

<b>Section 1</b>	<b>Identification of the mixture and of the company</b>
1.1	Product identifier
	Product name Madex Twin®
	Synonyms Grandex, CyGra
1.2	Relevant identified uses of the mixture and uses advised against
	Use of the product Biological insecticide
	Uses advised against
1.3	Details of the supplier of the Safety Data Sheet
	Manufacturer/Supplier Andermatt Biocontrol AG
	Address Stahlermatten 6 6146 Grossdietwil
	Phone (technical) +41 (0)62 917 5125
	E-mail contact@biocontrol.ch
1.4	Emergency telephone number
	Phone (medical) +41 (0)44 251 5151 (Swiss Toxicology Centre)
<b>Section 2</b>	<b>Hazards identification</b>
2.1	Classification of the mixture
	Classification according to Regulation (EC) No 1272/2008 [CLP]
2.2	Label elements
	Store locked up. Keep out of the reach of children. If medical advice is needed, have product container or label at hand. To avoid risks to human health and the environment, comply with the instructions for use. Contains <i>Cydia pomonella</i> Granulovirus. May produce an allergic reaction.
2.3	Other hazards
	This mixture does not contain any substances, which are persistent, bioaccumulative and toxic (PBT). / This mixture does not contain any substances which are very persistent and very bioaccumulative (vPvB).
<b>Section 3</b>	<b>Composition/information on ingredients</b>
3.1	Substances
	This product is a mixture
3.2	Mixtures
	<i>Cydia pomonella</i> granulovirus No hazardous component according to Regulation (EC) No 1272/2008 [CLP]
<b>Section 4</b>	<b>First aid measures</b>
4.1	Description of first aid measures
	General notes Change any contaminated or wetted clothing at once. If poisoning occurs contact a doctor or Swiss Toxicology Centre.
	Following inhalation Only possible by exposure to HOT product. Move to fresh air, rest, half upright position, loosen clothing. Oxygen or artificial respiration if there is difficulty in breathing. Seek medical advice after significant exposure. Symptomatic treatment is advised.
	Following skin contact Remove contaminated clothing. Seek medical advice if irritation develops. Launder clothes before reuse. After contact with skin, wash immediately with plenty of water.

Following eye contact Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.

Following ingestion No typical symptoms and affects known

Advice to physician Symptomatic treatment

#### 4.2 Most important symptoms and effects, both acute and delayed

No typical symptoms and effects known.

#### 4.3 Indication of any immediate medical attention and special treatment needed

None

### Section 5 Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media Water mist, alcohol resistant foam, carbon dioxide, dry powder

Unsuitable extinguishing media Water-jet, foam

#### 5.2 Special hazards arising from the mixture

Vapours cause coughing

At elevated temperatures (> 200°C), there is a risk of exothermic polymerization. At temperatures > 280°C, acrolein may be formed.

#### 5.3 Advice for firefighters

Avoid contact with oxidizing agents. Cool closed containers with water.

### Section 6 Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Use protective clothing. Do not inhale.

#### 6.2 Environmental precautions

Prevent entry into drains, waters, sewages etc. of the product; contact immediately the municipal technical management if the product enters such bodies.

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

Use adsorbent material to collect spillage (e.g. sawdust, peat, chemical binder). Place contaminated adsorbent in closable containers. Use a damp cloth to clean floors and other objects after removal of contaminated adsorbent. Also place used cleaning materials into closable receptacles.

#### 6.4 Reference to other sections

See personal protective equipment under Section 8 of SDS.

### Section 7 Handling and storage

#### 7.1 Precautions for safe handling

The usual precautions for handling chemicals should be observed

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in original package only. Stored in the refrigerator (< 5°C) for two years. Stored at -18°C for years without any loss of activity.

#### 7.3 Specific end use(s)

Biological Insecticide

### Section 8 Exposure controls/personal protection

#### 8.1 Control parameters

The usual precautionary measures for handling chemicals should

be observed

### 8.2 Exposure controls

Eye/face protection	No specific recommendations
Skin protection	Use protective clothing
Respiratory protection	No specific recommendations
Thermal hazards	No specific recommendations
Other information	None

## Section 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	Liquid (20°C)
Colour	Grey-brown
Odour	Characteristic
Odour threshold	Not determined
pH	6-7
Melting point/freezing point	Not determined (is not freezing at -18°C)
Initial boiling point and boiling range	103 - 290°C
Flash point	Not determinable up to 101°C
Evaporation rate	Not determined
Flammability	Not flammable
Upper/lower flammability or explosive limits	Not flammable
Vapour pressure	Not determined
Vapour density	Not relevant
Relative density	1.16 (g/ml)
Solubility(ies)	Soluble in water
Partition coefficient: n-cotanol/water	Not determined
Auto-ignition temperature	Not determined
Decomposition temperature	>200°C
Viscosity	1200 mPa × s
Explosive properties	Non explosive
Oxidising properties	Non oxidizing

