

Safety data sheet

BASF Safety Data Sheet
Date / Revised: 06.09.2016
Product: **ACROBAT® MZ690**

Ref. ID no. 30279358/SDS_CPA_00/EN. Version: 1.1 (according to UN GHS 4th rev.)

1. Identification of the substance/mixture and of the company/undertaking

Product identifier

ACROBAT® MZ690

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: crop protection product, fungicide.

Details of the supplier of the safety data sheet

Company:

BASF New Zealand Limited
Level 4, 4 Leonard Isitt Drive, Auckland Airport, Auckland 2022
P.O. Box 407, Auckland 1140
Phone: + 64 9 255 4300
Fax: + 64 9 255 4307
E-mail address: reception@basf-nz.co.nz

Emergency telephone number

National Poisons Centre: 0800764 766

BASF Emergency Advice Number: 0800 944 955 (24 Hour Advice in an Emergency Only)

2. Hazards Identification

Hazard Classification:

6.3A, 6.4A, 6.5B, 6.9B, 9.1A



Priority Identifier:

WARNING

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Secondary Identifiers:

Hazard Statements

H303 May be harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H320 Causes eye irritation.
H333 May be harmful if inhaled.
H361 Suspected of damaging the unborn child.
H373 May cause liver damage through prolonged or repeated oral exposure at high doses.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Hazard determining component(s) for labelling: MANCOZEB, DIMETHOMORPH

Other hazards

According to UN GHS criteria

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition/Information on Ingredients

Substances

Not applicable

Mixtures

Chemical nature

Crop protection product, fungicide, water dispersible granules.

Hazardous ingredients

Mancozeb (ISO); manganese ethylenebis(dithiocarbamate) (polymeric) complex with zinc salt
Content (W/W): 60 %
CAS Number: 8018-01-7
INDEX-Number: 006-076-00-1
H317, H400, H361

Dimethomorph
Content (W/W): 9 %
CAS Number: 110488-70-5
EC-Number: 404-200-2
INDEX-Number: 613-102-00-0
H303, H401, H410

Sodium dodecyl sulphate
Content (W/W): < 2 %
CAS Number: 151-21-3
EC-Number: 205-788-1
H228, H318, H315, H313, H332, H302, H335, H412, H401

4. First-Aid Measures

Description of first aid measures

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Further important symptoms and effects are so far not known.

Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
Water spray, foam, dry powder.

Unsuitable extinguishing media for safety reasons:

Carbon dioxide

Special hazards arising from the substance or mixture

Sulphur dioxide, hydrogen sulphide, carbon monoxide, hydrogen chloride, carbon disulphide, Carbon dioxide, nitrogen oxides, organochloric compounds.

The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Contain with dust binding material and dispose of.

For large amounts: Sweep/shovel up.

Avoid raising dust. Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labelled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

7. Handling and Storage

Precautions for safe handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. Remove contaminated clothing and protective equipment before entering eating areas.

APPROVED HANDLER:

Approved handlers as defined under the HSNO Act 1996 are not required for this product except during commercial use. This product must be under the control of an APPROVED HANDLER if it is being applied in a wide dispersive manner or used by a commercial contractor. Refer to the product label for handling precautions and directions for use.

TRACKING:

Not required.

RECORD KEEPING:

Records of use must be kept if 3 kg or more of this product is applied in a place where it is likely to enter air or water and leave the place.

Protection against fire and explosion:

Avoid dust formation. Dust can form an explosive mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Protect against moisture. Keep away from heat. Protect from direct sunlight.

Storage stability:

Storage duration: 36 Months

Keep container tightly closed and dry.

Protect from temperatures below: -10 °C

Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.

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Protect from temperatures above: 30 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

AGGREGATE STORAGE VOLUME THRESHOLDS: When stored with substances of the same hazard the aggregate quantity must be considered. For full details refer to the current standard NZS8409 Management of Agrichemicals or the HSNO Regulations.

