



LANNATE® 25 WP

Version 5.0

Revision Date 21.09.2011

Ref. 130000000442

This SDS adheres to the standards and regulatory requirements of the European Community and may not meet the regulatory requirements of other countries.

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

Product identifier

Product name : LANNATE® 25 WP

Synonyms : B11517709
DPX-X1179-548

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

Use of the Substance/Mixture : Insecticide

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 : +41-22-717.5111

Telefax : +41-22-717.5109

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

Emergency telephone number

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

Supplier : Du Pont de Nemours (France) S.A.S.
82, rue de Wittelsheim
F-68701 Cernay Cedex

Telephone : +33 3 89 38 38 38

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Toxic	R25: Toxic if swallowed.
Harmful	R20: Harmful by inhalation.
Dangerous for the environment	R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.



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Label elements



R20	Harmful by inhalation.
R25	Toxic if swallowed.
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.

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.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
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).
SPo 2	Wash all protective clothing after use.

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).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

not applicable

Mixtures

Registration number	Classification according Directive 67/548/EEC	Classification according Regulation 1272/2008 (CLP)	Concentration
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Methomyl (CAS-No.16752-77-5) (EC-No.240-815-0)

	T+;R28 N;R50 R53	Acute Tox. 2; H300 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	25 %
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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.

4. FIRST AID MEASURES

Description of first aid measures

- General advice : Call a physician or poison control centre immediately. If breathing is irregular or stopped, administer artificial respiration. Never give anything by mouth to an unconscious person.
- : Contains an N-methyl carbamate that inhibits cholinesterase. This product contains an anticholinesterase compound. Do not use if under medical advice not to work with such compounds.
- Inhalation : Call a poison control center or doctor for treatment advice. Move to fresh air. Artificial respiration and/or oxygen may be necessary.
- Skin contact : Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. In the case of skin irritation or allergic reactions see a physician. If after contact with the skin signs of poisoning appear, call a physician or poison control centre immediately. 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. Get medical advice/ attention.
- Ingestion : Call a physician or poison control centre immediately. If swallowed, drink 1 or 2 glasses of water and try once or twice to induce vomiting by touching the back of throat with finger. Induce vomiting, but only if victim is fully conscious. Rinse mouth.

Most important symptoms and effects, both acute and delayed

- Risks : Allow no further exposure to any cholinesterase inhibitor until full recovery is assured.
- Symptoms : Poisoning produces effects associated with anticholinesterase activity which may include: constriction of pupils, Blurred vision, Weakness, Headache, Nausea, sweating, slow pulse, muscle twitching, Shortness of breath

Indication of any immediate medical attention and special treatment needed

- Treatment : Administer atropine sulphate as an antidote until complete atropinisation (1.2-2.0 mg i.v. every 10-30 minutes). 2-PAM may be used as an antidote in conjunction with atropine sulphate but must not be used alone. Allow no further exposure to any cholinesterase inhibitor until full recovery is assured.
- : Contraindication: Oximes (pralidoxime), succinylcholine and other cholinergic agents, respiratory stimulants and physostigmine. Morphine therapy is contraindicated.

5. FIREFIGHTING MEASURES



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Extinguishing media

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

Special hazards arising from the substance or mixture

- Specific hazards during firefighting : Hazardous decomposition products formed under fire conditions. Carbon dioxide (CO2) nitrogen oxides

Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Wear suitable protective equipment.
- 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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Personal precautions : Control access to area. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid dust formation. Avoid breathing dust. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.

Environmental precautions

- Environmental precautions : Use appropriate container to avoid environmental contamination. Prevent further leakage or spillage if safe to do so. 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.

Methods and materials for containment and cleaning up

- Methods for cleaning up : Clean-up methods - small spillage Sweep up or vacuum up spillage and collect in suitable container for disposal.
Clean-up methods - large spillage 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).
- Other information : Never return spills in original containers for re-use. Dispose of in accordance with local regulations.



