

BIO-CHEM ZORB

Hazard Alert Code:
MODERATE

Chemwatch Material Safety Data Sheet

Revision No: 4

Chemwatch 4658-59

Issue Date: 23-Dec-2009

CD 2010/1

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

Bio-Chem Zorb

PRODUCT USE

■ Used according to manufacturer's directions. For product 108.

SUPPLIER

Company: Mars Fishcare Inc

Address:

50 East Hamilton Street

Chalfont

PA, 18914

USA

Telephone: +1 215 822 8181

Fax: +1 215 822 1906

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.

HAZARD RATINGS

	Min	Max
Flammability:	0	■
Toxicity:	2	■
Body Contact:	2	■
Reactivity:	2	■
Chronic:	2	■

Min/Nil=0
Low=1
Moderate=2
High=3
Extreme=4

POISONS SCHEDULE

None

RISK

- May cause fire.
- Inhalation may produce health damage*.
- Cumulative effects may result following exposure*.
- May produce discomfort of the eyes and respiratory tract*.
- Limited evidence of a carcinogenic effect*.

* (limited evidence).

SAFETY

- Do not breathe dust.
- Avoid contact with skin.
- Wear eye/ face protection.
- Use only in well ventilated areas.
- Keep container in a well ventilated place.
- In case of contact with eyes rinse with plenty of water and contact Doctor or Poisons Information Centre.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
ion-exchange resin, proprietary		30-40
zeolites	1318-02-1	10-30
carbon, activated	7440-44-0	10-30
water	7732-18-5	10-20

Section 4 - FIRST AID MEASURES

SWALLOWED

-
- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

BIO-CHEM ZORB

Hazard Alert Code:
MODERATE

Chemwatch Material Safety Data Sheet

Revision No: 4

Chemwatch 4658-59

Issue Date: 23-Dec-2009

CD 2010/1

EYE

- If this product comes in contact with the eyes:
 - Wash out immediately with fresh running water.
 - 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.
 - Seek medical attention without delay; if pain persists or recurs seek medical attention.
 - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- If skin or hair contact occurs:
 - Flush skin and hair with running water (and soap if available).
 - Seek medical attention in event of irritation.

INHALED

- - If fumes or combustion products are inhaled remove from contaminated area.
 - Lay patient down. Keep warm and rested.
 - Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
 - 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.
 - Transport to hospital, or doctor.

NOTES TO PHYSICIAN

- 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.

FIRE FIGHTING

- - Alert Fire Brigade and tell them location and nature of hazard.
 - Wear breathing apparatus plus protective gloves for fire only.
 - Prevent, by any means available, spillage from entering drains or water courses.
 - Use fire fighting procedures suitable for surrounding area.
 - DO NOT approach containers suspected to be hot.
 - Cool fire exposed containers with water spray from a protected location.
 - If safe to do so, remove containers from path of fire.
 - Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

- - Non combustible.
 - Not considered a significant fire risk, however containers may burn.
- Decomposition may produce toxic fumes of: carbon dioxide (CO₂), other pyrolysis products typical of burning organic material.
May emit poisonous fumes.
May emit corrosive fumes.

FIRE INCOMPATIBILITY

- - Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

HAZCHEM

None

PERSONAL PROTECTION

Glasses:	Gloves:	Respirator:
Chemical goggles.	PVC chemical resistant type.	Particulate

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- - Remove all ignition sources.
 - Clean up all spills immediately.
 - Avoid contact with skin and eyes.
 - Control personal contact by using protective equipment.
 - Use dry clean up procedures and avoid generating dust.
 - Place in a suitable, labelled container for waste disposal.

MAJOR SPILLS

- Moderate hazard.
 - CAUTION: Advise personnel in area.

BIO-CHEM ZORB

Hazard Alert Code:
MODERATE

Chemwatch Material Safety Data Sheet

Revision No: 4

Chemwatch 4658-59

Issue Date: 23-Dec-2009

CD 2010/1

- Alert Emergency Services and tell them location and nature of hazard.
- Control personal contact by wearing protective clothing.
- Prevent, by any means available, spillage from entering drains or water courses.
- Recover product wherever possible.
- IF DRY: Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal. IF WET: Vacuum/shovel up and place in labelled containers for disposal.
- ALWAYS: Wash area down with large amounts of water and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise Emergency Services.