Location Certificate*:	Hazardous Atmosphere Zone*:	Fire Extinguishers:	Signage [Hazard Class & Emergency Action]:	Emergency Information:	Emergency Response Plan:	Secondary Containment:
NA	NA	NA	100 kg	3 kg	100 kg	100 kg

* Note: Farms \geq 4 ha are exempt but with controls

DO NOT STORE OR LOAD WITH:

Class 1 Explosive

SEGREGATE FROM:

Foodstuffs and Food Containers

Segregation: In store separate by at least 5 metres, on transport separate by at least 3 metres, in both cases horizontally. On vehicles, a segregation device may be used: Check the Land Transport Rule Dangerous Goods, Rule 45001 for additional information. Sea transport may require additional segregation. Refer to NZS5433 Sea Segregation for details.

Note: Storage, application and record keeping must be as described in the current version of the New Zealand Standard for the Management of Agrichemicals NZS8409

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

7783-20-2: ammonium sulphate

8018-01-7: mancozeb

8061-51-6: lignosulfonic acid, sodium salt

Exposure controls

Personal protective equipment

Respiratory protection:

Suitable respiratory protection for higher concentrations or long-term effect: Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2).

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166).

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	solid, granules
Colour:	beige
Odour:	faint odour, smoky
Odour threshold:	Not determined due to potential health hazard by inhalation.
pH value:	approx. 6 - 8 (water, 1 %(m), 20 °C) (as a dispersion)
Melting temperature:	approx. 192 °C The data given are those of the active ingredient.
boiling temperature:	The product is a non-volatile solid.
Flash point:	not applicable
Evaporation rate:	not applicable
Flammability:	not highly flammable (Directive 84/449/EEC, A.10)
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Vapour pressure:	The value has not be determined because of the high melting point.
Density:	approx. 1.85 g/cm ³ (20 °C) (OECD Guideline 109)
Relative vapour density (air):	not applicable
Solubility in water:	dispersible
<i>Information on: dimethomorph (ISO); 4-(3-(4-chlorophenyl)-3-(3,4-dimethoxyphenyl)acryloyl)morpholine</i>	
<i>Partitioning coefficient n-octanol/water (log Kow): 2.63 - 2,73 (20 °C)</i>	
<i>Information on: mancozeb (ISO); manganese ethylenebis(dithiocarbamate) (polymeric) complex with zinc salt</i>	
<i>Partitioning coefficient n-octanol/water (log Kow): 0.26 (20 °C)</i>	
Self-ignition:	not self-igniting (Method: Directive 92/69/EEC, A.16)
Thermal decomposition:	100 °C, 30 kJ/kg (DSC (OECD 113)) (onset temperature) 190 °C, 150 kJ/kg (DSC (OECD 113)) (onset temperature) Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.
Viscosity, dynamic:	not applicable, the product is a solid
Explosion hazard:	Based on the chemical structure there is no indicating of explosive properties. (Directive 92/69/EEC, A.14)
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.

Other information

Bulk density:	630 - 660 kg/m ³ (20 °C).
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10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

See SDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:

Strong acids, strong bases, strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Of low toxicity after single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. The product has not been tested. The statement has been derived from products of a similar structure or composition.

Experimental/calculated data:

LD50 rat (oral): 2,770 mg/kg (OECD Guideline 401)

LC50 rat (by inhalation): > 6.4 mg/l 4 h

LD50 rat (dermal): > 2,000 mg/kg (OECD Guideline 402)

Irritation

Assessment of irritating effects:

Not irritating to the skin. Not irritating to the eyes. The product has not been tested. The statement has been derived from products of a similar structure or composition.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:

Sensitization after skin contact possible. The product has not been tested. The statement has been derived from products of a similar structure or composition.

Experimental/calculated data:

Modified Buehler test guinea pig: Caused skin sensitization in animal studies.

Germ cell mutagenicity

Mutagenicity tests revealed no genotoxic potential. The product has not been tested. The statement has been derived from the properties of the individual components.

Carcinogenicity

Assessment of carcinogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: mancozeb (ISO); manganese ethylenebis(dithiocarbamate) (polymeric) complex with zinc salt

Assessment of carcinogenicity:

In long-term studies in rats the substance induced thyroid tumors.

Reproductive toxicity

Assessment of reproduction toxicity:

The product has not been tested. The results of animal studies gave no indication of a fertility impairing effect. The statement has been derived from the properties of the individual components.

