



# COMAX

HIGH PERFORMANCE LOW-CARBON

## Material Safety Data Sheet



## 1. Identification of Substance & Company

### Product

<b>Product name</b> ECOMAX RMC Concrete (wet)	<b>Standard</b> 2020	<b>Hazchem code</b> NA
<b>Generic names</b> Ready Mixed Concrete, Pump Concrete, Shotcrete, Nofines Concrete, Kerbmix	<b>UN number</b> NA	<b>Uses</b> Building and Civil Engineering Construction
<b>HSNO approval</b> HSR002544	<b>Proper Shipping Name</b> NA	
<b>Approval description</b> Construction Products (Subsidiary hazard) Group	<b>DG class</b> NA	
	<b>Packaging group</b> NA	

### Company Details

<b>Company</b> ECOMAX RMC Ltd	<b>Address</b> 35 Woodward St, Frankton, Hamilton 3204	<b>Telephone</b> +64 7 847 5209
----------------------------------	---	------------------------------------

**Emergency Telephone Number: 027 233 1835**

## 2. Hazard Identification

### Approval

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002544, Construction Products (Subsidiary hazard) Group Standard 2020). The substance has been classified as hazardous according to the criteria in the Hazardous substances (Hazard Classification) Notice 2020.

### GHS Classes

Skin irritant category 2  
Eye damage category 1

### Hazard Statements

H315 - Causes skin irritation.  
H318 - Causes serious eye damage.

*Note: concrete is considered irritating to the skin under the classification system; however, there is a possibility of burns if wet concrete is left in contact with the skin for a prolonged time.*

### SYMBOLS



**DANGER**



**CORROSIVE**

### Other Classifications

No other classifications are known to apply when cement/concrete is wet.  
See SDS for ECOMAX RMC Concrete, dry.

### Precautionary Statements

<b>Prevention</b>	<b>P103</b>	Read label before use.
	<b>P102</b>	Keep out of reach of children.
	<b>P201</b>	Obtain special instructions before use.
	<b>P202</b>	Do not handle until all safety precautions have been read and understood.
	<b>P260</b>	Do not breathe dust.
	<b>P264</b>	Wash hands thoroughly after handling.
	<b>P270</b>	Do not eat, drink or smoke when using this product.
	<b>P280</b>	Wear protective gloves/eye protection.
<b>Response</b>	<b>P101</b>	If medical advice is needed, have product container or label at hand.
	<b>P302+P352</b>	IF ON SKIN: Wash with plenty of soap and water.
	<b>P332+P313</b>	If skin irritation occurs: Get medical advice/attention.
	<b>P362</b>	Take off contaminated clothing and wash before re-use.
	<b>P305+P351+P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	<b>P310</b> <b>P308+P313</b>	Immediately call a POISON CENTRE or doctor/physician. IF exposed or concerned: Get medical advice/attention.
<b>Storage</b>	<b>P405</b>	Store locked up.
<b>Disposal</b>	<b>P501</b>	Dispose of contents/container in accordance with local/regional/national/international regulation.

## 3. Composition / Information on Ingredients

Component	CAS/ Identification	Conc (%)
Portland Cement	65997-15-1	10-70%
Aggregates may contain crystalline silica	14808-60-7	10-90%
Metal oxides – not contributing to GHS classes	Mixture	3-6%
Additives	Various	0-5%
Non hazardous substances including polymers	Proprietary	0-20%
Water	7732-18-5	30-50

Aggregates may contain fillers such as sand, flyash and slag. This is a commercial product whose exact ratio of components may vary slightly. Trace quantities of impurities are also likely.

## 4. First Aid

### General Information

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel that you may have been harmed, burned or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

#### Recommended first aid facilities

Ready access to running water is recommended. Accessible eyewash is recommended.

### Exposure

- Swallowed**      **IF SWALLOWED** Do NOT induce vomiting. Rinse mouth. Contact a doctor if you feel unwell.
- Eye contact**    **IF IN EYES** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Apply continuous irrigation with water for at least 15 minutes holding eyelids apart. Immediately call a POISON CENTER or doctor.
- Skin contact**    **IF ON SKIN** Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
- Inhaled**          **IF INHALED** If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor. If experiencing respiratory symptoms: Immediately call a POISON CENTER or doctor/physician.