### 9.2 Other information

None

## Section 10 Stability and Reactivity

### 10.1 Reactivity

Not reactive

### 10.2 Chemical stability

No decomposition if stored and handled properly

### 10.3 Possibility of hazardous reactions

Not relevant

### 10.4 Conditions to avoid

Temperature >200°C (polymerization, decomposition)

### 10.5 Incompatible materials

Avoid contact with oxidizing agents

### 10.6 Hazardous decomposition products

Acrolein (>280°C)

### Section 11 Toxicological information

#### 11.1 Information on toxicological effects

Acute toxicity	Rat, oral, $5 \times 10^9$ granules /kg BW (AcNPV), no adverse effects
Skin corrosion/irritation	Rabbit, contact, 0.5 mL/animal ( $2.2 \times 10^{13}$ granula of CpGV/L) for 4 h, no adverse effect
Serious eye damage/irritation	Rabbit, contact, 0.1 mL/eye ( $2.2 \times 10^{13}$ granula of CpGV/L) for 24 h, non-irritating
Respiratory or skin sensitization	Guinea pig, inhalation, 35 mg CpGV ( $7 \times 10^8$ granules) per m <sup>3</sup> for 15 min, no adverse effects
Germ cell mutagenicity	Not determined
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not existing
STOT-repeated exposure	Not existing
Aspiration hazard	Not relevant

### Section 12 Ecological information

#### 12.1 Toxicity

##### Acute (short-term) toxicity

Fish	<i>Oncorhynchus mykiss</i> , 96 hour LC <sub>50</sub> > 100 mg/L = $2.0 \times 10^9$ CpGV/L
Crustacea	<i>Daphnia magna</i> , 48 hour LC <sub>50</sub> > 100 mg/L = $2.0 \times 10^9$ CpGV/L
Algae/aquatic plants	<i>Scenedesmus subspicatus</i> , 72 hour EC <sub>50</sub> > 100 mg/L = $2.0 \times 10^9$ CpGV/L
Other organisms	<i>Lemna gibba</i> , 7 day EC <sub>50</sub> > 100 mg/L = $3.1 \times 10^9$ CpGV/L

##### Chronic (long-term) toxicity

Fish	Not determined
Crustacea	Not determined
Algae/aquatic plants	Not determined
Other organisms	Not determined

#### 12.2 Persistence and degradability

Abiotic Degradation	pH
Physical- and photo-chemical elimination	UV light
Biodegradation	Soil microflora

#### 12.3 Bioaccumulative potential

Octanol/water partition coefficient (Kow)	Not determined
Bioconcentration factor (BCF)	Not determined

#### 12.4 Mobility in soil

Known or predicted distribution to environmental compartments	CpGV persists in the soil for a fairly long period in the immobilised state and does not accumulate.
Surface tension	Not determined
Adsorption/Desorption	Not determined

#### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

#### 12.6 Other adverse effects

None

#### 12.7 Additional information

None

### Section 13 Disposal considerations

#### 13.1 Waste treatment methods

Product/Packaging disposal	Use pressure rinsing devices or triple rinsing with water to reduce any product residues in the container to insignificant levels. Don't dispose product or containers on ponds, rivers or ditches. Don't re-use containers for other purposes. Waste disposal and recycling contractors will take cleaned containers. Waste resulting from the use of the product must be disposed on site or on an approved waste disposal facility. Empty the sprayer out in the field being treated by spraying out on to a relatively pest free part of the field left unsprayed or under-dosed for the crop.
Waste codes/waste designations according to LoW	Not applicable
Waste treatment-relevant information	None
Sewage disposal-relevant information	Waste should not be disposed of by release to sewers
Other disposal recommendations	None

### Section 14 Transport Information

<b>Inland transport</b>	Not restricted
<b>Sea transport</b>	Not restricted
<b>Air transport</b>	Not restricted

### Section 15 Regulatory information

#### 15.1 Safety, health and environmental regulations/legislation specific for the mixture

Authorisations	Not relevant
Restrictions on use	Not relevant

#### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

### Section 16 Other information

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

#### i Indication of changes

Adapted to the regulation (EC) No. 1272/2008 [CLP]

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