Developmental toxicity

Assessment of teratogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: mancozeb (ISO); manganese ethylenebis(dithiocarbamate) (polymeric) complex with zinc salt

Assessment of teratogenicity:

Possible risk of harm to the unborn child.

Information on: Sodium dodecyl sulphate

Assessment of teratogenicity:

The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Remarks: The product has not been tested. The statement has been derived from the properties of the individual components.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components. No substance-specific organotoxicity was observed after repeated administration to animals.

Aspiration hazard

The product has not been tested. The statement has been derived from the properties of the individual components.

No aspiration hazard expected.

Other relevant toxicity information
 Misuse can be harmful to health.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

Very toxic to aquatic life with long lasting effects.

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Toxicity to fish:

LC50 (96 h) 1.48 mg/l, *Oncorhynchus mykiss*

Aquatic invertebrates:

EC50 (48 h) 0.83 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static) The product has not been tested. The statement has been derived from products of a similar structure or composition.

Aquatic plants:

EC50 (72 h) 0.136 mg/l, *Selenastrum capricornutum*

No observed effect concentration (72 h) 0.0173 mg/l, *Pseudokirchneriella subcapitata*

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: dimethomorph (ISO); 4-(3-(4-chlorophenyl)-3-(3,4-dimethoxyphenyl)acryloyl)morpholine

Assessment biodegradation and elimination (H₂O):

Not readily biodegradable (by OECD criteria).

Information on: mancozeb (ISO); manganese ethylenebis(dithiocarbamate) (polymeric) complex with zinc salt

Assessment biodegradation and elimination (H₂O):

According to OECD criteria the product is not readily biodegradable but inherently biodegradable.

Bioaccumulative potential

Assessment bioaccumulation potential:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: mancozeb (ISO); manganese ethylenebis(dithiocarbamate) (polymeric) complex with zinc salt

Assessment bioaccumulation potential:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Information on: dimethomorph (ISO); 4-(3-(4-chlorophenyl)-3-(3,4-dimethoxyphenyl)acryloyl)morpholine

Bioaccumulation potential:

No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).

Mobility in soil

Assessment transport between environmental compartments:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: mancozeb (ISO); manganese ethylenebis(dithiocarbamate) (polymeric) complex with zinc salt

Assessment transport between environmental compartments:

Adsorption in soil: Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Information on: dimethomorph (ISO); 4-(3-(4-chlorophenyl)-3-(3,4-dimethoxyphenyl)acryloyl)morpholine

Assessment transport between environmental compartments:

Volatility: The substance will not evaporate into the atmosphere from the water surface.

Adsorption in soil: Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Results of PBT and vPvB assessment

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal Considerations

Container:

Empty bag completely into the spray tank. Burn empty bag in a suitable incinerator if circumstances, especially wind direction, permit. Otherwise crush and bury in suitable landfill.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

Product:

Dispose of this product only by using according to the label or at an approved landfill or at an approved facility. Do NOT burn product. Do NOT contaminate water with product or used container.

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14. Transport Information

Commercial transport:
Classified as Dangerous Goods for Land/rail (ADR/RID), sea (IMDG/GGVSee) and air transport (ICAO/IATA):

UN number:	UN 3077
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains MANCOZEB, DIMETHOMORPH)
Transport hazard class(es):	9, EHSM
Packing group:	III
Marine pollutant:	YES
HAZCHEM:	2[Z]

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

To avoid risks to man and the environment, comply with the instructions for use.

NZ Regulations

Approved pursuant to the HSNO Act 1996, Code HSR000531.
See www.epa.govt.nz for approval conditions.

Registered pursuant to the ACVM Act 1997, Nos. P3971.
See www.foodsafety.govt.nz/acvm for registration conditions.

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

H317 May cause an allergic skin reaction.
H400 Very toxic to aquatic life.
H361 Suspected of damaging the unborn child.
H303 May be harmful if swallowed.
H401 Toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H228 Flammable solid.
H318 Causes serious eye damage.
H315 Causes skin irritation.
H313 May be harmful in contact with skin.
H332 Harmful if inhaled.
H302 Harmful if swallowed.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.
H402 Harmful to aquatic life.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

| Vertical lines in the left-hand margin indicate an amendment from the previous version.