

SAFETY DATA SHEET



CORAGEN®

Version 4.0

(replaces: Version 3.3)

Revision Date 08.06.2017

Ref. 130000027866

This Safety Data Sheet adheres to the standards and regulatory requirements of the European Union and may not meet the regulatory requirements in other countries.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : CORAGEN®
Synonyms : B12498745
DPX-E2Y45 20SC

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

Use of the Substance/Mixture : Insecticide

1.3. Details of the supplier of the safety data sheet

Company : DuPont de Nemours South Africa (Pty) Ltd
34 Whiteley Road
Block B, 1st Floor
Melrose Arch
South Africa

Telephone : +27 (0) 11 218 8600

Telefax : +27 (0) 11 218 8664

E-mail address : sds-support@che.dupont.com

1.4. Emergency telephone number

Emergency telephone number : 0-800-983-611 (Toll free in-country) or +(44)-870-8200418 (CHEMTREC)
: +27 (0) 83 123 3911
: Poison Centres may only possess information required for products in
accordance with Regulation (EC) No 1272/2008 and national legislation.
:

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EU) 1272/2008 (CLP)

Acute aquatic toxicity, H400: Very toxic to aquatic life.
Category 1
Chronic aquatic toxicity, H410: Very toxic to aquatic life with long lasting effects.
Category 1

2.2. Label elements

Labelling according to Regulation (EU) 1272/2008 (CLP)

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Warning

| | |
|--|--|
| H410 | Very toxic to aquatic life with long lasting effects. |
| Special labelling of certain substances and mixtures | EUH401: To avoid risks to human health and the environment, comply with the instructions for use., |
| P391 P501 | Collect spillage. Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations. |

2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).
This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients**3.1. Substances**

Not applicable

3.2. Mixtures

| Classification according to Directive 67/548/EEC | Classification according to Regulation (EU) 1272/2008 (CLP) | Concentration |
|--|---|---------------|
| Chlorantraniliprole (CAS-No.500008-45-7) | | |
| | Aquatic Acute 1; H400 Aquatic Chronic 1; H410 | 18,4 % |

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures**

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- General advice : Never give anything by mouth to an unconscious person.
- Inhalation : No hazards which require special first aid measures. Consult a physician after significant exposure.
- Skin contact : No hazards which require special first aid measures. If on skin, rinse well with water. Wash contaminated clothing before re-use.
- Eye contact : If easy to do, remove contact lens, if worn. Hold eye open and rinse slowly and gently with water for 15-20 minutes. If eye irritation persists, consult a specialist.
- Ingestion : No hazards which require special first aid measures. Consult a physician if necessary.

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

- Symptoms : No cases of human intoxication are known and the symptoms of experimental intoxication are not known.

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

- Treatment : Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media**

- Suitable extinguishing media : Water spray, Foam, Dry chemical, Carbon dioxide (CO₂)
- Extinguishing media which shall not be used for safety reasons : High volume water jet, (contamination risk)

5.2. Special hazards arising from the substance or mixture

- Specific hazards during firefighting : Hazardous decomposition products formed under fire conditions. Carbon dioxide (CO₂) Nitrogen oxides (NO_x)
: The product is not flammable.

5.3. Advice for firefighters

- Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.
- Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- : (on small fires) If area is heavily exposed to fire and if conditions permit, let fire

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burn itself out since water may increase the area contaminated. Cool containers/tanks with water spray.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions : Control access to area. Ventilate spill area. Take precautionary measures against static discharges. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.

6.2. Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so. Use appropriate container to avoid environmental contamination. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up : Clean-up methods - small spillage Soak up with inert absorbent material. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean-up methods - large spillage Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Large spills should be collected mechanically (remove by pumping) for disposal. Collect leaking liquid in sealable (metal/plastic) containers. Collect and contain contaminated absorbent and dike material for disposal.

Other information : Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

6.4. Reference to other sections

For personal protection see section 8., For disposal instructions see section 13.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Advice on safe handling : Use only according to our recommendations. Use only clean equipment. Do not breathe vapours or spray mist. Provide adequate ventilation. Wear personal protective equipment. For personal protection see section 8. Prepare the working solution as given on the label(s) and/or the user instructions. Use prepared working solution as soon as possible - Do not store. Avoid exceeding the given occupational exposure limits (see section 8).