### Advice to Doctor

Treat symptomatically. See Section 11 for information on potential long term health effects from exposure to very fine crystalline silica dust.

## 5. Firefighting Measures

### Fire and explosion hazards:

There are no specific risks for fire/explosion for this chemical. It is non-combustible.

### Suitable extinguishing substances:

Not applicable.

### Unsuitable extinguishing substances:

Unknown.

### Products of combustion:

Product does not burn. Dust may form irritating atmosphere. Product will react exothermically with water. Contaminated water will be strongly alkaline. Product may decompose in a fire and produce toxic or corrosive fumes.

### Protective equipment:

Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.

### Hazchem code:

NA

## 6. Accidental Release Measures

### Containment

If greater than 1000kg is stored, secondary containment is required. Emergency plans to manage any potential spills must be in place. Prevent spillage from spreading or entering soil, waterways or drains.

### Emergency procedures

In the event of large spillage (>100kg) of the dry or wetted mixture alert the fire brigade to location and give brief description of hazard. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain spill. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses.

### Clean-up method

Collect product avoiding any dust formation, and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

### Disposal

Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.

### Precautions

The dust may form irritating atmosphere. Contaminated water will be strongly alkaline. Do not allow contaminated water to enter the environment. Wear protective equipment to prevent skin and eye contamination and the inhalation of dust. Work up wind or increase ventilation.

## 7. Storage & Handling

### Storage

Avoid storage of harmful substances with food. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Keep in a cool, dry place. Avoid contact with incompatible substances as listed in Section 10.

### Handling

Keep exposure to a minimum, and minimise the quantities kept in work areas. Minimise dust generation and accumulation. See section 8 with regard to personal protective equipment requirements. Avoid skin and eye contact and inhalation of dust.

## 8. Exposure Controls / Personal Protective Equipment

### Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m<sup>3</sup> for respirable particulates and 10mg/m<sup>3</sup> for inhalable particulates when limits have not otherwise been established.

### NZ Workplace Exposure Stds

Ingredient	WES-TWA	WES-STEL
Crystalline silica Cement	0.05mg/m <sup>3</sup> (respirable dust) 3mg/m <sup>3</sup> (respirable dust)	data unavailable data unavailable

### Engineering Controls

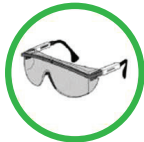
In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation

## Personal Protective Equipment

### General

Personal Protective Equipment (PPE) should not be used as the primary means of exposure protection, except in the event of an accident or emergency situation or where all other means of protection have proven to be inadequate. Clean PPE after use or dispose of as appropriate. Store PPE for re-use in a clean place. Regular training on the correct use of PPE should be provided. In particular the correct fitting and use of respirators and where applicable the cleaning of respirators should be undertaken.

### Eyes



Protect eyes with goggles, safety glasses or full face mask. Avoid wearing contact lenses. Select eye protection in accordance with AS/NZS 1337.

### Skin



Avoid repeated or prolonged skin contact. Wear overalls, waterproof boots and impervious alkali-resistant gloves (e.g., nitrile, PVC, rubber, neoprene). Tuck overalls inside boots and seal with duct tape to reduce risk of concrete entering boots. Protective gloves or suitably resistant material must comply with AS 2161. Replace frequently.



Gloves should be checked for tears or holes before use. Protective clothing must comply with AS 2919, AS3765.1 or AS3765.2. PVC or rubber boots must comply with AS/NZS 2210.2 and selected and maintained in accordance with AS/NS2210.1. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking.



Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking. Take special care to ensure that cuts/abrasions or irritated skin are not exposed to this product. It is also important to ensure that wet concrete does not become trapped within gloves, boots or clothing – leaving cement in contact with the skin for extended period of time may cause skin burns.

It is important that skin is also covered when concrete dust is created (e.g., sanding, grinding, crushing or cutting concrete). The dust may also irritate and/or damage the skin.

### Respiratory

The product does not present an inhalation hazard when wet. However when dust is created a well fitted dust mask should be used (this is not recommended when exposure is close to the WES). Refer to SDS for ECOMAXRMC Concrete, dry.

