

# SAFETY DATA SHEET

New Zealand

## Section 1. Identification

Product name

**ADCF MAb™**

Catalogue Number

**SH30635**



Other means of identification

Not available.

Product type

Powder.

Identified uses

### Supplier

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New Zealand

Emergency telephone number

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## Section 2. Hazards identification

HSNO Classification

6.4 - EYE IRRITATION - Category A (Irritant)

9.3 - TERRESTRIAL VERTEBRATE ECOTOXICITY - Category C

Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 5%

Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 29.8%

Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 29.8%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 29.8%

This material is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 and has been classified according to the Hazardous Substances (Classifications) Regulations 2001.

### GHS label elements

Signal word

Warning

Hazard statements

Causes serious eye irritation.  
Harmful to terrestrial vertebrates.

### Precautionary statements

Prevention

Wear eye or face protection. Avoid release to the environment. Wash thoroughly after handling.

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage

Not applicable.

**Disposal**

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

**Symbol****Other hazards which do not result in classification**

May form explosible dust-air mixture if dispersed.

### Section 3. Composition/information on ingredients

**Substance/mixture** Mixture

**Other means of identification** Not available.

**CAS number/other identifiers**

**CAS number** Not applicable.

**EC number** Mixture.

**Product code** SH30635

Ingredient name	%	CAS number
sodium chloride	<35	7647-14-5
Oxirane, 2-methyl-, polymer with oxirane	<5.1	9003-11-6
disodium hydrogenorthophosphate	<2.2	7558-79-4
potassium chloride	<1.9	7447-40-7
Strontium chloride (SrCl <sub>2</sub> ), hydrate (1:6)	<1.3	10025-70-4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First aid measures

**Description of necessary first aid measures**

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Ingestion</b>	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Skin contact</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

**Most important symptoms/effects, acute and delayed****Potential acute health effects**

<b>Inhalation</b>	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
<b>Ingestion</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	No known significant effects or critical hazards.
<b>Eye contact</b>	Causes serious eye irritation.

**Over-exposure signs/symptoms**

<b>Inhalation</b>	Adverse symptoms may include the following: respiratory tract irritation coughing
<b>Ingestion</b>	No specific data.
<b>Skin</b>	No specific data.

<b>Eyes</b>	Adverse symptoms may include the following: pain or irritation watering redness
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#### **Indication of immediate medical attention and special treatment needed, if necessary**

<b>Specific treatments</b>	Not available.
<b>Notes to physician</b>	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### **Extinguishing media**

<b>Suitable</b>	Use dry chemical powder.
<b>Not suitable</b>	Do not use water jet.
<b>Specific hazards arising from the chemical</b>	May form explosible dust-air mixture if dispersed.
<b>Hazardous thermal decomposition products</b>	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides phosphorus oxides halogenated compounds metal oxide/oxides
<b>Hazchem code</b>	Not available.
<b>Special precautions for fire-fighters</b>	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
<b>Special protective equipment for fire-fighters</b>	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flames, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
<b>Environmental precautions</b>	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### **Methods and material for containment and cleaning up**

<b>Small spill</b>	Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container.
<b>Large spill</b>	Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Avoid creating dusty conditions and prevent wind dispersal. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container.

## Section 7. Handling and storage

<b>Precautions for safe handling</b>	Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
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**Conditions for safe storage, including any incompatibilities**

Store between the following temperatures: 2 to 8°C (35.6 to 46.4°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**Section 8. Exposure controls/personal protection****Control parameters****Occupational exposure limits**

None.

**Appropriate engineering controls**

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures****Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Respiratory protection**

Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Eye protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. If operating conditions cause high dust concentrations to be produced, use dust goggles.

**Skin protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Section 9. Physical and chemical properties****Appearance**

<b>Physical state</b>	Solid. [Powder.]
<b>Colour</b>	Not available.
<b>Odour</b>	Not available.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Flash point</b>	Not available.
<b>Burning rate</b>	Not available.
<b>Burning time</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Lower and upper explosive (flammable) limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility</b>	Not available.

<b>Solubility in water</b>	Not available.
<b>Partition coefficient: n-octanol/ water</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>SADT</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Flow time (ISO 2431)</b>	Not available.

**Aerosol product**

<b>Type of aerosol</b>	Not applicable.
<b>Heat of combustion</b>	Not available.
<b>Ignition distance</b>	Not applicable.
<b>Enclosed space ignition - Time equivalent</b>	Not applicable.
<b>Enclosed space ignition - Deflagration density</b>	Not applicable.
<b>Flame height</b>	Not applicable.
<b>Flame duration</b>	Not applicable.

