



## VERTISAN®

Version 4.1 (replaces: Version 4.0)

Revision Date 27.09.2016

Ref. 130000036424

This safety data sheet is based on the structure provided by the standards of the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (UN GHS), and includes the classification and identification information under internationally recognized rules. Available exposure limits may not meet regulatory standards for all countries.

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

#### 1.1. Product identifier

Product name : VERTISAN®  
Synonyms : B12894144  
DPX-LEM17 200 g/L EC

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

Use of the Substance/Mixture : Fungicide

#### 1.3. Details of the supplier of the safety data sheet

Company : DuPont International Operations S.a.r.l.  
2, chemin du Pavillon  
CH-1218 Le Grand-Saconnex / GE  
Switzerland  
Telephone : +41 (0) 22 717 51 11  
Telefax : +41 (0) 22 717 51 09  
Supplier : Du Pont de Nemours (France) S.A.S.  
82, rue de Wittelsheim  
F-68701 Cernay Cedex  
Telephone : +33 (0) 3 89 38 38 38  
E-mail address : sds-support@che.dupont.com

#### 1.4. Emergency telephone number

+(44)-870-8200418 (CHEMTREC)

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

Serious eye damage/eye irritation, Category 2 H319: Causes serious eye irritation.  
Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.  
Acute aquatic toxicity, Category 1 H400: Very toxic to aquatic life.

## VERTISAN®

Version 4.1 (replaces: Version 4.0)

Revision Date 27.09.2016

Ref. 130000036424

Chronic aquatic toxicity,  
Category 2

H411: Toxic to aquatic life with long lasting effects.

### 2.2. Label elements



#### Warning

H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H411	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.,

P280	Wear protective gloves/ protective clothing.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P391	Collect spillage.
P501	Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

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).
------	---

### 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



**VERTISAN®**

Version 4.1 (replaces: Version 4.0)  
Revision Date 27.09.2016

Ref. 130000036424

**3.2. Mixtures**

Registration number	Classification according to Regulation (EU) 1272/2008 (CLP)	Concentration (% w/w)
---------------------	---	-----------------------

**Penthiopyrad (CAS-No.183675-82-3)**  
**(M-Factor : 1[Acute] 1[Chronic])**

	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	20,6 %
--	--	--------

The above products are compliant to REACH registration obligations; 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 H-Statements mentioned in this Section, see Section 16.

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

- General advice : Never give anything by mouth to an unconscious person.
- Inhalation : Move to fresh air. Oxygen or artificial respiration if needed. Consult a physician after significant exposure.
- Skin contact : Take off all contaminated clothing immediately. Wash off with soap and water. In the case of skin irritation or allergic reactions see a physician. 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 : Obtain medical attention. DO NOT induce vomiting unless directed to do so by a physician or poison control center. If victim is conscious: Rinse mouth with water.

**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, Dry chemical, Carbon dioxide (CO2), Foam



## VERTISAN®

Version 4.1 (replaces: Version 4.0)

Revision Date 27.09.2016

Ref. 130000036424

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 (CO<sub>2</sub>) nitrogen oxides

### 5.3. Advice for firefighters

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

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 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. Keep people away from and upwind of spill/leak. 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 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 and shovel into suitable containers for disposal.  
Clean-up methods - large spillage Prevent further leakage or 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



## VERTISAN®

Version 4.1 (replaces: Version 4.0)  
Revision Date 27.09.2016

Ref. 130000036424

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. Wear personal protective equipment. For personal protection see section 8. Use only clean equipment. Provide adequate ventilation. Do not breathe vapours or spray mist. When opening containers, avoid breathing vapours that may be emanating. 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. To avoid spills during handling keep bottle on a metal tray. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use. Never return unused material to storage receptacle. Avoid exceeding the given occupational exposure limits (see section 8).

Advice on protection against fire and explosion : Keep away from heat and sources of ignition. Take measures to prevent the build up of electrostatic charge.

