &gt;1:10</b>
<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.	Where possible, vacuum spilled liquid to recover material. Rinse water may be disposed of down a sanitary sewer system if authorized by the local municipality.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.	No known hazards
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.	No hazardous
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).	Not hazardous

<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.	Not hazardous
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**14. TRANSPORT INFORMATION**

	<u>Concentrated Product</u>	<u>Diluted Product &gt;1:10</u>
<b>DOT</b>	Not regulated as dangerous goods	
<b>IATA</b>	Not regulated as dangerous goods	
<b>IMDG</b>	Not regulated as dangerous goods	
<b>Transport in bulk according to Annex II of MARPOL 73/38 and the IBC Code</b>	Not established	

**15. REGULATORY INFORMATION**

	<u>Concentrated Product</u>	<u>Diluted Product &gt;1:10</u>
<b>US Federal Regulations</b>	This product is a Hazardous Chemical as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200	Not hazardous
<b>TSCA Section 12(b) Export Notification</b>	Not regulated	Not applicable
<b>CERCLA Hazardous Substance List (40)</b>	Not listed	Not applicable
<b>SARA 304 Emergency release</b>	Not regulated	Not applicable
<b>OSHA Specifically Regulated</b>	Not listed.	Not applicable
<b>Superfund Amendments and Reauthorization Act of 1986 (SARA)</b>	<b>Hazard categories</b>	Immediate Hazard - Yes Delayed hazard - No Fire hazard - No Pressure hazard - No Reactivity hazard - No
	<b>SARA 302 Extremely hazardous substance</b>	Not listed
	<b>SARA 311/312 hazardous chemical</b>	No
	<b>SARA 313 (TRI reporting)</b>	Not regulated

**Other Federal Regulations**

	<u>Concentrated Product</u>	<u>Diluted Product &gt;1:10</u>
<b>Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List</b>	Not regulated	
<b>Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)</b>	Not regulated	
<b>Safe Drinking Water Act (SDWA)</b>	Nor regulated	

**US State Regulations**

	<u>Concentrated Product</u>	<u>Diluted Product &gt;1:10</u>
<b>US. California Controlled Substances.</b>	Not listed.	Not applicable
<b>US. Massachusetts RTK - Substance List</b>	Glycerol (CAS 56-81-5)	Product quantity below regulation limits
<b>US. New Jersey Worker and Community Right-to-Know Act</b>	Glycerol (CAS 56-81-5)	Product quantity below regulation limits
<b>US. Pennsylvania Worker and Community Right-to-Know Law</b>	Glycerol (CAS 56-81-5)	Product quantity below regulation limits
<b>US. Rhode Island RTK</b>	Not regulated	Not applicable
<b>US. California Proposition 65</b>	California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.	Not applicable

**International Inventories**

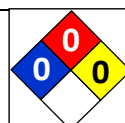
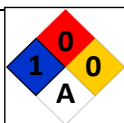
Country(s) or Region	Inventory Name	On Inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IEDSD)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (FINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or are exempt from listing on the inventory administered by the governing country(s).

**16. OTHER INFORMATION**

	Concentrated Product		Diluted Product >1:10	
	HMIS® Ratings	NFPA Ratings	HMIS® Ratings	NFPA Ratings
Health	1	1	0	0
Flammability	0	0	0	0
Instability	0	0	0	0
Personal Protection	A	A	-	-

Symbol



Prepared by: Regulatory Department  
 Issue date: 1/14/2016  
 Revision date: 5/29/2024  
 Version #: 4

**Disclaimer** The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Revision Information** Physical & Chemical Properties: Multiple Properties  
 Regulatory Information: United States.

**END OF SDS**