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Reference to other sections

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

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling : Use only according to our recommendations. Use only clean equipment. Do not breathe dust or spray mist. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Provide appropriate exhaust ventilation at places where dust is formed. 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. Use only in an area equipped with a safety shower. For personal protection see section 8. Avoid exceeding of the given occupational exposure limits (see section 8).

Advice on protection against fire and explosion : Keep away from heat and sources of ignition. During processing, dust may form explosive mixture in air. Fire or intense heat may cause violent rupture of packages.

Conditions for safe storage, including any incompatibilities

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

Specific end uses

Plant protection products subject to Directive 91/414/EEC.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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

Exposure controls

Engineering measures : Ensure adequate ventilation, especially in confined areas. Provide for appropriate exhaust ventilation and dust collection at machinery.

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: > 480 min
The selected protective gloves have to satisfy the specifications of EU Directive



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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. 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 5 (EN 13982-2) Mixer and loaders must wear: Full protective clothing Type 4 (EN 14605) Rubber apron Nitrile rubber boots (EN 13832-3 / EN ISO 20345). Tractor / sprayer without hood: Nitrile rubber boots (EN 13832-3 / EN ISO 20345). Low application (horticulture, field crops): Full protective clothing Type 4 (EN 14605) Middle-height application (vegetables, viticulture): Full protective clothing Type 3 (EN 14605) Backpack / knapsack sprayer: Nitrile rubber boots (EN 13832-3 / EN ISO 20345). Low application (horticulture, field crops): Full protective clothing Type 4 (EN 14605) Middle-height application (vegetables, viticulture): Full protective clothing Type 3 (EN 14605) High application (orchard, fruit trees): Full protective clothing Type 3 (EN 14605) Closed tunnel spray application: No personal body protection normally required. 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 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.

Protective measures : All Personal Protection Equipment should be checked before use to confirm it is compatible with the chemicals you are handling.
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. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Only protected handlers may be in the area during application. Always have on hand a first-aid kit, together with proper instructions.

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 and face before breaks and immediately after handling the product. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. For environmental protection remove and wash all contaminated protective equipment before re-use. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Dispose of rinse water in accordance with local and national regulations. Take a



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shower immediately after the end of work.

Respiratory protection : Manufacturing and processing work: Half mask with a particle filter FFP2 (EN149) Mixer and loaders must wear: Half mask with combination filter A2/P3 (EN 141) Spray application - outdoor: Tractor / sprayer with hood: No personal respiratory protective equipment normally required. Tractor / sprayer without hood: Half mask with combination filter A2/P3 (EN 141) Backpack / knapsack sprayer: Half mask with combination filter A2/P3 (EN 141) Closed tunnel spray application: No personal respiratory protective equipment normally required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form : wetable powder

Colour : light green

Odour : slight, sulphurous

Odour Threshold : not determined

pH : 7,1 at 10 g/l

Melting point/range : Decomposes without melting.

Boiling point/boiling range : not applicable

Flash point : not applicable

Flammability (solid, gas) : Does not sustain combustion.

Thermal decomposition : 136 °C

: not auto-flammable

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.

Vapour pressure : not determined

Relative density : not applicable

Bulk density : 417 kg/m³ , packed

Solubility/qualitative : dispersible



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Water solubility : 0,55 g/l
Partition coefficient: n-
octanol/water : not applicable
Viscosity, kinematic : not applicable
Relative vapour density : not applicable
Evaporation rate :
not applicable

Other information

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

10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : The product is chemically stable.
Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use. No decomposition if stored and applied as directed.
Conditions to avoid : Processing temperature : > 136 °C Heating can release hazardous gases. To avoid thermal decomposition, do not overheat. Under severe dusting conditions, this material may form explosive mixtures in air.
Incompatible materials : No materials to be especially mentioned.
Hazardous decomposition products : Sulphur dioxide
Hydrogen cyanide (hydrocyanic acid)
Methyl isocyanate

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute oral toxicity

LD50 / rat : 84 mg/kg
Method: OECD Test Guideline 401
(Data on the product itself) Information source: Internal study report

Acute inhalation toxicity

LC50 / 4 h rat : 1,2 mg/l
Method: OECD Test Guideline 403
(Data on the product itself) Information source: Internal study report

Acute dermal toxicity



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LD50 / rabbit : > 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: No eye irritation
Method: OECD Test Guideline 405
(Data on the product itself) Information source: Internal study report

Sensitisation

guinea pig Modified Buehler Test
Result: Animal test did not cause sensitization by skin contact.
Method: OECD Test Guideline 406
(Data on the product itself) Information source: Internal study report

Repeated dose toxicity

The product itself has not been tested., Refer to information available on components.