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Advice on protection against fire and explosion : Keep away from heat and sources of ignition. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Avoid dust formation in confined areas.

The product is not flammable.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a place accessible by authorized persons only. Store in original container. Keep in properly labelled containers. 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.

Advice on common storage : No special restrictions on storage with other products.

Other data : Stable under recommended storage conditions.

7.3. Specific end use(s)

Plant protection products subject to Regulation (EC) No 1107/2009.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

If sub-section is empty then no values are applicable.

8.2. Exposure controls

Engineering measures : Ensure adequate ventilation, especially in confined areas. Use sufficient ventilation to keep employee exposure below recommended limits.

Eye protection : Safety glasses with side-shields conforming to EN166

Hand protection : Material: Nitrile rubber
Glove thickness: 0,3 mm
Glove length: Standard glove type.
Protection index: Class 6
Wearing time: > 480 min
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The suitability for a specific workplace should be discussed with the producers of the protective gloves. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. The exact break through time can be obtained from the protective glove producer and this has to be observed. Gloves must be inspected prior to use. Gloves should be discarded

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- and replaced if there is any indication of degradation or chemical breakthrough. Gauntlets shorter than 35 cm long shall be worn under the combination sleeve. Before removing gloves clean them with soap and water.
- Skin and body protection** : Manufacturing and processing work: Full protective clothing Type 6 (EN 13034)
- Mixer and loaders must wear: Full protective clothing Type 6 (EN 13034) Nitrile rubber boots (EN 13832-3 / EN ISO 20345).
- Spray application - outdoor: Tractor / sprayer with hood: No personal body protection normally required.
- Tractor / sprayer without hood: Full protective clothing Type 4 (EN 14605) Nitrile rubber boots (EN 13832-3 / EN ISO 20345).
- Backpack / knapsack sprayer: Full protective clothing Type 4 (EN 14605) Nitrile rubber boots (EN 13832-3 / EN ISO 20345).
- Mechanical automatized spray application in closed tunnel: No personal body protection normally required.
- To optimize the ergonomics it may be recommended to use cotton underwear when wearing some fabrics. Take advice from supplier.
- Garment materials that are resistant to both water vapour and air will maximise wearing comfort. Materials should be robust to maintain the integrity and barrier in use.
- The permeation resistance of the fabric must be verified independently of the « type » protection recommended, to ensure an appropriate performance level of the material adequate to the corresponding agent and type of exposure.
- When exceptional circumstances require an access to the treated area before the end of re-entry periods, wear full protective clothing Type 6 (EN 13034), nitrile rubber gloves class 3 (EN 374) and nitrile rubber boots (EN 13832-3 / EN ISO 20345).
- Protective measures** : All Personal Protection Equipment should be checked before use to confirm it is compatible with the chemicals you are handling.
- The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or if contaminated. Only protected handlers may be in the area during application.
- Hygiene measures** : Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing. Contaminated work clothing should not be allowed out of the workplace. Keep working clothes separately. Wash hands and face before breaks and immediately after handling the product.

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When using do not eat, drink or smoke. For environmental protection remove and wash all contaminated protective equipment before re-use. Dispose of rinse water in accordance with local and national regulations.

- Respiratory protection : Manufacturing and processing work: Half mask with vapour filter A1 (EN 141)
- Mixer and loaders must wear: Half mask with vapour filter A1 (EN 141)
- Spray application - outdoor: Tractor / sprayer with hood: No personal respiratory protective equipment normally required. Tractor / sprayer without hood: Half mask with a particle filter P1 (EN 143).
- Backpack / knapsack sprayer: Half mask with a particle filter P1 (EN 143).
- Mechanical automatized spray application in closed tunnel: No personal respiratory protective equipment normally required.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

- Form : liquid, suspension
- Colour : white
- Odour : alcohol-like
- Odour Threshold : not determined
- pH : 5 - 9 at 10 g/l
- Freezing point : -6 °C
- Boiling point/boiling range : Not available for this mixture.
- Flash point : > 100 °C No flash up to boiling point.
- Thermal decomposition : Not available for this mixture.
- Auto-ignition temperature : not auto-flammable
- Explosive properties : Not explosive
- Lower explosion limit/ lower flammability limit : Not available for this mixture.
- Upper explosion limit/ upper flammability limit : Not available for this mixture.
- Vapour pressure : Not available for this mixture.