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

Requirements for storage areas and containers : Store in original container. Keep in properly labelled containers. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. 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. Keep away from: Oxidizing agents

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



**VERTISAN®**

Version 4.1 (replaces: Version 4.0)

Revision Date 27.09.2016

Ref. 130000036424

- Engineering measures : Ensure adequate ventilation, especially in confined areas.
- Eye protection : Safety glasses with side-shields conforming to EN166
- Hand protection : Material: Nitrile rubber  
Glove thickness: 0,4 - 0,7 mm  
Glove length: Gauntlets of 35 cm long or longer.  
Protection index: Class 6  
Wearing time: 8 h  
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 of 35 cm long or longer shall be worn over 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)  
Rubber apron Nitrile rubber boots (EN 13832-3 / EN ISO 20345).  
  
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 during the application. However, gloves and a long sleeved shirt shall be worn when handling the treated plants after the application. Wear shoes with conductive soles.  
  
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).  
  
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



**VERTISAN®**

Version 4.1 (replaces: Version 4.0)

Revision Date 27.09.2016

Ref. 130000036424

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.

**Protective measures** : 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. Keep working clothes separately. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. Remove clothing/PPE immediately if material gets inside. 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 A2 (EN 141)  
  
Mixer and loaders must wear: Half mask with vapour filter A2 (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  
Colour : light yellow  
Odour : like fruit  
Odour Threshold : not determined  
pH : 5,8 at 10 g/l



## VERTISAN®

Version 4.1 (replaces: Version 4.0)

Revision Date 27.09.2016

Ref. 130000036424

Boiling point/boiling range	: Not available for this mixture.
Flash point	: 88 °C , Method: Pensky-Martens closed cup - PMCC
Thermal decomposition	: Not available for this mixture.
Auto-ignition temperature	: 250 °C
Oxidizing properties	: The product is not oxidizing.
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.
Relative density	: 0,9681
Water solubility	: emulsifiable
Partition coefficient: n-octanol/water	: 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

<b>10.1. Reactivity</b>	: No hazards to be specially mentioned.
<b>10.2. Chemical stability</b>	: The product is chemically stable under recommended conditions of storage, use and temperature.
<b>10.3. Possibility of hazardous reactions</b>	: No dangerous reaction known under conditions of normal use. Polymerization will not occur. No decomposition if stored and applied as directed.
<b>10.4. Conditions to avoid</b>	: Exposure to sunlight. Decomposes on heating. Protect from frost.
<b>10.5. Incompatible materials</b>	: Strong oxidizing agents
<b>10.6. Hazardous decomposition products</b>	: Sulphur oxides Hydrogen fluoride Hydrogen cyanide (hydrocyanic acid)





**VERTISAN®**

Version 4.1 (replaces: Version 4.0)  
Revision Date 27.09.2016

Ref. 130000036424

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

Acute oral toxicity

LD50 / Rat : > 5 000 mg/kg  
Method: OECD Test Guideline 425  
(Data on the product itself) Information source: Internal study report

Acute inhalation toxicity

LC50 / 4 h Rat : > 4,89 mg/l  
Method: OECD Test Guideline 403  
(Data on the product itself) Information source: Internal study report

Acute dermal toxicity

LD50 / Rat : > 5 000 mg/kg  
Method: OECD Test Guideline 402  
(Data on the product itself) Information source: Internal study report

Skin irritation

Rabbit  
Result: No skin irritation  
Method: OECD Test Guideline 404  
(Data on the product itself) Information source: Internal study report

Eye irritation

Rabbit  
Result: Irritating to eyes.  
Method: OECD Test Guideline 405  
(Data on the product itself) Information source: Internal study report

Sensitisation

Mouse Local lymph node test  
Result: Causes sensitisation.  
Method: OECD Test Guideline 429  
(Data on the product itself) Information source: Internal study report

Repeated dose toxicity

- Penthiopyrad  
Oral multiple species  
The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions., Reduced body weight gain, Liver effects, Thyroid effects, Spleen effects, Gallbladder effects, Liver enlargement, Immune system effects, altered blood chemistry, Organ weight changes,



## VERTISAN®

Version 4.1 (replaces: Version 4.0)

Revision Date 27.09.2016

Ref. 130000036424

Increased liver weight

### Mutagenicity assessment

- Penthiopyrad

Animal testing did not show any mutagenic effects. Did not cause genetic damage in cultured bacterial cells. Genetic damage in cultured mammalian cells was observed in one laboratory test but was not observed in others.