- Methomyl
Oral human
LOAEL: 0,2 mg/kg
- Oral rat
LOAEL: 0,5 mg/kg

Mutagenicity assessment

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

Carcinogenicity assessment

- Methomyl
Did not show carcinogenic effects in animal experiments. Not classifiable as a human carcinogen.

Toxicity to reproduction assessment

- Methomyl
Animal testing showed no reproductive toxicity.

12. ECOLOGICAL INFORMATION

Toxicity



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Toxicity to fish

static test / LC50 / 96 h / *Lepomis macrochirus* (Bluegill sunfish): 5,3 mg/l
Method: OECD Test Guideline 203
(Data on the product itself) Information source: Internal study report

Toxicity to aquatic plants

- Methomyl
ErC50 / 72 h / *Desmodesmus subspicatus* (green algae): > 100 mg/l

Toxicity to aquatic invertebrates

static test / EC50 / 48 h / *Daphnia magna* (Water flea): 0,096 mg/l
Method: OECD Test Guideline 202
(Data on the product itself) Information source: Internal study report

Toxicity to other organisms

LD50 / *Colinus virginianus* (Bobwhite quail): 30 mg/kg
Method: US EPA Test Guideline OPPTS 850.2100
Oral (Data on the product itself) Information source: Internal study report

LD50 / 48 h / *Apis mellifera* (bees): 0,00025 mg/kg
Method: OEPP/EPPO Test Guideline 170
Oral (Data on the product itself) Information source: Internal study report

LD50 / 48 h / *Apis mellifera* (bees): 0,00020 mg/kg
Method: OEPP/EPPO Test Guideline 170
Contact (Data on the product itself) Information source: Internal study report

Chronic toxicity to fish

- Methomyl
Early Life-Stage / NOEC / 35 d / *Pimephales promelas* (fathead minnow): 0,073 mg/l

Chronic toxicity to aquatic Invertebrates

- Methomyl
NOEC / 21 d / *Daphnia magna* (Water flea): 0,0016 mg/l

Persistence and degradability

Biodegradability

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

Bioaccumulative potential

Bioaccumulation

Does not bioaccumulate.



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Mobility in soil

Mobility in soil

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

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).

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.

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

ADR

Class: 6.1
Packaging group: II
Classification Code: T7
HI No: 60
UN number: 2757
Labelling No.: 6.1
Proper shipping name: Carbamate pesticide, solid, toxic (Methomyl)
Tunnel restriction code: (D/E)

IATA_C

Class: 6.1
Packaging group: II
UN number: 2757
Labelling No.: 6.1
Proper shipping name: Carbamate pesticide, solid, toxic (Methomyl)

IMDG

Class: 6.1



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Packaging group: II
UN number: 2757
Labelling No.: 6.1
Proper shipping name: Carbamate pesticide, solid, toxic (Methomyl)

Marine pollutant: Marine pollutant.

Further information : ICAO / IATA cargo aircraft only

15. REGULATORY INFORMATION

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

no data available

Chemical Safety Assessment

A Chemical Safety Assessment is not required for this/these products
The mixture is registered as a plant protection product under Directive 91/414.
Refer to the label for exposure assessment information.

16. OTHER INFORMATION

Text of R-phrases mentioned in Section 3

R28 Very toxic if swallowed.
R50 Very toxic to aquatic organisms.
R53 May cause long-term adverse effects in the aquatic environment.

Full text of H-Statements referred to under section 3.

H300 Fatal if swallowed.
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.

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.