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

■ NOTE:

- 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.
- 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.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- DO NOT allow material to contact humans, exposed food or food utensils.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

SUITABLE CONTAINER

-
- Polyethylene or polypropylene container.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

-
- 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. C. The presence of moisture in air facilitates the ignition. Drying oils and oxidising oils promote spontaneous heating and ignition; contamination with these must be avoided. Unsaturated drying oils (linseed oil etc.) may ignite following adsorption owing to an enormous increase in the surface area of oil exposed to air; the rate of oxidation may also be catalysed by metallic impurities in the carbon. A similar, but slower effect occurs on fibrous materials such as cotton waste. Spontaneous heating of activated carbon is related to the composition and method of preparation of the activated carbon. Free radicals, present in charcoal, are responsible for autoignition. Self-heating and autoignition may also result from adsorption of various vapours and gases (especially oxygen). For example, activated carbon auto-ignites in flowing air at 452-518 deg. C.; when the base, triethylenediamine, is adsorbed on the carbon (5%) the autoignition temperature is reduced to 230-260 deg. C.. An exotherm is produced at 230-260 deg. C., at high flow rates of air, although ignition did not occur until 500 deg. C.. Mixtures of sodium borohydride with activated carbons, in air, promote the oxidation of sodium borohydride, producing a self-heating reaction that may result in the ignition of charcoal and in the production of hydrogen through thermal decomposition of the borohydride.
- Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous
- Avoid reaction with oxidising agents

STORAGE REQUIREMENTS

-
- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry area protected from environmental extremes.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations

For major quantities:

- Consider storage in bunded areas - ensure storage areas are isolated from sources of community water (including stormwater, ground water, lakes and streams).
- Ensure that accidental discharge to air or water is the subject of a contingency disaster management plan; this may require consultation with local authorities.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS

BIO-CHEM ZORB

Hazard Alert Code:
MODERATE

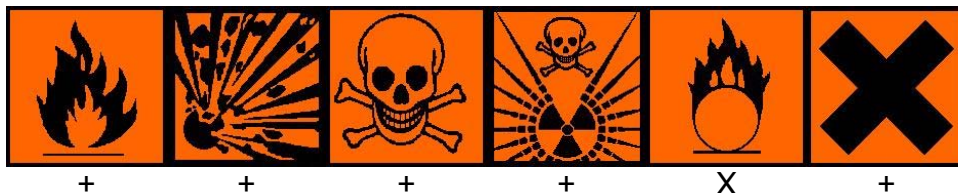
Chemwatch Material Safety Data Sheet

Revision No: 4

Chemwatch 4658-59

Issue Date: 23-Dec-2009

CD 2010/1



X: Must not be stored together

O: May be stored together with specific precautions

+: May be stored together

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	Peak ppm	Peak mg/m ³	TWA F/CC	Notes
Australia Exposure Standards	carbon, activated (Carbon black)		3						

The following materials had no OELs on our records

- CAS:1318-02-1 CAS:37305-72-9 CAS:50809-51-3 CAS:52349-29-8 CAS:53025-48-2 CAS:53060-43-8 CAS:53569-61-2 CAS:53789-62-1 zeolites: CAS:54693-40-2 CAS:54824-24-7 CAS:56747-83-2 CAS:61710-45-0 CAS:75216-11-4 CAS:76774-74-8 CAS:85117-23-3
- water: CAS:7732-18-5

EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m ³)	Revised IDLH Value (ppm)
carbon, activated	1,750	

MATERIAL DATA

BIO-CHEM ZORB:

Not available

ZEOLITES:

■ It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.

At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

NOTE: The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.

CARBON, ACTIVATED:

■ Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents
- lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

The TLV-TWA for carbon black is recommended to minimise complaints of excessive dirtiness and applies only to commercially produced carbon blacks or to soots derived from combustion sources containing absorbed polycyclic aromatic hydrocarbons (PAHs). When PAHs are present in carbon black (measured as the cyclohexane-extractable fraction) NIOSH has established a REL-TWA of 0.1 mg/m³ and considers the material to be an occupational carcinogen.

The NIOSH REL-TWA was "selected on the basis of professional judgement rather than on data delineating safe from unsafe concentrations of PAHs".

This limit was justified on the basis of feasibility of measurement and not on a demonstration of its safety.

NOTE: This substance has been classified by the ACGIH as A4 NOT classifiable as causing Cancer in humans.

- as fine dust: defined as a dust which can reach the alveolar region of the lung.

MAK Group C: There is no reason to fear risk of damage to the developing embryo when MAK and BAT values are observed.

MAK values, and categories and groups are those recommended within the Federal Republic of Germany.

as carbon black CAS RN 1333-86-4

TLV TWA: 3.5 mg/m³ A4

ES TWA: 3 mg/m³

MAK value: 6 mg/m³

WATER:

■ No exposure limits set by NOHSC or ACGIH.