## WES Additional Information

Not applicable

## 9. Physical & Chemical Properties

### Appearance

Wetted concrete

### Odour

not specified

### Odour Threshold

no data

### pH

~12

### Freezing/melting point

no data

### Boiling Point

no data

### Flashpoint

non flammable

### Flammability

non flammable

### Upper & lower flammable limits

no LEL or UEL

### Vapour pressure

no data

### Vapour density

no data

### Specific gravity/density

2300-2400kg/m<sup>3</sup>

### Solubility

forms a slurry (pH >12), insoluble in hardened state

### Partition coefficient

no data

### Auto-ignition temperature

no data

### Decomposition temperature

no data

### Viscosity

no data

### Particle Characteristics

powder

## 10. Stability & Reactivity

### Stability

This product is unlikely to react or decompose under normal storage conditions. This product will not undergo polymerisation reactions. Keep dry until used.

### Conditions to be avoided

Containers should be kept closed in order to avoid contamination.

### Incompatible groups

Strong acids, ammonium salts, and aluminum metal.

### Substance Specific Incompatibility

Cement products dissolves in hydrofluoric acid producing corrosive silicon tetra fluoride gas. Silicates react with powerful oxidizers such as fluorine, chlorine, trifluorides, and oxygen difluoride.

### Hazardous decomposition products

Does not readily decompose. Respirable dust particles may be generated when concrete is sawed, drilled, sanded or grinded.

### Hazardous reactions

Will not polymerise



## 11. Toxicological Information

### Summary

The following summary is for wetted concrete:

**IF IN EYES:** Contact with wet (unhardened) concrete, mortar, cement mixtures or concrete dust can cause effects ranging from irritation to serious eye damage/burns and blindness. The pH of the mixture is >12. Note: the level of irritation/damage is dependent on the quantity of the dust, the pH, and the length of time exposed. E.g., if dust is washed out of the eye immediately, effects will be minor. However, if dust or wet concrete is left in contact with the eye, serious damage/blindness could result.

**IF ON SKIN:** Contact with wet (unhardened) concrete, mortar, cement, or cement mixtures can cause skin irritation, severe chemical burns (third degree). Drying concrete is hygroscopic, i.e. absorbs water. It will draw water away from any material it contacts-including skin. This may cause irritation – particularly in hot conditions or when sweating. Brief exposure to the skin (i.e., washed off immediately) will result in irritation. However, if the concrete or dust is left on the skin for an extended time (e.g., if inside boots or absorbed through overalls), burns to the skin are possible. Thickening of the skin and/or rash is also possible.

**IF SWALLOWED:** Ingestion of this product may cause gastrointestinal irritation. For toxicological information on the dry concrete or concrete dust, refer to the SDS ECOMAX RMC concrete, dry

### Supporting Data

#### Acute

- **Oral** The estimated LD50 (oral, rat) for the mixture is > 2,000 mg/kg. Ingestion of this product may cause gastrointestinal irritation and burns to the mouth.
- **Aspiration** This mixture is not considered an aspiration hazard.
- **Dermal** Using LD50's for ingredients, the Acute Toxicity Estimate (ATE) (dermal) for the mixture is >2,000 mg/kg.
- **Inhaled** Using LD50's for ingredients, the Acute Toxicity Estimate (ATE) (inhalation) for the mixture is >5mg/L/4h.
- **Eye** Cement, is considered to be an eye corrosive. pH >11, if wetted. Dust may also be irritating to eye (mechanical irritation)
- **Skin** Wet product may be corrosive to the skin as pH >11

#### Chronic

- **Sensitisation** No ingredient present at concentrations > 0.1% is considered a sensitizer.
- **Mutagenicity** No ingredient present at concentrations > 0.1% is considered a mutagen.
- **Carcinogenicity** This mixture may contain crystalline silica. Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC Group 1). This mixture is wetted concrete and no respirable particles are present. Refer to SDS for dry concrete is dust or dry concrete is present.
- **Reproductive / Developmental** No data for mixture is available. No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
- **Systemic** This mixture may contain crystalline silica. Crystalline silica triggers STOT RE cat 1 classification if it is in the form of a fine respirable dust in an occupational (chronic exposure) setting. This mixture does not contain respirable particles (wetted). Refer to SDS for dry concrete is dust or dry concrete is present.
- **Aggravation of existing conditions** Persons with existing lung conditions may be at a higher risk of further adverse health effects (as above). Smokers have an increased risk of lung cancer and silicosis.

