

**LYRIC®**

Version 3.0

Revision Date 20.07.2009

Ref. 130000030895

This SDS adheres to the standards and regulatory requirements of Great Britain and may not meet the regulatory requirements in other countries.

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****Product information**

Product name : LYRIC®

Synonyms : B11995500  
: DPX-H6473-462

Use of the Substance/Mixture : Fungicide

Company : Du Pont (UK) Limited  
Wedgwood Way  
Stevenage, Herts. SG1 4QN  
United Kingdom

Telephone : +44-1438-734.000

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

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

**2. HAZARDS IDENTIFICATION**

Harmful if swallowed.  
Irritating to skin.  
Limited evidence of a carcinogenic effect.  
May cause harm to the unborn child.  
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS-No.	EC-No.	Classification	Concentration [%]
Flusilazole	85509-19-9		Carc.Cat.3; R40 Repr.Cat.2; R61 Xn; R22 N; R51 -R53	25
2,6-Dimethylheptan-4-one	108-83-8	203-620-1	R10 Xi; R37	>= 20 - < 25
Polyethylene Oxide Mono<Tris(Alpha-Methylbenzyl)Phenyl> Ether	99734-09-5		R52/53	>= 5 - < 10
Xylene	1330-20-7	215-535-7	R10 Xn; R20/21 Xi; R38	>= 1 - < 2,5

**LYRIC®**

Version 3.0

Revision Date 20.07.2009

Ref. 130000030895

For the full text of the R-phrases mentioned in this Section, see Section 16.

**4. FIRST AID MEASURES**

- 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.
- Inhalation : Move to fresh air. Oxygen or artificial respiration if needed. Consult a physician.
- Skin contact : Wash off immediately with soap and plenty of water. Take off contaminated clothing and shoes immediately. In the case of skin irritation or allergic reactions see a physician. Wash contaminated clothing before re-use.
- Eye contact : Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.
- Ingestion : If swallowed, call a poison control centre or doctor immediately. Do not induce vomiting; contains petroleum distillates and/or aromatic solvents. If victim is conscious: Rinse mouth with water. Drink 1 or 2 glasses of water.

**5. FIRE-FIGHTING MEASURES**

- Suitable extinguishing media : Water spray, Dry powder, Foam, Carbon dioxide (CO<sub>2</sub>),
- Extinguishing media which shall not be used for safety reasons : High volume water jet, (contamination risk),
- Specific hazards during fire fighting : Hazardous decomposition products formed under fire conditions. Carbon dioxide (CO<sub>2</sub>) nitrogen oxides (NO<sub>x</sub>)
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
- Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- (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 : Control access to area. Evacuate personnel to safe areas. 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.
- Environmental precautions : Prevent further leakage or spillage if safe to do so. Use appropriate container to

**LYRIC®**

Version 3.0

Revision Date 20.07.2009

Ref. 130000030895

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.

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 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 absorbent and dike material for disposal.

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

**7. HANDLING AND STORAGE****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 of the given occupational exposure limits (see section 8).

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.

**Storage**

Requirements for storage areas and containers : Keep locked up. 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. Keep away from: Oxidizing agents

Storage temperature : > -5 °C

Other data : Stable under recommended storage conditions.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**LYRIC®**

Version 3.0

Revision Date 20.07.2009

Ref. 130000030895

**Components with workplace control parameters**

Components	CAS-No.	Type Form of exposure	Control parameters	Update	Basis	
2,6-Dimethylheptan-4-one	108-83-8	TWA	148 mg/m <sup>3</sup> 25 ppm	2003	EH40 OES	
		TWA	148 mg/m <sup>3</sup> 25 ppm	2007	EH40 WEL	
Propane-1,2-diol	57-55-6	TWA Particulate.	10 mg/m <sup>3</sup>	2007	EH40 WEL	
		TWA Total vapour and particulates.	474 mg/m <sup>3</sup> 150 ppm	2007	EH40 WEL	
Xylene	1330-20-7	TWA	220 mg/m <sup>3</sup> 50 ppm	2002	EH40 OES	
		STEL	441 mg/m <sup>3</sup> 100 ppm	2002	EH40 OES	
			Skin designation: Can be absorbed through the skin.			
		TWA	221 mg/m <sup>3</sup> 50 ppm	02 2006	EU ELV	
		STEL	442 mg/m <sup>3</sup> 100 ppm	02 2006	EU ELV	
		SKIN_DES		02 2006	EU ELV	
			Can be absorbed through skin.			
		TWA	220 mg/m <sup>3</sup> 50 ppm	2007	EH40 WEL	
		STEL	441 mg/m <sup>3</sup> 100 ppm	2007	EH40 WEL	
		SKIN_DES		2007	EH40 WEL	
	Can be absorbed through skin.					