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| | |
|--|-----------------------------------|
| Relative density | : 1,08 - 1,10 |
| Water solubility | : dispersible |
| Partition coefficient: n-octanol/water | : Not applicable |
| Solubility in other solvents | : slightly soluble |
| Viscosity, dynamic | : 400 - 800 mPa.s , 30 rpm |
| Viscosity, kinematic | : Not applicable |
| Relative vapour density | : Not available for this mixture. |
| Evaporation rate | : Not available for this mixture. |

9.2. Other information

Phys.-chem./other information : No other data to be specially mentioned.

SECTION 10: Stability and reactivity

| | |
|---|--|
| 10.1. Reactivity | : No hazards to be specially mentioned. |
| 10.2. Chemical stability | : The product is chemically stable under recommended conditions of storage, use and temperature. |
| 10.3. Possibility of hazardous reactions | : No dangerous reaction known under conditions of normal use. Polymerization will not occur. Stable at normal temperatures and storage conditions. Polymerization will not occur. Stable at normal temperatures and storage conditions. |
| 10.4. Conditions to avoid | : To avoid thermal decomposition, do not overheat. Protect from frost. |
| 10.5. Incompatible materials | : No materials to be especially mentioned. |
| 10.6. Hazardous decomposition products | : No materials to be especially mentioned. |

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity

LD50 / Rat : > 5 000 mg/kg

Method: OECD Test Guideline 425

Information source: Internal study report (Data on the product itself)

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Acute inhalation toxicity

LC50 / 4 h Rat : > 2 mg/l

Method: OECD Test Guideline 403

Information source: Internal study report (Data on the product itself)

Acute dermal toxicity

LD50 / Rat : > 5 000 mg/kg

Method: OECD Test Guideline 402

Information source: Internal study report (Data on the product itself)

Skin irritation

Rabbit

Result: No skin irritation

Method: OECD Test Guideline 404

Information source: Internal study report (Data on the product itself)

Eye irritation

Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

Information source: Internal study report (Data on the product itself)

Sensitisation

Mouse Local lymph node test

Result: Animal test did not cause sensitization by skin contact.

Method: OECD Test Guideline 429

Information source: Internal study report (Data on the product itself)

Repeated dose toxicity

- Chlorantraniliprole
Oral multiple species
No toxicologically significant effects were found.

Dermal Rat

No toxicologically significant effects were found.

Mutagenicity assessment

- Chlorantraniliprole
Animal testing did not show any mutagenic effects. Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity assessment

- Chlorantraniliprole

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Animal testing did not show any carcinogenic effects. Not classifiable as a human carcinogen.

Toxicity to reproduction assessment

- Chlorantraniliprole
No toxicity to reproduction Animal testing showed no reproductive toxicity.

Assessment teratogenicity

- Chlorantraniliprole
Animal testing showed no developmental toxicity.

SECTION 12: Ecological information**12.1. Toxicity**

Toxicity to fish

static test / LC50 / 96 h / *Oncorhynchus mykiss* (rainbow trout): > 9,9 mg/l

Method: OECD Test Guideline 203

Information source: Internal study report (Data on the product itself)

Toxicity to aquatic plants

ErC50 / 72 h / *Pseudokirchneriella subcapitata* (green algae): > 20 mg/l

Method: OECD Test Guideline 201

(Data on the product itself) Information source: Internal study report

Toxicity to aquatic invertebrates

static test / EC50 / 48 h / *Daphnia* (water flea): 0,035 mg/l

Method: OECD Test Guideline 202

Information source: Internal study report (Data on the product itself)

Toxicity to soil dwelling organisms

LC50 / 14 d / *Eisenia fetida* (earthworms): > 1 000 mg/kg

Method: OECD Test Guideline 207

Information source: Internal study report (Data on the product itself)

Toxicity to other organisms

LD50 / *Colinus virginianus* (Bobwhite quail): > 2 000 mg/kg

Method: US EPA Test Guideline OPPTS 850.2100

Information source: Internal study report (Data on the product itself)

