1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT INFORMATION

Product name: PROCLAIM 5 SG
Design Code: A10324A
Use: Insecticide
Company: Syngenta Crop Protection AG
Postfach
CH-4002 Basel
Switzerland
Telephone: +41 61 323 11 11
Telefax: +41 61 323 12 12
Emergency telephone: +44 1484 538444
E-mail address: safetydatasheetcoordination@syngenta.com

2. HAZARDS IDENTIFICATION

Harmful if swallowed.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Symbol(s)</th>
<th>R-phrase(s)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethanesulfonic acid, 2-[methyl(1-oxo-9-octadecenyl)amin o]-, sodium salt, (Z)-</td>
<td>137-20-2</td>
<td>205-285-7</td>
<td>Xi</td>
<td>R41</td>
<td>5 - 10 % W/W</td>
</tr>
<tr>
<td>naphthalenesulfonic acid, bis(1-methylethyl)-, sodium salt</td>
<td>1322-93-6</td>
<td>215-343-3</td>
<td>Xn</td>
<td>R22 R36</td>
<td>1 - 5 % W/W</td>
</tr>
</tbody>
</table>

* Substances for which there are Community workplace exposure limits.
For the full text of the R-phrases mentioned in this Section, see Section 16.

### 4. FIRST AID MEASURES

#### General advice

Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control center or physician, or going for treatment.

#### Inhalation

- Move the victim to fresh air.
- If breathing is irregular or stopped, administer artificial respiration.
- Keep patient warm and at rest.
- Call a physician or Poison Control Centre immediately.

#### Skin contact

- Take off all contaminated clothing immediately.
- Wash off immediately with plenty of water.
- If skin irritation persists, call a physician.
- Wash contaminated clothing before re-use.

#### Eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Remove contact lenses.
- Immediate medical attention is required.

#### Ingestion

- If swallowed, seek medical advice immediately and show this container or label.
- Do NOT induce vomiting.

#### Symptoms

- Lack of coordination
- Tremors
- Dilatation of the pupil

#### Medical advice

This material is believed to enhance GABA activity in animals. It is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic mectin exposure.

Toxicity can be minimized by early administration of chemical absorbents (e.g. activated charcoal).

If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged.

Appropriate supportive parental fluid replacement therapy should be given, along with other required supportive measures as indicated by clinical signs, symptoms and measurements.
5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**
- Extinguishing media - small fires
  - Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Extinguishing media - large fires
  - Alcohol-resistant foam
  - Water spray

**Extinguishing media which shall not be used for safety reasons**
- Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards during fire fighting**
- As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).
- Exposure to decomposition products may be a hazard to health.

**Special protective equipment for firefighters**
- Wear full protective clothing and self-contained breathing apparatus.

**Further information**
- Do not allow run-off from fire fighting to enter drains or water courses.
- Cool closed containers exposed to fire with water spray.

6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**
- Refer to protective measures listed in sections 7 and 8.
- Avoid dust formation.

**Environmental precautions**
- Do not flush into surface water or sanitary sewer system.

**Methods for cleaning up**
- Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).
- Do not create a powder cloud by using a brush or compressed air.
- Clean contaminated surface thoroughly.

**Additional advice**
- If the product contaminates rivers and lakes or drains inform respective authorities.
7. HANDLING AND STORAGE

HANDLING

Advice on safe handling: No special protective measures against fire required. Avoid contact with skin and eyes. When using, do not eat, drink or smoke. For personal protection see section 8.

STORAGE

Requirements for storage areas and containers: No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

Other data: Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>Exposure limit(s)</th>
<th>Type of exposure limit</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>emamectin benzoate</td>
<td>0.02 mg/m3</td>
<td>8 h TWA</td>
<td>SYNGENTA</td>
</tr>
</tbody>
</table>

ENGINEERING MEASURES

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. If airborne dust is generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit. Where necessary, seek additional occupational hygiene advice.

PERSONAL PROTECTIVE EQUIPMENT

Protective measures: The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.

Respiratory protection: A particulate filter respirator may be necessary until effective technical measures are installed. Protection provided by air-purifying respirators is limited.
Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

Hand protection  
Chemical resistant gloves should be used. 
Gloves should be certified to an appropriate standard. 
Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure. 
The breakthrough time of gloves varies according to the thickness, material and manufacturer. 
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. 
Suitable material  
Nitrile rubber

Eye protection  
Eye protection is not usually required. 
Follow any site specific eye protection policies.

Skin and body protection  
Assess the exposure and select chemical resistant clothing based on the potential for contact and the permeation / penetration characteristics of the clothing material. 
Wash with soap and water after removing protective clothing. 
Decontaminate clothing before re-use, or use disposable equipment (suits, aprons, sleeves, boots, etc.) 
Wear as appropriate:  
Dust impervious protective suit

9. PHYSICAL AND CHEMICAL PROPERTIES

Form  
granules

Colour  
white to tan

pH  
4 - 8 at 1 % w/v

Flammability (solid, gas)  
not highly flammable

Dust explosion class  
Does not form flammable dust clouds at ambient temperatures.