PERSONAL PROTECTION

BIO-CHEM ZORB

Hazard Alert Code:
MODERATE

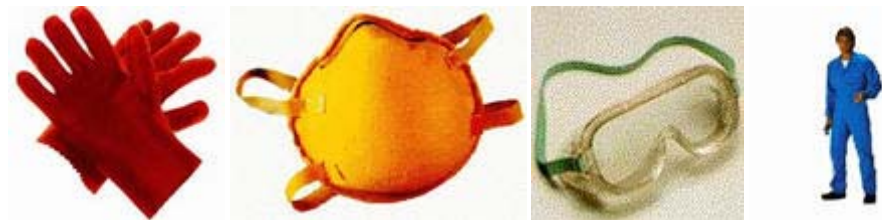
Chemwatch Material Safety Data Sheet

Revision No: 4

Chemwatch 4658-59

Issue Date: 23-Dec-2009

CD 2010/1



EYE

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59]

HANDS/FEET

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

- polychloroprene
- nitrile rubber
- butyl rubber
- fluorocarbon
- polyvinyl chloride

Gloves should be examined for wear and/ or degradation constantly.

- Wear chemical protective gloves, eg. PVC.
- Wear safety footwear or safety gumboots, eg. Rubber

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

RESPIRATOR

Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
10 x ES	P1 Air-line*	--	PAPR-P1 -
50 x ES	Air-line**	P2	PAPR-P2
100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

* - Negative pressure demand ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.

An approved self contained breathing apparatus (SCBA) may be required in some situations.

Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range

- 1: Room air currents minimal or favourable to capture
- 2: Contaminants of low toxicity or of nuisance value only.
- 3: Intermittent, low production.
- 4: Large hood or large air mass in motion

Upper end of the range

- 1: Disturbing room air currents
- 2: Contaminants of high toxicity
- 3: High production, heavy use
- 4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for

BIO-CHEM ZORB

Hazard Alert Code:
MODERATE

Chemwatch Material Safety Data Sheet

Revision No: 4

Chemwatch 4658-59

Issue Date: 23-Dec-2009

CD 2010/1

extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Mixture of black, off-white and brown beads and granules with no odour; insoluble in water.

PHYSICAL PROPERTIES

Does not mix with water.

State	Divided Solid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Applicable	Viscosity	Not Applicable
Boiling Range (°C)	Not Applicable	Solubility in water (g/L)	Immiscible
Flash Point (°C)	Not Applicable	pH (1% solution)	Not Applicable
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not Applicable
Autoignition Temp (°C)	Not Applicable	Vapour Pressure (kPa)	Not Applicable
Upper Explosive Limit (%)	Not Applicable	Specific Gravity (water=1)	Not Available
Lower Explosive Limit (%)	Not Applicable	Relative Vapour Density (air=1)	Not Applicable
Volatile Component (%vol)	Not Applicable	Evaporation Rate	Not Applicable

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

-
- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ 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. Ingestion may produce a black stool.

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 dotted discoloration.

SKIN

■ 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.

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. Coughing, irritation of the upper airways and eye burning may occur.

CHRONIC HEALTH EFFECTS

■ 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. Prime symptom is breathlessness; lung shadows show on X-ray. 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.

TOXICITY AND IRRITATION

■ Not available. Refer to individual constituents.

ZEOLITES:

■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (rat) LD50: >5110 mg/kg

Dermal (rabbit) LD50: >2000 mg/kg

Inhalation (-) LC50: >18.3 mg/l/1hr

for sodium aluminosilicate, zeolite A:

IRRITATION

Skin (rabbit): non-irritating

Eye (rabbit): slight

[Grace]

CARBON, ACTIVATED:

■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

■ No significant acute toxicological data identified in literature search.

The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

WATER:

■ No significant acute toxicological data identified in literature search.

CARCINOGEN

Zeolites other than erionite (clinoptilolite, phillipsite, mordenite, non-fibrous Japanese zeolite, synthetic zeolites)

International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs

Group 3

Carbon black

International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs

Group 2B

Section 12 - ECOLOGICAL INFORMATION

Refer to data for ingredients, which follows:

ZEOLITES:

CARBON, ACTIVATED:

BIO-CHEM ZORB:

■ DO NOT discharge into sewer or waterways.

