## **Bio-Chem Zorb**

Mars Fishcare North America, Inc.

Chemwatch: 4658-59 Version No: 4.1.1 Safety Data Sheet according to OSHA HazCom Standard (2012) requirements Issue Date: 06/27/2017 Print Date: 10/18/2018 S.GHS.USA.EN

## **SECTION 1 IDENTIFICATION**

## **Product Identifier**

Product name	Bio-Chem Zorb
Synonyms	Not Available
Other means of identification	Not Available

## Recommended use of the chemical and restrictions on use

Relevant identified uses	Use according to manufacturer's directions.
	For product 108.

## Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	Mars Fishcare North America, Inc.
Address	50 E. Hamilton Street United States
Telephone	215 822 8181
Fax	215 997 1290
Website	Not Available
Email	Not Available

#### **Emergency phone number**

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

## SECTION 2 HAZARD(S) IDENTIFICATION

#### Classification of the substance or mixture

NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification Eye Irritation Category 2B

## Label elements

Hazard pictogram(s)	Not Applicable
SIGNAL WORD	WARNING
Hazard statement(s)	
H320	Causes eye irritation.

## Hazard(s) not otherwise specified

Not Applicable

## Precautionary statement(s) Prevention

P264	Wash all exposed external body areas thoroughly after handling.
Precautionary statement(s) Response	

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P337+P313	7+P313 If eye irritation persists: Get medical advice/attention.	

## Precautionary statement(s) Storage

Not Applicable

## Precautionary statement(s) Disposal

Not Applicable

### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

#### Substances

See section below for composition of Mixtures

## **Mixtures**

CAS No	%[weight]	Name
	30-40	ion-exchange resin, proprietary
1318-02-1	10-30	zeolites
7440-44-0	10-30	carbon, activated
7732-18-5	10-20	water

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

#### **SECTION 4 FIRST-AID MEASURES**

## Description of first aid measures

Eye Contact	<ul> <li>If this product comes in contact with the eyes:</li> <li>Wash out immediately with fresh running water.</li> <li>Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>	
Skin Contact	If skin or hair contact occurs: ► Flush skin and hair with running water (and soap if available). ► Seek medical attention in event of irritation.	
Inhalation	<ul> <li>If fumes or combustion products are inhaled remove from contaminated area.</li> <li>Lay patient down. Keep warm and rested.</li> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>Transport to hospital, or doctor.</li> </ul>	
Ingestion	<ul> <li>Immediately give a glass of water.</li> <li>First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>	

## Most important symptoms and effects, both acute and delayed

See Section 11

#### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5 FIRE-FIGHTING MEASURES

#### Extinguishing media

- + There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

## Special hazards arising from the substrate or mixture

Fire Incompatibility

F	may	result
---	-----	--------

## Special protective equipment and precautions for fire-fighters

	Alert Fire Brigade and tell them location and nature of hazard.
Fire Fighting	Wear breathing apparatus plus protective gloves in the event of a fire.
	Prevent, by any means available, spillage from entering drains or water courses.
	► Non combustible.
	Not considered a significant fire risk, however containers may burn.
	Decomposition may produce toxic fumes of:
Fire/Explosion Hazard	carbon dioxide (CO2)
	other pyrolysis products typical of burning organic material.
	May emit poisonous fumes.
	May emit corrosive fumes.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

## Personal precautions, protective equipment and emergency procedures See section 8

## **Environmental precautions**

See section 12

## Methods and material for containment and cleaning up

Minor Spills	<ul> <li>Remove all ignition sources.</li> <li>Clean up all spills immediately.</li> <li>Avoid contact with skin and eyes.</li> </ul>
Major Spills	Moderate hazard. <ul> <li>CAUTION: Advise personnel in area.</li> <li>Alert Emergency Services and tell them location and nature of hazard.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

#### Precautions for safe handling

Safe handling	<ul> <li>NOTE:</li> <li>Wet, activated carbon removes oxygen from the air thus producing a severe hazard to workers inside carbon vessels and in enclosed or confined spaces where activated carbons might accumulate.</li> <li>Before entry to such areas, sampling and test procedures for low oxygen levels should be undertaken; control conditions should be established to ensure the availability of adequate oxygen supply.</li> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> </ul>
Other information	<ul> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>Store in a cool, dry area protected from environmental extremes.</li> </ul>