Oxidizing properties  
not oxidizing

Explosive properties  
Not explosive

Miscibility  
Miscible

Surface tension  
33.3 mN/m at 20 °C
10. STABILITY AND REACTIVITY

Hazardous decomposition products: Combustion or thermal decomposition will evolve toxic and irritant vapors.

Hazardous reactions: None known.
Hazardous polymerization does not occur.
Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity: LD50 male and female Rat, 1,516 mg/kg
GHS-Classification
Category 4
A single exposure may damage the central and peripheral nervous systems.

Acute inhalation toxicity: LC50 male and female Rat, 6.28 mg/l, 4 h
GHS-Classification
None
A single exposure may damage the central and peripheral nervous systems.

Acute dermal toxicity: LD50 male and female Rat, > 2,000 mg/kg
GHS-Classification
None
A single exposure may damage the central and peripheral nervous systems.

Skin irritation: Rabbit: Non-irritating
GHS-Classification
None

Eye irritation: Rabbit: Mildly Irritating
GHS-Classification
None

Sensitisation: guinea pig: Not a skin sensitizer in animal tests.
GHS-Classification
None

Long term toxicity: Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.
Reproductive toxicity noted in rats that is not relevant to humans.

emamectin benzoate: Central nervous system effects in chronic/subchronic animal tests.
12. ECOLOGICAL INFORMATION

ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)

Bioaccumulation : Emamectin benzoate does not bioaccumulate.

Stability in water : Degradation half life: 0.4 - 1.74 d
Emamectin benzoate is not persistent in water.

Stability in soil : Degradation half life : 0.335 - 2.56 d
Emamectin benzoate is not persistent in soil.

Mobility : Emamectin benzoate is immobile in soil.

ECOTOXICITY EFFECTS

Toxicity to fish : LC50 Cyprinus carpio (Carp), 6.8 mg/l , 96 h
GHS-Classification
Category 2

Toxicity to daphnia and other aquatic invertebrates. : EC50 Daphnia magna (Water flea), 0.08 mg/l , 48 h
GHS-Classification
Category 1

Toxicity to algae : EbC50 Pseudokirchneriella subcapitata (green algae), 28.4 mg/l , 72 h

: ErC50 Pseudokirchneriella subcapitata (green algae), 157 mg/l , 72 h
GHS-Classification
None

13. DISPOSAL CONSIDERATIONS

Product : Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging : Empty remaining contents.
Triple rinse containers.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

14. TRANSPORT INFORMATION
Land transport

**ADR/ RID:**
- UN-Number: 3077
- Class: 9
- Labels: 9
- Packaging group: III
- Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (EMAMECTIN BENZOATE)

Sea transport

**IMDG:**
- UN-Number: 3077
- Class: 9
- Labels: 9
- Packaging group: III
- Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (EMAMECTIN BENZOATE)

Marine pollutant: Marine pollutant

Air transport

**IATA-DGR**
- UN-Number: 3077
- Class: 9
- Labels: 9
- Packaging group: III
- Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (EMAMECTIN BENZOATE)

15. REGULATORY INFORMATION

**Labelling according to EC Directives**

Hazardous components which must be listed on the label:
- *emamectin benzoate*

Symbol(s): Xn Harmful, N Dangerous for the environment
PROCLAIM 5 SG

Version 6
Revision Date 02.04.2009

R-phrase(s)

| R22 | Harmful if swallowed. |
| R48/22 | Harmful: danger of serious damage to health by prolonged exposure if swallowed. |
| R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| R68/20/21/22 | Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed. |

S-phrase(s)

| S 2 | Keep out of the reach of children. |
| S13 | Keep away from food, drink and animal feedingstuffs. |
| S20/21 | When using do not eat, drink or smoke. |
| S35 | This material and its container must be disposed of in a safe way. |
| S36/37 | Wear suitable protective clothing and gloves. |
| S57 | Use appropriate container to avoid environmental contamination. |

Note: The product is classified and labelled in accordance with Directive 1999/45/EC.

Special labelling of certain preparations: To avoid risks to man and the environment, comply with the instructions for use.

GHS-Labelling

Globally Harmonized System of Classification and Labelling of Chemicals (GHS), 2nd revised edition

Pictogram

Signal Word: Danger

Hazard Statements:
H302 Harmful if swallowed.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:
P102 Keep out of reach of children.
P270 Do no eat, drink or smoke when using this product.
P314 Get medical advice/attention if you feel unwell.
P391 Collect spillage.
P501  Dispose of contents/container to .?

Remarks: Classified using all GHS hazard classes and categories. Where the GHS contains options, the most conservative option has been chosen. Regional or national implementations of GHS may not implement all hazard classes and categories.

Hazardous components which must be listed on the label:
- emamectin benzoate

16. OTHER INFORMATION

Further information

Text of R-phrases mentioned in Section 3:

R22  Harmful if swallowed.
R23/25  Toxic by inhalation and if swallowed.
R36  Irritating to eyes.
R39/23/24/25  Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R41  Risk of serious damage to eyes.
R48/25  Toxic: danger of serious damage to health by prolonged exposure if swallowed.
R50/53  Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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