Safety Data Sheet – NH_3 Selective Scrubber

Section 1 - Identification

Product name	NH_3 Selective Scrubber
Synonym	Part No.: ECO-1033-1, standard-2.83cc
Application of the Material	Used as a gas drying and scrubbing medium. Only use for intended purpose and as directed.
Supplier details	Ecotech Pty Ltd 1492 Ferntree Gully Road, knoxfield, Victoria 3180, Australia
Emergency Contact details:	Safety Officer (03) 9730 7800
Contact Number:	+61 3 9730 7800

Section 2 - Hazards identification

Hazard Classification

This material is classified as Hazardous according to Safe Work Australia[1].

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Classified as dangerous goods according to the criteria of the ADG code.

The product in its marketed form is relatively non-toxic and poses little immediate hazard to the health of workers or emergency response personnel or to the environment in an emergency situation. However, the inner tube of the scrubber contains ortho phosphoric acid which is a Hazardous substance. Hence, care should be taken when using the product not to break it or come in contact with the internal medium. The following Signal words, Hazards and Precautionary statements refer to the scrubber medium which is securely contained in the packaging.

Signal Word

DANGER

Pictogram(s)

Hazards Statements [2]

H290 Maybe corrosive to metals.
H314 Causes severe skin burns and eye damage. Category 1B
H401 Toxic to aquatic life. Category 2

Precautionary Statements [2]

Prevention

P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/protective clothing/eye protection when handling.
P273 Avoid release to the environment.
Refer to section 7 for Handling and Storage and to Section 8 for exposure controls.

Response P301+P330+P331 IF SWALLOWED: rinse mouth. Do not induce vomiting
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present, and easy to do so. Continue rinsing.
P308+P310 IF exposed or concerned: Immediately call a POISON CENTER or doctor/physician.

Disposal P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

Poisons Schedule (SUSMP): S6.

Section 3 – Composition/Information on ingredients

Components of Scrubber

Ingredient	CAS Number	Levels
Ortho-phosphoric acid	7664-38-2	3.6% w/w
Boiling (anti-bumping) stones	N/A	3.6% w/w
Non Hazardous Packaging	N/A	92.8% w/w

Components of bumping granules

Ingredient	CAS Number	Levels
SiO_2	7361-86-9	77.8% w/w
Al_2O_3	1344-28-1	12.1% w/w
Fe_2O_3	1309-37-1	1.5% w/w
Na_2O	1313-59-3	4.4% w/w

Section 4 – First aid measures

Material in its market form:

Ingestion Not a normal route of exposure due to product form.

Skin Not a normal route of exposure due to product form.

Eye Not a normal route of exposure due to the encased packaging.

Inhalation Product in its manufactured form is not inhalable

Contact with scrubber medium:

Eye In case of contact, immediately flush eyes with plenty of clean water for at least 15 minutes. Get medical aid.
Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Wash affected area with soap and plenty of water. Seek medical attention if adverse effects occur.

Ingestion Rinse mouth with water. Do Not induce vomiting. Immediately call a POISON CENTER or doctor.

Inhalation Remove person to fresh air. If breathing difficulty persists seek immediate medical attention.

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Section 5 – Fire-fighting measures

Hazardous combustion products

In case if fire, hazardous decomposition products can occur; carbon dioxide, carbon monoxide and different hydrocarbons.

Extinguishing media

Remove ignition source and fuel supply from fire if safe to do so. Foam, carbon dioxide, dry chemical or water. Prevent contamination of drains and waterways.

Fire fighting

Alert fire brigade and inform them of the hazard.

Wearing breathing apparatus and body protection are required for firefighting personnel.

Use firefighting procedures suitable for surrounding area.

Prevent contamination of drains and waterways.

Hazchem code

2R

Section 6 – Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

Prevent product from entering drains and waterways.

Clean-up and Disposal of Spills – Major and Minor:

Scrubber tubes can be simply gathered and disposed of as necessary. No Smoking.

However, if large numbers of the scrubbers are broken when spilt, releasing the corrosive mixture, absorb spillage with absorbents, neutralize if possible otherwise transfer spilled material to suitable (plastic) container for disposal.

Section 7 – Handling and storage

Handling

Use appropriate personal protective equipment as specified in Section 8.

Handle in a well-ventilated area and with an extractor hood if possible.

Handle and use in a manner consistent with good work practices. Wash thoroughly after handling and before eating/drinking, smoking or using restrooms.

Storage

Store in a closed, dry and well-ventilated area.

Packaging should be adequately labelled and protected from physical damage via strong impacts that may cause the material to break and release the scrubber medium.

Section 8 - Exposure controls / personal protection

Exposure limits

There is no provision for any exposure limits associated with the finished product or the installed product in the Australian HCIS system.