### Conditions for safe storage, including any incompatibilities

Suitable container	<ul> <li>Polyethylene or polypropylene container.</li> <li>Check all containers are clearly labelled and free from leaks.</li> </ul>
Storage incompatibility	<ul> <li>Activated carbon, when exposed to air, represents a potential fire hazard due to a high surface area and adsorptive capacity. Freshly prepared material may ignite spontaneously in the presence of air especially at high humidity. Spontaneous combustion in air may occur at 90-100 deg.</li> <li>Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous</li> <li>Avoid reaction with oxidising agents</li> </ul>



**X** — Must not be stored together

**0** — May be stored together with specific preventions

+ — May be stored together

#### SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **Control parameters**

## OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US NIOSH Recommended Exposure Limits (RELs)	zeolites	Synonyms vary depending upon the specific aluminum compound.	5 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	zeolites	Synonyms vary depending upon the specific aluminum compound.	2 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	carbon, activated	Graphite, synthetic: Total dust	15 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	carbon, activated	Graphite, synthetic: Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available

#### EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
zeolites	Zeolites, NaA	30 mg/m3	330 mg/m3	2,000 mg/m3
zeolites	Zeolites, NaX	30 mg/m3	330 mg/m3	2,000 mg/m3
carbon, activated	Carbon; (Graphite, synthetic)	6 mg/m3	16 mg/m3	95 mg/m3

Ingredient	Original IDLH	Revised IDLH
zeolites	Not Available	Not Available
carbon, activated	Not Available	Not Available
water	Not Available	Not Available

## Exposure controls

Appropriate engineering controls	to provide this high level of protection.		
Personal protection			
Eye and face protection	<ul> <li>Safety glasses with side shields.</li> <li>Chemical goggles.</li> <li>Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.</li> </ul>		
Skin protection	See Hand protection below		
Hands/feet protection	<ul> <li>Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.</li> <li>polychloroprene.</li> <li>nitrile rubber.</li> <li>Wear chemical protective gloves, e.g. PVC.</li> <li>Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul>		
Body protection	See Other protection below		
Other protection	<ul> <li>P.V.C. apron.</li> </ul>		

## **Respiratory protection**

Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:001, ANSI Z88 or national equivalent)

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

Appearance	Mixture of black, off-white and brown beads and granules with no odour; insoluble in water.			
Physical state	State     Divided Solid     Relative density (Water = 1)     Not Available			
Odour	Not Available	Partition coefficient n-octanol / water	Not Available	
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable	

pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Applicable	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Not Applicable	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Applicable
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Available

## SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

## SECTION 11 TOXICOLOGICAL INFORMATION

## Information on toxicological effects

Inhaled	Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual. Impurities found in carbons, including iodine, can be toxic. Carbon dusts in the air may cause irritation of the mucous membranes, eyes and skin.
Ingestion	Ingestion of finely divided carbon may produce gagging and constipation. Aspiration does not appear to be a concern as the material is generally regarded as inert and is often used as a food additive.
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	Eyes exposed to carbon particulates may be liable to irritation and burning. These can remain in the eye causing inflammation lasting weeks, and can cause permanent dark dotty discolouration.
Chronic	Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis, caused by particles less than 0.5 micron penetrating and remaining in the lung. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. There is insufficient evidence to suggest that exposure to carbon black causes increased susceptibility to cancer or other ill effects. Some lung changes can occur after a prolonged period of exposure as well as increased strain on the right side of the heart.

Bio-Chem Zorb	TOXICITY Not Available	IRRITATION Not Available
	TOXICITY >4.575 mg/l/1hr <sup>[2]</sup>	IRRITATION Not Available
zeolites	Dermal (rabbit) LD50: >2000 mg/kg <sup>[2]</sup> Oral (rat) LD50: 5000 mg/kg <sup>[2]</sup>	

	TOXICITY	IRRITATION	
carbon, activated	Oral (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Not Available	
	ΤΟΧΙΟΙΤΥ	IRRITATION	
water	TOXICITY		
Water	Not Available	Not Available	
Legend:	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS.		
	Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances		

ZEOLITES	Inhalation (-) LC50: >18.3 mg/l/1hr for sodium aluminosilicate, zeolite A: Skin (rabbit): non-irritating Eye (rabbit): slight [Grace]		
CARBON, ACTIVATED	The substance is classified by IARC as Group 3: <b>NOT</b> classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.		
CARBON, ACTIVATED & WATER	No significant acute toxicological data identified in literature search.		
Acute Toxicity	0	Carcinogenicity	0
Skin Irritation/Corrosion	0	Reproductivity	0
Serious Eye Damage/Irritation	*	STOT - Single Exposure	0
Respiratory or Skin sensitisation	0	STOT - Repeated Exposure	0
Mutagenicity	0	Aspiration Hazard	0