**Section 10. Stability and reactivity**

<b>Chemical stability</b>	The product is stable.
<b>Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Prevent dust accumulation.
<b>Incompatible materials</b>	Reactive or incompatible with the following materials: oxidizing materials
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Section 11. Toxicological information****Information on likely routes of exposure**

<b>Inhalation</b>	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
<b>Ingestion</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	No known significant effects or critical hazards.
<b>Eye contact</b>	Causes serious eye irritation.

**Symptoms related to the physical, chemical and toxicological characteristics**

<b>Inhalation</b>	Adverse symptoms may include the following: respiratory tract irritation coughing
<b>Ingestion</b>	No specific data.
<b>Skin contact</b>	No specific data.
<b>Eye contact</b>	Adverse symptoms may include the following: pain or irritation watering redness

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Acute toxicity**

<b>Product/ingredient name</b>	<b>Result</b>	<b>Species</b>	<b>Dose</b>	<b>Exposure</b>
Oxirane, 2-methyl-, polymer with oxirane	LD50 Dermal	Rabbit	20000 mg/kg	-
	LD50 Oral	Rat	5700 mg/kg	-
disodium hydrogenorthophosphate	LD50 Oral	Rat	17000 mg/kg	-
potassium chloride	LD50 Oral	Rat - Male	2600 mg/kg	-

**Irritation/Corrosion**

Not available.

### **Sensitisation**

Not available.

### **Potential chronic health effects**

<b>General</b>	No known significant effects or critical hazards.
<b>Inhalation</b>	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
<b>Ingestion</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	No known significant effects or critical hazards.
<b>Eye contact</b>	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

### **Chronic toxicity**

Not available.

### **Carcinogenicity**

Not available.

### **Mutagenicity**

Not available.

### **Teratogenicity**

Not available.

### **Reproductive toxicity**

Not available.

### **Specific target organ toxicity**

Not available.

### **Aspiration hazard**

Not available.

### **Numerical measures of toxicity**

#### **Acute toxicity estimates**

<b>Route</b>	<b>ATE value</b>
Oral	5263.37 mg/kg

## **Section 12. Ecological information**

**Ecotoxicity** No known significant effects or critical hazards.

### **Aquatic and terrestrial toxicity**

<b>Product/ingredient name</b>	<b>Result</b>	<b>Species</b>	<b>Exposure</b>
sodium chloride	Acute EC50 2430000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute EC50 402.6 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
Oxirane, 2-methyl-, polymer with oxirane	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
	LC50 10000 mg/l	Fish	96 hours
disodium hydrogenorthophosphate	Acute LC50 3580000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
potassium chloride	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours

Acute EC50 9.24 g/L Fresh water	Algae - Desmodesmus subspicatus	72 hours
Acute EC50 141.46 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
Acute LC50 9.68 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	48 hours
Acute LC50 880 mg/l Fresh water	Fish - Pimephales promelas	96 hours

**Persistence/degradability**

Not available.

**Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
disodium hydrogenorthophosphate	-5.8	-	low

**Mobility in soil**Soil/water partition coefficient (K<sub>oc</sub>) Not available.**Other adverse effects** No known significant effects or critical hazards.**Section 13. Disposal considerations****Disposal methods**

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

**Section 14. Transport information**

Regulatory information	UN number	Proper shipping name	Classes	PG*
<b>New Zealand Class</b>	Not available.	Not available. No.	Not available.	-
<b>IATA Class</b>	Not available.	Not available. - No.	Not available.	-
<b>IMDG Class</b>	Not available.	Not available. No.	Not available.	-

PG\* : Packing group

<b>Special precautions for user</b>	<b>Transport within user's premises:</b> always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
<b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not available.

**Section 15. Regulatory information**

<b>HSNO Approval Number</b>	Not available.
<b>HSNO Group Standard</b>	Not available.
<b>HSNO Classification</b>	6.4 - EYE IRRITATION - Category A (Irritant) 9.3 - TERRESTRIAL VERTEBRATE ECOTOXICITY - Category C

**International regulations****Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol (Annexes A, B, C, E)**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

<b>New Zealand</b>	Not determined.
<b>Australia</b>	Not determined.
<b>Europe</b>	Not determined.
<b>United States</b>	Not determined.
<b>Canada inventory</b>	Not determined.
<b>China</b>	At least one component is not listed.
<b>Japan</b>	<b>Japan inventory (ENCS):</b> Not determined. <b>Japan inventory (ISHL):</b> Not determined.
<b>Malaysia</b>	Not determined

**Section 16. Other information****History**

<b>Date of printing</b>	21 April 2020
<b>Date of issue/ Date of revision</b>	02 August 2019
<b>Date of previous issue</b>	8/2/2019
<b>Version</b>	3

**Key to abbreviations**

ADG = Australian Dangerous Goods  
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
 ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 UN = United Nations

**References**

Not available.

 Indicates information that has changed from previously issued version.

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.