### Carcinogenicity assessment

- Penthiopyrad

Not classifiable as a human carcinogen. The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions. A slight increased incidence in tumors was observed in animal studies. Liver Thyroid

### Toxicity to reproduction assessment

- Penthiopyrad

No toxicity to reproduction

### Assessment teratogenicity

- Penthiopyrad

No toxicity to reproduction The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions. Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

### STOT - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

### STOT - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### Aspiration hazard

The mixture does not have properties associated with aspiration hazard potential.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Toxicity to fish

static test / LC50 / 96 h / Pimephales promelas (fathead minnow): 0,32 mg/l

Method: OECD Test Guideline 203

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



## VERTISAN®

Version 4.1 (replaces: Version 4.0)

Revision Date 27.09.2016

Ref. 130000036424

### Toxicity to aquatic plants

- Penthiopyrad  
ErC50 / 72 h / Pseudokirchneriella subcapitata (green algae): > 4,02 mg/l  
Method: OECD Test Guideline 201  
Information source: Data provided by an external source.

### Toxicity to aquatic invertebrates

static test / EC50 / 48 h / Daphnia magna (Water flea): 1,2 mg/l  
Method: OECD Test Guideline 202  
(Data on the product itself) Information source: Internal study report

### Toxicity to other organisms

- Penthiopyrad  
LD50 / 48 d / Apis mellifera (bees): > 500 µg/b  
Method: OECD Test Guideline 213  
Oral Information source: Data provided by an external source.
  
- LD50 / 48 d / Apis mellifera (bees): > 500 µg/b  
Method: OECD Test Guideline 214  
Contact Information source: Data provided by an external source.

### Chronic toxicity to fish

- Penthiopyrad  
Early Life-Stage / NOEC / 33 d / Pimephales promelas (fathead minnow): 51 µg/l  
Method: OECD Test Guideline 210  
Information source: Data provided by an external source.

### Chronic toxicity to aquatic Invertebrates

- Penthiopyrad  
flow-through test / NOEC / 21 d / Daphnia magna (Water flea): 0,47 mg/l  
Method: OECD Test Guideline 211  
Information source: Data provided by an external source.

## 12.2. Persistence and degradability

### Biodegradability

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

## 12.3. Bioaccumulative potential

### Bioaccumulation

Bioaccumulation is unlikely. Estimation based on data obtained on active ingredient.

## 12.4. Mobility in soil



## VERTISAN®

Version 4.1 (replaces: Version 4.0)

Revision Date 27.09.2016

Ref. 130000036424

Mobility in soil

Slightly 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 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.
- European Waste Catalogue number : 020108: agrochemical waste containing dangerous substances

## SECTION 14: Transport information

### ADR

- 14.1. UN number: 3082
- 14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Penthiopyrad)
- 14.3. Transport hazard class(es): 9
- 14.4. Packing group: III
- 14.5. Environmental hazards: Environmentally hazardous
- 14.6. Special precautions for user:  
Tunnel restriction code: (E)

### IATA\_C

- 14.1. UN number: 3082
- 14.2. UN proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Penthiopyrad)
- 14.3. Transport hazard class(es): 9
- 14.4. Packing group: III
- 14.5. Environmental hazards : For further information see Section 12.



## VERTISAN®

Version 4.1 (replaces: Version 4.0)

Revision Date 27.09.2016

Ref. 130000036424

### 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. (Penthiopyrad) |
| 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. 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. This product is in full compliance according to REACH regulation 1907/2006/EC.

### 15.2. Chemical safety assessment

A Chemical Safety Assessment is not required for this/these products  
The mixture is registered as a plant protection product under Regulation (EC) No. 1107/2009.  
Refer to the label for exposure assessment information.

## 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



**VERTISAN®**

Version 4.1 (replaces: Version 4.0)

Revision Date 27.09.2016

Ref. 130000036424

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.

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.