Legend: 💙

X – Data available but does not fill the criteria for classification

✔ – Data available to make classification

🚫 – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

Bio-Chem Zorb	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	>1000mg/L	1
	EC50	48	Crustacea	10001800mg/L	1
zeolites	EC50	96	Algae or other aquatic plants	18mg/L	1
	EC10	96	Algae or other aquatic plants	4.9mg/L	1
	NOEC	432	Algae or other aquatic plants	1mg/L	1
carbon, activated Not Available	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
		Not Available	Not Available	Not Available	Not Available
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
water	Not Available	Not Available	Not Available	Not Available	Not Available
Legend:	Toxicity 3. EP Data 5. ECE1	IWIN Suite V3.12 (QSAR) - Aqu	ope ECHA Registered Substances - Ecotoxi atic Toxicity Data (Estimated) 4. US EPA, Ec t Data 6. NITE (Japan) - Bioconcentration Da	cotox database - Aqua	

**DO NOT** discharge into sewer or waterways.

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
water	LOW	LOW

## **Bioaccumulative potential**

Ingredient

Bioaccumulation

#### Mobility in soil

Ingredient	Mobility
water	LOW (KOC = 14.3)

## SECTION 13 DISPOSAL CONSIDERATIONS

Vaste treatment methods		
Product / Packaging disposal	<ul> <li>Recycle wherever possible.</li> <li>Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.</li> <li>Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material)</li> <li>Decontaminate empty containers.</li> </ul>	

#### **SECTION 14 TRANSPORT INFORMATION**

# Marine Pollutant NO

#### Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

## SECTION 15 REGULATORY INFORMATION

## Safety, health and environmental regulations / legislation specific for the substance or mixture

## ZEOLITES(1318-02-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified	US - Washington Permissible exposure limits of air contaminants
by the IARC Monographs	US List of Active Substances Exempt from the TSCA Inventory
US - California Permissible Exposure Limits for Chemical Contaminants	Notifications (Active-Inactive) Rule
US - Idaho - Limits for Air Contaminants	US NIOSH Recommended Exposure Limits (RELs)
US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
for Air Contaminants	

#### CARBON, ACTIVATED(7440-44-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Air Transport Association (IATA) Dangerous Goods Regulations	US - Rhode Island Hazardous Substance List	
<ul> <li>Prohibited List Passenger and Cargo Aircraft</li> </ul>	US - Tennessee Occupational Exposure Limits - Limits For Air	
US - California OEHHA/ARB - Chronic Reference Exposure Levels and	Contaminants	
Target Organs (CRELs)	US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for	
US - California Permissible Exposure Limits for Chemical Contaminants	Air Contaminants	
US - Hawaii Air Contaminant Limits	US - Washington Permissible exposure limits of air contaminants	
US - Idaho - Toxic and Hazardous Substances - Mineral Dust	US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air	
US - Michigan Exposure Limits for Air Contaminants	Contaminants	
US - Minnesota Permissible Exposure Limits (PELs)	US OSHA Permissible Exposure Levels (PELs) - Table Z1	
US - Oregon Permissible Exposure Limits (Z-1)	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory	
US - Pennsylvania - Hazardous Substance List	US TSCA Chemical Substance Inventory - Interim List of Active	
	Substances	

#### WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

#### **Federal Regulations**

## Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SECTION 311/312 HAZARD CATEGORIES

Flammable (Gases, Aerosols, Liquids, or Solids)

US TSCA Chemical Substance Inventory - Interim List of Active Substances

Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No

## US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4)

None Reported

## State Regulations

## US. CALIFORNIA PROPOSITION 65

None Reported

## **National Inventory Status**

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (water; carbon, activated)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Υ
Japan - ENCS	N (carbon, activated; zeolites)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

## **SECTION 16 OTHER INFORMATION**

Revision Date	06/27/2017
Initial Date	Not Available

## Other information

## Ingredients with multiple cas numbers

Name	CAS No
zeolites	1318-02-1, 37305-72-9, 50809-51-3, 52349-29-8, 53025-48-2, 53060-43-8, 53569-61-2, 53789-62-1, 54693-40-2, 54824-24-7, 56747-83-2, 61710-45-0, 75216-11-4, 76774-74-8, 85117-23-3, 12173-10-3, 92623-86-4, 12321-85-6, 67239-95-6, 12271-42-0, 67240-23-7, 12173-98-7, 12445-20-4, 66732-10-3, 68652-75-5, 12174-18-4, 61027-84-7, 66733-09-3, 68989-22-0, 68989-23-1, 79982-98-2

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios.

#### This document is copyright.

Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.