



CORAGEN®

Version 4.0

Revision Date 31.10.2012

Ref. 130000027866

This SDS adheres to the standards and regulatory requirements of Great Britain 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 : Du Pont (UK) Limited
Wedgwood Way
Stevenage, Herts. SG1 4QN
United Kingdom
Telephone : +44-1438-734.000
E-mail address : sds-support@che.dupont.com

1.4. Emergency telephone number

Emergency telephone number : +44-(0)8456-006.640

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Dangerous for the environment : R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2. Label elements



Dangerous for
the
environment

R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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



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Do not allow direct spray from broadcast air-assisted sprayers to fall within 10 m of the top of the bank of a static or flowing waterbody, unless a Local Environment Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 5 m of the top of a ditch which is dry at the time of application. Aim spray away from water.

Sensitising components	Contains: 1,2-Benzisothiazol-3(2H)-one / May produce an allergic reaction.
S 2	Keep out of the reach of children.
S13	Keep away from food, drink and animal feedingstuffs.
S35	This material and its container must be disposed of in a safe way.
S57	Use appropriate container to avoid environmental contamination.
SP 1	Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).
SPe3	To protect aquatic organisms respect an unsprayed buffer zone to surface water bodies in line with LERAP requirements.

2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients

3.1. Substances

not applicable

3.2. Mixtures

Registration number	Classification according Directive 67/548/EEC	Classification according Regulation 1272/2008 (CLP)	Concentration
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Chlorantraniliprole (CAS-No.500008-45-7)

	N;R50/53	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	20 %
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The above products are REACH compliant; Registration number(s) may not be provided because substance(s) are exempted, not yet registered under REACH or are registered under another regulatory process (biocide uses, plant protection products), etc.

For the full text of the R-phrases mentioned in this Section, see Section 16.
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.
- : For specialist advice physicians should contact the National Poisons Information Service, (24-hr), Tel: 0870-600-6266. Call a physician or poison control centre immediately.
- 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.



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: (on small fires) If area is heavily exposed to fire and if conditions permit, let fire 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 of the given occupational exposure limits (see section 8).

Advice on protection : Keep away from heat and sources of ignition. Take necessary action to avoid



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against fire and explosion 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.

Storage temperature : > 0 °C

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.

Components with workplace control parameters

Type Form of exposure	Control parameters	Update	Basis	Remarks
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Propane-1,2-diol (CAS-No. 57-55-6)

TWA Particulate.	10 mg/m3	2007	EH40 WEL	
TWA Total vapour and particulates.	474 mg/m3 150 ppm	2007	EH40 WEL	

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TWA Particulate.	10 mg/m3	2007	EH40 WEL	
TWA Total vapour and particulates.	474 mg/m3 150 ppm	2007	EH40 WEL	

8.2. Exposure controls

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



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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 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 ergonomoy 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.



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- 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. 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 : 7.8 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.
- Relative density : 1.094



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Partition coefficient: n-octanol/water	: not applicable
Solubility in other solvents	: slightly soluble
Viscosity, dynamic	: 583 mPa.s
Viscosity, kinematic	: not applicable
I Relative vapor density	: Not available for this mixture.
I 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.
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)

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



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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.

Carcinogenicity assessment

- Chlorantraniliprole
Animal testing did not show any carcinogenic effects.

Not classifiable as a human carcinogen.

Toxicity to reproduction assessment

- Chlorantraniliprole
No toxicity to reproduction

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish



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static test / LC50 / 96 h / *Lepomis macrochirus* (Bluegill sunfish): 3.2 mg/l
Method: OECD Test Guideline 203
Information source: Internal study report (Data on the product itself)

Toxicity to aquatic plants

EbC50 / 72 h / *Pseudokirchneriella subcapitata* (green algae): > 4.0 mg/l
Method: OECD Test Guideline 201
Information source: Internal study report (Data on the product itself)

Toxicity to aquatic invertebrates

static test / EC50 / 48 h / *Daphnia*: 0.0071 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): > 0.1141 mg/kg
Method: OECD Test Guideline 213
Oral Information source: Internal study report (Data on the product itself)

LD50 / 48 h / *Apis mellifera* (bees): > 0.100 mg/kg
Method: OECD Test Guideline 214
Contact Information source: Internal study report (Data on the product itself)

Chronic toxicity to fish

- Chlorantraniliprole
NOEC / 28 d / *Oncorhynchus mykiss* (rainbow trout): 0.110 mg/l

Chronic toxicity to aquatic Invertebrates

- Chlorantraniliprole
NOEC / 21 d / *Daphnia magna* (Water flea): 0.00447 mg/l

12.2. Persistence and degradability

Biodegradability

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

12.3. Bioaccumulative potential



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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. Under actual use conditions, there is no reasonable expectation of any movement of the product from the top soil layer.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). / This mixture contains no substance considered to be very persistent nor 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 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:
14.6. Special precautions for user:
Tunnel restriction code: (E)
DuPont internal recommendations and transport guidance: ICAO / IATA cargo aircraft only

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 :
14.6. Special precautions for user:
DuPont internal recommendations and transport guidance: ICAO / IATA cargo aircraft only



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IMDG

- 14.1. UN number: 3082
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chlorantranilprole)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
14.5. Environmental hazards : Marine Pollutant
14.6. Special precautions for user:
DuPont internal recommendations and transport guidance: ICAO / IATA cargo aircraft only

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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 mixture is classified as dangerous in accordance with Directive 1999/45/EC. Take note of Dir 94/33/EC on the protection of young people at work. Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers. Take note of Directive 96/82/EC on the control of major-accident hazards involving dangerous substances. Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values.

15.2. Chemical Safety Assessment

- A Chemical Safety Assessment is not required for this/these products
The mixture is evaluated within the frame of the provisions of Regulation (EC) No. 1107/2009.
Refer to the label for exposure assessment information.

SECTION 16: Other information

Text of R-phrases mentioned in Section 3

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

Further information

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

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



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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.