BIO-CHEM ZORB:

ZEOLITES:

■ Metal-containing inorganic substances generally have negligible vapour pressure and are not expected to partition to air. Once released to surface waters and moist soils their fate depends on solubility and dissociation in water. Environmental processes (such as oxidation and the presence of acids or bases) may transform insoluble metals to more soluble ionic forms. Microbiological processes may also transform insoluble metals to more soluble forms. Such ionic species may bind to dissolved ligands or sorb to solid particles in aquatic or aqueous media. A significant proportion of dissolved/ sorbed metals will end up in sediments through the settling of suspended particles. The remaining metal ions can then be taken up by aquatic organisms.

When released to dry soil most metals will exhibit limited mobility and remain in the upper layer; some will leach locally into ground water and/ or surface water ecosystems when soaked by rain or melt ice. Environmental processes may also be important in changing solubilities.

Even though many metals show few toxic effects at physiological pHs, transformation may introduce new or magnified effects.

A metal ion is considered infinitely persistent because it cannot degrade further.

The current state of science does not allow for an unambiguous interpretation of various measures of bioaccumulation.

The counter-ion may also create health and environmental concerns once isolated from the metal. Under normal physiological conditions the counter-ion may be essentially insoluble and may not be bioavailable.

Environmental processes may enhance bioavailability.

■ For zeolites:

The environmental exposure assessments for detergent-based zeolites were conducted using the HERA detergent scenario (HERA, 2004). The PNEC values used in the risk assessment were derived from the most conservative reliable NOEC values available in the study.

These long-term ecotoxicity data have confirmed the anticipation that the ecological behaviour of the zeolite types used in detergents is very similar. The risk characterisation ratios based upon the discussed exposure and effects data show RCR values < 1 and, hence, do not indicate a risk for any of the environmental compartments, i.e. water, sediment, soil and sewage treatment plants (STP).

The favourable outcome of this environmental risk assessment provides a sound basis for the conclusion that the use of zeolites in detergent products does not pose a risk to the environment.

Supplement to the HERA Report on the Environmental Assessment of Zeolite A; September 2005

Ecotoxicity:

BIO-CHEM ZORB

Hazard Alert Code:
MODERATE

Chemwatch Material Safety Data Sheet

Revision No: 4

Chemwatch 4658-59

Issue Date: 23-Dec-2009

CD 2010/1

for sodium aluminosilicate, zeolite A
Fish toxicity LC50 (96 h): Brachidario rerio 1800 mg/l
Daphnia magna EC50 (48 h): 2808 mg/l
Algal toxicity NOEC (96 h): Scenedesmus subspecies 10 mg/l
Bacterial toxicity (Pseudomonas putida): 330 mg/l, initial inhibition of cell multiplication [Source - Grace].

CARBON, ACTIVATED:

WATER:

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
water	LOW		LOW	HIGH

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible.
- 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.
- Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material)
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM:

None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: ADG7, UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE

None

REGULATIONS

Regulations for ingredients

zeolites (CAS: 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) is found on the following regulatory lists;

"Australia High Volume Industrial Chemical List (HVICL)", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

carbon, activated (CAS: 7440-44-0) is found on the following regulatory lists;

"Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia Therapeutic Goods Administration (TGA) Substances that may be used as active ingredients in Listed medicines", "International Air Transport Association (IATA) Dangerous Goods Regulations", "International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List", "OECD Representative List of High Production Volume (HPV) Chemicals"

water (CAS: 7732-18-5) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)", "IMO IBC Code Chapter 18: List of products to which the Code does not apply", "OECD Representative List of High Production Volume (HPV) Chemicals"

No data for Bio-Chem Zorb (CW: 4658-59)

Section 16 - OTHER INFORMATION

Ingredients with multiple CAS Nos

Ingredient Name	CAS
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

EXPOSURE STANDARD FOR MIXTURES

■ "Worst Case" computer-aided prediction of spray/ mist or fume/ dust components and concentration: ■ Composite Exposure Standard for Mixture (TWA) :3 mg/m³. ■ Operations which produce a spray/mist or fume/dust, introduce particulates to the breathing zone. If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed. Component Breathing Zone ppm Breathing Zone mg/m³ Mixture Conc (%).

Component Mixture Conc (%)	Breathing zone (ppm)	Breathing zone (mg/m ³)
30.0	carbon, activated	3.0000

■ 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.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

BIO-CHEM ZORB

Hazard Alert Code:
MODERATE

Chemwatch Material Safety Data Sheet

Revision No: 4

Chemwatch 4658-59

Issue Date: 23-Dec-2009

CD 2010/1

■ The (M)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. Scale of use, frequency of use and current or available engineering controls must be considered.

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