

MITEQ BR128

Chemwatch Independent Material Safety Data Sheet
Issue Date: 16-Feb-2012
9317SP

CHEMWATCH 30-4033
Version No:2.0
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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

MITEQ BR128

PROPER SHIPPING NAME

TETRAETHYL SILICATE

PRODUCT USE

Modifying agent for building materials.

SUPPLIER

Company: Micon Construction Products Pty Ltd

Address:

4/273 Wickham Road

Moorabbin

VIC, 3189

Australia

Telephone: +61 3 9532 5177

Fax: +61 3 9532 5168

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

RISK

Risk Codes

R10

R20

R36/37

Risk Phrases

• Flammable.

• Harmful by inhalation.

• Irritating to eyes and respiratory system.

SAFETY

Safety Codes

S23

S24

S25

S36

S37

S39

S51

S09

S401

Safety Phrases

• Do not breathe gas/fumes/vapour/spray.

• Avoid contact with skin.

• Avoid contact with eyes.

• Wear suitable protective clothing.

• Wear suitable gloves.

• Wear eye/face protection.

• Use only in well ventilated areas.

• Keep container in a well ventilated place.

• To clean the floor and all objects contaminated by this material, use water and detergent.

• Keep container tightly closed.

• Keep away from food, drink and animal feeding stuffs.

• In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.

S46 • If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

S60 • This material and its container must be disposed of as hazardous waste.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
tetraethyl silicate	78-10-4	25-50
ingredients non- hazardous		balance
reacts with water or moisture to form ethanol		^

continued...

Section 4 - FIRST AID MEASURES

SWALLOWED

- Rinse mouth out with plenty of water.
- If poisoning occurs, contact a doctor or Poisons Information Centre.
- If swallowed do NOT induce vomiting.
 - If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
 - Observe the patient carefully.
 - Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

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 contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- 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.

NOTES TO PHYSICIAN

- Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.

FIRE/EXPLOSION HAZARD

- Liquid and vapour are flammable.
 - Moderate fire hazard when exposed to heat or flame.
 - Vapour forms an explosive mixture with air.
 - Moderate explosion hazard when exposed to heat or flame.
- Other combustion products include: carbon dioxide (CO₂), silicon dioxide (SiO₂).

FIRE INCOMPATIBILITY

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

HAZCHEM

3Y

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Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.

MAJOR SPILLS

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid generating and breathing mist.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of overexposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

SUITABLE CONTAINER

- Plastic container.
- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- Segregate from water, strong alkalis and strong acids.

STORAGE REQUIREMENTS

- Keep dry.
 - Store in approved flammable liquid storage area.
 - No smoking, naked lights/ignition sources.
 - Keep containers securely sealed.
 - Store away from incompatible materials in a cool, dry, well-ventilated area.
- Moisture sensitive.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³
Australia Exposure Standards	Miteq BR128 (Ethyl silicate)	10	85

MATERIAL DATA

MITEQ BR128:

- None assigned. Refer to individual constituents.

TETRAETHYL SILICATE:

- For ethyl silicate (syn: tetraethyl silicate)
OES TWA: 10 ppm, 87 mg/m³; STEL: 30 ppm, 260 mg/m³
Odour Threshold Value: 3.6 ppm (detection), 5 ppm (recognition)
Short exposures effect the eyes and nose as follows:
3000 ppm - extremely irritating and intolerable.
1500 ppm - lachrimatory and stinging
700 ppm - mild stinging
250 ppm - slightly irritating
Odour threshold: 5 ppm

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Odour detection: 85 ppm

IDLH Level: 700 ppm

The TLV-TWA is thought to be protective against irritation to the eye and mucous membranes.

PERSONAL PROTECTION

RESPIRATOR

• Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE

- Safety glasses with side shields; or as required,
- 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], [AS/NZS 1336 or national equivalent].