However for the phosphoric acid in the scrubber medium. Australian Workplace Standards for Contaminants lists the following Permissible exposure limits:

8 hours, TWA (mg/m^3) : Phosphoric acid 1.0; STEL(mg/m^3): Phosphoric acid 3.0

Biological Limits

No biological limits have been entered for this product

Personal protective equipment

Eye protection

Safety glasses or goggles with side shields during handling (AS/NZS 1337.1)

Hand and Skin protection

Protective gloves, resistant to acids – nitrile or neoprene gloves. Do not use cotton or leather gloves. Long-sleeved work clothes if significant potential for worker contact exists. Wash hands before eating, drinking, smoking, or using toilet facilities. Wash thoroughly after work using soap and water

Respiratory protection

If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Section 9 – Physical and chemical properties

Physical State	Foam covered glass tube with plastic fittings / connectors
Colour	Black
Appearance	Black foam shrink wrapped tube with opaque plastic fittings.
Bulk density (kg/m^3)	0.73 (bumping granules + ortho phosphoric acid)
UN Class 4 Division 4.1	Not DG 4.1 (bumping granules + ortho phosphoric acid)
UN Class 4 Division 4.3	Not DG 4.3 (bumping granules + ortho phosphoric acid)
UN Class 8	DG 8 (bumping granules + ortho phosphoric acid)
Water Solubility (wt/wt %)	Not soluble (bumping granules + phosphoric acid – inside tube)
pH (20% solution)	1.95 (bumping granules + phosphoric acid – inside tube)
Melting Point	Does not melt. Black foam becomes brittle between 150°C and 200°C due to loss of plasticizers.

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Section 10 –Stability and reactivity

Stability

Stable under normal conditions of use. If released the scrubber medium will be corrosive to metals

Chemical Stability

Stable at normal temperatures and storage conditions

Conditions to avoid

Avoid strong impacts that may cause scrubber packaging to break and release scrubber medium

Hazardous decomposition products

May evolve carbon oxides and hydrocarbons when heated to decomposition.

Hazardous Polymerization

Will not occur.

Section 11 – Toxicological information

No acute or chronic effects are known from exposure to intact scrubbers

Primary Routes of Exposure:

None for the intact product. Inhalation and potential exposure to eyes, hands, lungs or other body parts are made with internal scrubber medium emitted from breakages.

Acute Effects

For bumping granules + ortho phosphoric acid breathing mist may cause physical respiratory irritation. Eye and skin contact may cause severe burns.

Skin contact

For bumping granules + ortho phosphoric acid cause severe skin and burns. Category 1B

Eye contact

For bumping granules + ortho phosphoric serious eye damage can be caused. Category 1.

Carcinogenicity: Not classified

Tetrogenicity: Not classified

Mutagenicity: Not classified

Reproductive Effects: Not classified.

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Section 12 - Ecological information

Toxicity: Ecology – General: For bumping granules + ortho phosphoric harmful to aquatic life

Persistence and Degradability: Not established

Bioaccumulative Potential: Not established

Mobility on Soil: Not available

Section 13 - Disposal Considerations

Disposal method:

Preferred options of disposal are recycling and landfill. Dispose of waste at an appropriate waste disposal facility according to current applicable laws and regulations.

Avoid release to the environment. The scrubber material is hazardous to aquatic environment. Keep out of sewers and waterways.

Section 14 - Transport information

This material is classified as dangerous goods according to ADG / IMDG/ IATA dangerous goods protocols.

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG /IMO)	AIR TRANSPORT (IATA)
14.1 UN Number	1805	1805	1805
14.2 Proper Shipping Name	None Allocated	None Allocated	None Allocated
14.3 Transport Hazard Class	8	8	8
14.4 Packaging Group	III	III	III
14.5 Environmental Hazards	Marine pollutant: No	Marine pollutant: No	Marine pollutant: No
14.6 Emergency Response	ERG Number: 154	EMS: F-A, S-B	ERG code(IATA): 8L

Section 15 – Regulatory information

Poisons Schedule

S6

Regulations

Fire Hazard No

Reactive Hazard No

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Release of Pressure	No
Acute Health Hazard	Yes
Chronic Health Hazard	No
Corrosive Hazard	Yes

All components are listed on the Australian Inventory of Chemcial Substances (AICS).

Section 16 – Other information

Hazard ratings according to: HCIS [2]

SDS Distribution

This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of anyone in contact with this product.

Acronyms

CAS	Chemical Abstract Services
ADG	Australian Dangerous Goods
SDS	Safety Data Sheet
IMO	International Maritime Organization
IATA	International Air Transport Association
TWA	Time weighted Average
STEL	Short term exposure limit
PEL	Permissible Exposure Limit

Key Legend

1	Hazardous Chemicals Identification System – Safe Work Australia
2	Globally Harmonized System of Classification of labelling Chemicals (GHS)

Created

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