SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name	Alsorb
Product number	POA-0750
Brand	ReefX®
Substance name	Aluminum oxide
EC no.	215-691-6
CAS no.	1344-28-1

1.2 Relevant identified uses of the substance or mixture and uses advised against

Phosphate and silicate control in aquaria.

1.3 Details of the supplier of the safety data sheet

Name	Live Reef Ltd
Address	8-9 Mountbatten Road EX16 6SW Tiverton Devon UK
Telephone	+44 (0)800 8620270
email	info@livereef.uk

1.4 Emergency telephone number

Live Reef Distribution Ltd
+44 (0)800 8620270

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

2.3 Other hazards

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name	Aluminum oxide
EC no.	215-691-6
CAS no.	1344-28-1
Formula	Al2O3
Molecular weight	101.96
Other names / synonyms	Aluminii oxidum; Alumina; Aluminium oxide; Aluminum oxide (Al2O3); alpha-Alumina; activated Alumina; Aluminum oxide

No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures

4.1 Description of first aid measures

Following inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Following skin contact	Wash off with soap and plenty of water.
Following eye contact	Flush eyes with water as a precaution.
Following ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Aluminum oxide.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

Do not use halocarbon extinguishers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Avoid dust formation.
Avoid breathing vapours, mist or gas.
For personal protection see section 8.

6.2 Environmental precautions
No special environmental precautions required.

6.3 Methods and material for containment and cleaning up
Sweep up and shovel.
Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place.
Keep container tightly closed in a dry and well-ventilated place.
Strongly hygroscopic.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Aluminum oxide (CAS: 1344-28-1 EC: 215-691-6)

Parameter	PEL
Route of exposure	Inhalation
Value	5 mg/m3
Source	Cal/OSHA
Basis / monitoring / notes	OSHA Annotated Table Z-1, www.osha.gov
Parameter	PEL
Route of exposure	Inhalation
Value	5 mg/m3
Source	OSHA
Basis / monitoring / notes	OSHA Annotated Table Z-1, www.osha.gov
Parameter	PEL
Route of exposure	Inhalation
Value	10 mg/m3
Source	Cal/OSHA
Basis / monitoring / notes	OSHA Annotated Table Z-1, www.osha.gov
Parameter	PEL
Route of exposure	Inhalation
Value	15 mg/m3
Source	OSHA

Basis / monitoring / notes	OSHA Annotated Table Z-1, www.osha.gov
Parameter	REL
Route of exposure	Inhalation
Value	See Appendix D
Source	NIOSH
Basis / monitoring / notes	OSHA Annotated Table Z-1, www.osha.gov
Parameter	PEL
Route of exposure	Inhalation
Value	see PNOR
Source	Cal/OSHA
Basis / monitoring / notes	OSHA Annotated Table Z-1, www.osha.gov
Parameter	TWA
Route of exposure	WEL
Value	10 mg/m3

8.2 Exposure controls

Appropriate engineering controls
General industrial hygiene practice.

Personal protection equipment

Pictograms

Eye and face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body protection
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Respiratory protection is not required.
Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure controls
No special environmental precautions required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	White solid
Odour	None
Odour threshold	No data available
pH	No data available
Melting point / freezing point	2,040 °C
Initial boiling point and boiling range	2,980 °C
Flash point	Not applicable
Evaporation rate	No data available
Flammability (solid, gas)	The product is not flammable
Upper/lower flammability limits	No data available
Vapour pressure	1 hPa at 2,158 °C
Vapour density	No data available
Relative density	4.000 g/cm3
Solubilit(ies)	Insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	Not explosive
Oxidising properties	The substance or mixture is not classified as oxidizing.

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
Exposure to moisture.

10.5 Incompatible materials
Strong acids, Strong bases, Chlorine trifluoride, Ethylene oxide, Halogenated hydrocarbon, Oxygen difluoride, Sodium nitrate, Vinyl compounds, Oxygen, Nitrates, Halogens

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions - Aluminum oxide.
Other decomposition products - No data available.
In the event of fire: See section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - male and female - > 10,000 mg/kg
(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - > 2.3 mg/l
(OECD Test Guideline 403)

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 24 h
(OECD Test Guideline 404)

Serious eye damage/irritation
Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)

Respiratory or skin sensitization
Draize Test - Guinea pig
Result: Does not cause skin sensitisation.

Draize Test - Mouse
Result: Does not cause respiratory sensitisation.

Germ cell mutagenicity
Ames test
Bacillus subtilis
Result: negative
(IUCLID)

Carcinogenicity
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
No data available.

STOT-single exposure
No data available.

STOT-repeated exposure
No data available.

Aspiration hazard
No data available.

SECTION 12: Ecological information

12.1 Toxicity
No data available.

12.2 Persistence and degradability
The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
No ecological problems are to be expected when the product is handled and used with due care and attention.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal of the product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Disposal of contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1	UN Number	None
14.2	UN Proper Shipping Name	None
14.3	Transport hazard class(es)	None
14.4	Packing group	None
14.5	Environmental hazards	None
14.6	Special precautions for user	None
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	None

SECTION 15: Regulatory information

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

Massachusetts Right To Know Components
Chemical name: Aluminum oxide
CAS number: 1344-28-1

New Jersey Right To Know Components
Chemical name: Aluminum oxide
CAS number: 1344-28-1

Pennsylvania Right To Know Components
Chemical name: Aluminum oxide
CAS number: 1344-28-1

15.2 Chemical Safety Assessment
Not available.

HMIS Rating

Aluminum oxide	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

NFPA Rating

SECTION 16: Other information

Further information/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.