## 12. Ecological Data

### Summary

Wet concrete is considered to be harmful in the environment when in a soluble form. This is primarily due to the high pH of the product. Do not allow product to enter drains and waterways.

### Supporting Data

#### Aquatic

No data for mixture is available. Using EC50's for ingredients, the estimated EC50 for the mixture is between 1 and 100 mg/L. This implies that concrete should be considered harmful in the aquatic environment. Water contaminated with this product is alkaline and should not be allowed to enter the environment.

#### Bioaccumulation

Not applicable

#### Degradability

Not applicable (predominantly natural products)

#### Soil

No data available for the mixture. The soil toxicity value for the mixture is estimated to be  $\geq 100$  mg/kg.

#### Terrestrial vertebrate

See acute toxicity.

#### Terrestrial invertebrate

The mixture is not considered harmful to terrestrial invertebrates.

#### Biocidal

Not designed as a biocide.

## 13. Disposal Considerations

### Restrictions

There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.

### Disposal method

Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.

### Contaminated packaging

Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging.

## 14. Transport Information

### Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

This mixture is not considered a hazardous substance for transport on land.

**UN number:** NA

**Precautions:** NA

**Packing group:** NA

**Class(es):** NA

**Proper shipping name:** NA

**Hazchem code:** NA

## 15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002544, Construction Products (Subsidiary hazard) Group Standard 2020. All ingredients appear on the New Zealand Inventory of Chemicals NZIoC.

### Specific Controls

#### Key workplace requirements are:

##### SDS

To be available within 10 minutes in workplaces storing any quantity.

##### Inventory

An inventory of all hazardous substances must be prepared and maintained.

##### Packaging

All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied

##### Labelling

Must comply with the Hazardous Substances (Labelling) Notice 2017.

##### Emergency plan

Required if > 1000kg is stored.

##### Signage

Required if > 1000kg is stored.

##### Certified handler

Not required.

##### Location compliance certificate

Not required.

##### Tracking

Not required.

##### Flammable zone

Not required.

##### Bunding & secondary containment

Required if > 1000kg is stored.

##### Fire extinguisher

Not required.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

### Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

## 16. Other Information

### Abbreviations

#### Approval Code

Approval HSR002544, Construction Products (Subsidiary hazard) Group Standard 2020 Controls, EPA. [www.epa.govt.nz](http://www.epa.govt.nz)

#### CAS Number

Unique Chemical Abstracts Service Registry Number

#### EC50

Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)

#### EPA

Environmental Protection Authority (New Zealand)

#### GHS

Globally Harmonised System of Classification and Labelling of Chemicals, 7th revised edition, 2017, published by the United Nations.

#### HAZCHEM Code

Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters

#### HSNO

Hazardous Substances and New Organisms (Act and Regulations)

#### IARC

International Agency for Research on Cancer

#### LEL

Lower Explosive Limit

#### LD50

Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).

#### LC50

Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)

#### NZIoC

New Zealand Inventory of Chemicals

#### STEL

Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded

#### STOT RE

System Target Organ Toxicity – Repeated Exposure

#### STOT SE

System Target Organ Toxicity – Single Exposure

#### TWA

Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)

#### UEL

Upper Explosive Limit

#### UN Number

United Nations Number

#### WES

Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone

# ECOMAX RMC Concrete (wet)

## Material Safety Data Sheet



## References

### Data

Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).

### Controls

EPA notices, [www.epa.govt.nz](http://www.epa.govt.nz), Health and Safety at Work (Hazardous Substances) Regulations 2017, [www.legislation.govt.nz](http://www.legislation.govt.nz)

### WES

The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – [www.worksafe.govt.nz](http://www.worksafe.govt.nz).

### Other References:

Suppliers SDS

## Review

### Date

June 2023

### Reason for review

Not applicable - New SDS

## Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely GHS 7 classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email [info@datachem.co.nz](mailto:info@datachem.co.nz) or phone: +64 21 1040951.