LD50 / 48 h / *Apis mellifera* (bees): > 541 µg/bee

Method: OECD Test Guideline 213

Oral Information source: Internal study report (Data on the product itself)

LD50 / 48 h / *Apis mellifera* (bees): > 541 µg/bee

Method: OECD Test Guideline 214

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Contact Information source: Internal study report (Data on the product itself)

Chronic toxicity to fish

- Chlorantraniliprole
Early Life-Stage / NOEC / 90 d / Oncorhynchus mykiss (rainbow trout): 0,110 mg/l
Method: OECD Test Guideline 210
Information source: Internal study report

Chronic toxicity to aquatic Invertebrates

- Chlorantraniliprole
Static renewal test / NOEC / 21 d / Daphnia magna (Water flea): 0,00447 mg/l
Method: OECD Test Guideline 211
Information source: Internal study report

12.2. Persistence and degradability**Biodegradability**

Not readily biodegradable. Estimation based on data obtained on active ingredient.

12.3. Bioaccumulative potential**Bioaccumulation**

Does not bioaccumulate. Estimation based on data obtained on active ingredient.

12.4. Mobility in soil**Mobility in soil**

The product is not expected to be mobile in soils.

12.5. Results of PBT and vPvB assessment**PBT and vPvB assessment**

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). / This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

12.6. Other adverse effects**Additional ecological information**

No other ecological effects to be specially mentioned See product label for additional application instructions relating to environmental precautions.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Product : In accordance with local and national regulations. Must be incinerated in a

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suitable incineration plant holding a permit delivered by the competent authorities. Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Do not re-use empty containers.

SECTION 14: Transport information

ADR

- 14.1. UN number: 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chlorantraniliprole)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
14.5. Environmental hazards: For further information see Section 12.
14.6. Special precautions for user:
Tunnel restriction code: (-)

IATA_C

- 14.1. UN number: 3082
14.2. UN proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Chlorantraniliprole)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
14.5. Environmental hazards : For further information see Section 12.
14.6. Special precautions for user:
DuPont internal recommendations and transport guidance: ICAO / IATA cargo aircraft only

IMDG

- 14.1. UN number: 3082
14.2. UN proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Chlorantraniliprole)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
14.5. Environmental hazards : Marine pollutant
14.6. Special precautions for user:
No special precautions required.
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory information

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

Other regulations : The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008.

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SECTION 16: Other information**Full text of H-Statements referred to under section 3.**

H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.

Other information professional use

Abbreviations and acronyms

| | |
|---------|---|
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute toxicity estimate |
| CAS-No. | Chemical Abstracts Service number |
| CLP | Classification, Labelling and Packaging |
| EbC50 | Concentration at which 50% reduction of biomass is observed |
| EC50 | Median effective concentration |
| EN | European Norm |
| EPA | Environmental Protection Agency |
| ErC50 | Concentration at which a 50% inhibition of growth rate is observed |
| EyC50 | Concentration at which 50 % inhibition of yield is observed |
| IATA_C | International Air Transport Association (Cargo) |
| IBC | International Bulk Chemical Code |
| ICAO | International Civil Aviation Organization |
| ISO | International Standard Organization |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median Lethal Concentration |
| LD50 | Median Lethal Dose |
| LOEC | Lowest Observed Effect Concentration |
| LOEL | Lowest observed effect level |
| MARPOL | International Convention for the Prevention of Marine Pollution from Ships |
| n.o.s. | Not Otherwise Specified |
| NOAEC | No Observed Adverse Effect Concentration |
| NOAEL | No observed adverse effect level |
| NOEC | No Observed Effect Concentration |
| NOEL | No Observed Effect Level |
| OECD | Organisation for Economic Co-operation and Development |
| OPPTS | Office of Prevention, Pesticides and Toxic Substances |
| PBT | Persistent, Bioaccumulative and Toxic |
| STEL | Short term exposure limit |
| TWA | Time Weighted Average (TWA): |
| vPvB | very Persistent and very Bioaccumulative |

Further information

Before use read DuPont's safety information., Take notice of the directions of use on the label.

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Note: The information on components provided in sections 11 and 12 of this safety data sheet may in some cases not align with a legally binding classification on the basis of technical progress and availability of new information.

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Significant change from previous version is denoted with a double bar.

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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.