HANDS/FEET

- Rubber gloves.
- Polyethylene gloves.
- Safety footwear.

OTHER

- Handle and open container with care.
- Overalls.
- Eyewash unit.

ENGINEERING CONTROLS

- Use in a well-ventilated area.

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Colourless to yellowish flammable liquid with a slight odour; does not mix with water.

PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

Floats on water.

State	Liquid	Molecular Weight	Not available
Melting Range (°C)	Not Available	Viscosity	1.6 cSt@ 25°C
Boiling Range (°C)	Not Available	Solubility in water (g/L)	Immiscible
Flash Point (°C)	40	pH (1% solution)	Not applicable
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not applicable
Autoignition Temp (°C)	230	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	~23	Specific Gravity (water=1)	0.997
Lower Explosive Limit (%)	~1.3	Relative Vapour Density (air=1)	>1
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available

continued...

Section 10 - STABILITY AND REACTIVITY**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**

- Considered an unlikely route of entry in commercial/industrial environments. The material is highly discomforting. Ingestion may result in nausea, abdominal irritation, pain and vomiting.

EYE

- This material can cause eye irritation and damage in some persons.

SKIN

- The liquid may produce skin discomfort following prolonged contact. Defatting and/or drying of the skin may lead to dermatitis. The material may accentuate any pre-existing dermatitis condition. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

INHALED

- The vapour is discomforting. Acute effects from inhalation of high vapour concentrations may be chest and nasal irritation with coughing, sneezing, headache and even nausea. Inhalation of vapour may aggravate a pre-existing respiratory condition such as asthma, bronchitis, emphysema.

CHRONIC HEALTH EFFECTS

- Principal routes of exposure are by accidental skin and eye contact and by inhalation of vapours especially at higher temperatures. Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following. As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

TOXICITY AND IRRITATION

- Not available. Refer to individual constituents.

Section 12 - ECOLOGICAL INFORMATION

This material and its container must be disposed of as hazardous waste.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
tetraethyl silicate	HIGH	No Data Available	LOW	MED

Section 13 - DISPOSAL CONSIDERATIONS

- Consult manufacturer for recycling options and recycle where possible .
- Consult State Land Waste Management Authority for disposal.
- Incinerate residue at an approved site.

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- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: FLAMMABLE LIQUID

HAZCHEM:

3Y (ADG7)

ADG7:

Class or Division:	3	Subsidiary Risk:	None
UN No.:	1292	Packing Group:	III
Special Provision:	None	Limited Quantity:	5L
Portable Tanks & Bulk Containers - Instruction:	T2	Portable Tanks & Bulk Containers - Special Provision:	None
Packagings & IBCs - Packing Instruction:	None	Packagings & IBCs - Special Packing Provision:	P001 IBC03 LP01

Name and Description: None

Air Transport IATA:

ICAO/IATA Class:	3	ICAO/IATA Subrisk:	None
UN/ID Number:	1292	Packing Group:	III
Special provisions:	None		

Shipping name:TETRAETHYL SILICATE

Maritime Transport IMDG:

IMDG Class:	3	IMDG Subrisk:	None
UN Number:	1292	Packing Group:	III
EMS Number:	F- E, S- D	Special provisions:	None
Limited Quantities:	5 L		

Shipping name:TETRAETHYL SILICATE

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE None

REGULATIONS

Regulations for ingredients

tetraethyl silicate (CAS: 78-10-4) is found on the following regulatory lists;

"Australia Exposure Standards", "Australia Hazardous Substances", "IMO IBC Code Chapter 18: List of products to which the Code does not apply", "International Council of Chemical Associations (ICCA) - High Production Volume List"

No data for Miteq BR128 (CW: 30-4033)

Section 16 - OTHER INFORMATION

■ 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.

■ 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.

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Section 16 - OTHER INFORMATION

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Issue Date: 16-Feb-2012

Print Date: 16-Feb-2012

This is the end of the MSDS.