SAFETY DATA SHEET

1. Identification

Product identifier **AKWASEAL™ CATALYST**

Other means of identification None.

Recommended use of the chemical and restrictions on use

Recommended use Not available.

Restrictions on use Not available.

Details of manufacturer or importer

Manufacturer

Company name AMCOL Australia Pty Ltd.

Address 50 Crowle Street
North Geelong, VIC 3215
Australia

Telephone General Information +61 03 52782555

Website http://www.volclay.com.au/

E-mail safetydata@mineralstech.com

Emergency phone number .

Asia Pacific 1 760 476 3960 Access Code 333562, (Available 24 hours a day. SDS/Product information may not be available for the Emergency Services.)

Australia 61 1 800 686 951 Access Code 333562, (Available 24 hours a day. SDS/Product information may not be available for the Emergency Services.)

2. Hazard(s) identification

Classification of the hazardous chemical

Physical hazards Not classified.

Health hazards Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2

Environmental hazards Not classified.

Label elements, including precautionary statements

Hazard symbol(s)

Exclamation mark

Signal word Warning

Hazard statement(s) Causes skin irritation. Causes serious eye irritation.

Precautionary statement(s)

Prevention Keep out of reach of children. Read label before use. Wear protective gloves. Wear eye/face protection. Not applicable.

Response If medical advice is needed, have product container or label at hand. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Storage Store in accordance with local/regional/national/international regulation.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Other hazards which do not result in classification None known.

Supplemental information None.

3. Composition/information on ingredients

Mixture

Identity of chemical ingredients	CAS number and other unique identifiers	Concentration of ingredients
1,4-Diazabicyclo[2.2.2]octane	280-57-9	5 - < 10
BIS (2-DIMETHYLAMINOETHYL) ETHER	3033-62-3	5 - < 10
Other components below reportable levels		80 - < 90

#: This substance has workplace exposure limit(s).
vPvB: very persistent and very bioaccumulative substance.
PBT: persistent, bioaccumulative and toxic substance.

Composition comments This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

4. First-aid measures

Description of necessary first aid measures

Inhalation Move to fresh air. If symptoms are experienced, remove source of contamination or move victim to fresh air. Get medical attention immediately.

Skin contact Remove contaminated clothing. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Call a physician or Poison Control Center immediately. Drink 1 or 2 glasses of water. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention if symptoms occur.

Personal protection for first-aid responders If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Symptoms caused by exposure Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Medical attention and special treatment Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Water Fog. Foam. Dry chemical powder. Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical None known.

Special protective equipment and precautions for fire fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out. Do not scatter spilled material with high pressure water streams.

Fire fighting equipment/instructions Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out. Containers can build up pressure if exposed to heat (fire).

Hazchem code Not available.

General fire hazards Container may explode in heat of fire. Vapors may form explosive mixtures with air. No unusual fire or explosion hazards noted.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. No special environmental precautions required.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Ventilate the contaminated area. Large Spills: Stop leak if you can do so without risk. Use clean non-sparking tools to collect absorbed material. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Clean contaminated surface thoroughly. 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. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Never return spills in original containers for re-use.
Other issues relating to spills and releases	Clean up in accordance with all applicable regulations.

7. Handling and storage

Precautions for safe handling	Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Avoid contact with eyes, skin, and clothing. Use only in area provided with appropriate exhaust ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	The pressure in sealed containers can increase under the influence of heat. Keep away from heat and sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in original tightly closed container. Keep tightly closed in a dry, cool and well-ventilated place. Keep this material away from food, drink and animal feed. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls and personal protection

Control parameters Follow standard monitoring procedures.

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
BIS (2-DIMETHYLAMINOETHYL) ETHER (CAS 3033-62-3)	STEL	0.15 ppm
	TWA	0.05 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines No exposure standards allocated.

US ACGIH Threshold Limit Values: Skin designation

BIS (2-DIMETHYLAMINOETHYL) ETHER (CAS 3033-62-3)	Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, for example personal protective equipment (PPE)

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection	
Hand protection	Not normally needed. Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Where contact is likely, wear chemical-resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield. Use of butyl rubber or nitrile gloves is recommended
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Wear a positive-pressure supplied-air respirator. Respirator with filter for organic vapor
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	When using do not smoke. When using do not eat or drink. Keep away from food, drink and animal feeding stuffs. 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 equipment to remove contaminants. Use good industrial hygiene practices in handling this material.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Color	Clear to green.
Odor	Amine-like.
Odor threshold	Not available.
pH	9 - 10 9 - 10
Melting point/freezing point	316.4 °F (158 °C) estimated
Initial boiling point and boiling range	345.2 °F (174 °C) estimated
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0.07 hPa estimated 0 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	20 - 60 cps 20 - 60 cps
Viscosity temperature	77 °F (25 °C)
Other physical and chemical parameters	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Will not occur.
Conditions to avoid	Direct sources of heat. High temperatures. Contact with incompatible materials.
Incompatible materials	Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions. This product may react with metals, halogens.
Hazardous decomposition products	Irritating and/or toxic fumes and gases may be emitted upon the products decomposition. Upon decomposition, this product may yield oxides of nitrogen and ammonia, carbon dioxide, carbon monoxide and other low molecular weight hydrocarbons.

11. Toxicological information

Information on possible routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to exposure	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Components	Species	Test Results
1,4-Diazabicyclo[2.2.2]octane (CAS 280-57-9)		
Acute		
Oral		
LD50	Guinea pig	2250 mg/kg
	Rabbit	1100 mg/kg
	Rat	1700 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	None known.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Not listed by ACGIH, IARC, NIOSH, NTP OR OSHA.
Reproductive toxicity	Contains no ingredient listed as toxic to reproduction
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood.
Other information	Symptoms may be delayed.

12. Ecological information

Ecotoxicity	This product has no known eco-toxicological effects. In high concentrations, this product may be dangerous to aquatic life and fouling to shorelines.

Components		Species	Test Results
1,4-Diazabicyclo[2.2.2]octane (CAS 280-57-9)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	1510 - 1980 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability Not established.

Bioaccumulative potential Not established.

Mobility in soil Not established.

Other adverse effects Not established.

13. Disposal considerations

Disposal methods Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Residual waste 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).

Contaminated packaging 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. Offer rinsed packaging material to local recycling facilities.

14. Transport information

ADG

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

Safety, health and environmental regulations

National regulations This Safety Data Sheet was prepared in accordance with Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals (23/12/2011).

Australia Medicines & Poisons Appendix A

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix B

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix C

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix D

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix E

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix F

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix G

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix H

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix I

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix J

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix K

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 2

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 3

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 4

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 5

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 6

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 7

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 8

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 9

Poisons schedule number not allocated.

High Volume Industrial Chemicals (HVIC)

Not listed.

Importation of Ozone Deleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10)

Not listed.

National Pollutant Inventory (NPI) substance reporting list

Not listed.

Prohibited Carcinogenic Substances

Not regulated.

Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)

Not listed.

Resricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)

Not listed.

Restricted Carcinogenic Substances

Not regulated.

International regulations

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. The product does not need to be labelled in accordance with EC directives or respective national laws.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
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 exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date 17-March-2016

Further information This safety datasheet only contains information relating to safety and does not replace any product information or product specification. HMIS® is a registered trade and service mark of the NPCA.

References EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents

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