**LYRIC®**

Version 3.0

Revision Date 20.07.2009

Ref. 130000030895

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**Engineering measures**

Ensure adequate ventilation, especially in confined areas. Since the mixture includes an organic solvent, electrical equipment must be explosion-proof and free from ignition sources such as static electricity and sparks.

**Personal protective equipment**

Respiratory protection : Manufacturing and processing work: Half mask with vapour filter A2 (EN 141)

Respiratory protection : Field and greenhouse application: Half mask with combination filter A2/P2 (EN 141)

Hand protection : Material: Nitrile rubber  
 Glove thickness: 0,4 - 0,7 mm  
 Wearing time: 480 min  
 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., Avoid neoprene and natural rubber gloves.

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

Skin and body protection : Manufacturing and processing work: Full protective clothing Type 5 + 6 (EN ISO 13982-2 / EN 13034)

Field and greenhouse application: Full protective clothing Type 3 (EN 14605)

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.

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.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Form : liquid,

Colour : milky, white,

Odour : fruity,

**LYRIC®**

Version 3.0

Revision Date 20.07.2009

Ref. 130000030895

pH	: 6,8 at 10 g/l ( 18,9 °C)
Flash point	: 84,6 °C
Autoignition temperature	: 475 °C
Oxidizing properties	: The product is not oxidising.
Explosive properties	: Not explosive
Density	: 1,004 g/cm <sup>3</sup>
Water solubility	: , emulsifiable
Partition coefficient: n-octanol/water	: POW: 5 495 log Pow: 3,74 , Active ingredient
Viscosity, dynamic	: 86 mPa.s at 25,1 °C

**10. STABILITY AND REACTIVITY**

Conditions to avoid	: Temperature : < 5 °C Protect from frost. Heating can release hazardous gases.
Materials to avoid	: Incompatible with oxidizing agents.
Hazardous decomposition products	: Sulphur oxides, Hydrogen fluoride
Hazardous reactions	: No dangerous reaction known under conditions of normal use. Heating can release vapours which can be ignited. Polymerization will not occur. No decomposition if stored and applied as directed.

**11. TOXICOLOGICAL INFORMATION**

Acute oral toxicity	: LD50/ rat : > 300 mg/kg Method: Fixed Dose Method (Data on the product itself) Information source: Internal study report
Acute inhalation toxicity • Flusilazole	: LC50/ 4 h/ rat : > 5,0 mg/l
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	: Irritating to skin.
Eye irritation	: No eye irritation
Sensitisation	: Maximisation Test guinea pig Result: Animal test did not cause sensitization by skin contact. Method: OECD Test Guideline 406 The toxicological data has

**LYRIC®**

Version 3.0

Revision Date 20.07.2009

Ref. 130000030895

been taken from products of similar composition. Information source: Internal study report

**Mutagenicity assessment**

- Flusilazole : Did not cause genetic damage in cultured bacterial cells., Did not cause genetic damage in cultured mammalian cells., Did not cause genetic damage in animals.

**Carcinogenicity assessment**

- Flusilazole : An increased incidence of tumours was observed in laboratory animals.

**Toxicity to reproduction assessment**

- Flusilazole : Experiments have shown reproductive toxicity effects on laboratory animals.

Further information : Contains organic solvents.Solvents may decrease the skin.Evaporation of solvents may cause irritation to eyes and mucous membranes.Repeated and prolonged exposure to solvents may cause brain and nervous system damage.

**12. ECOLOGICAL INFORMATION****Elimination information (persistence and degradability)**

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

Bioaccumulation : 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).

**Ecotoxicity effects**

Toxicity to fish : static test LC50/ 96 h/ Oncorhynchus mykiss (rainbow trout) :: 3,2 mg/l  
Method: OECD Test Guideline 203  
(Data on the product itself) Information source: Internal study report

Toxicity to algae : / ErC50/ 72 h/ Pseudokirchneriella subcapitata (green algae): 6,9 mg/l  
Method: OECD Test Guideline 201  
(Data on the product itself) Information source: Internal study report

Toxicity to daphnia : static test / EC50/ 48 h/ Daphnia magna (Water flea): 19,5 mg/l  
Method: OECD Test Guideline 202  
(Data on the product itself) Information source: Internal study report

**13. DISPOSAL CONSIDERATIONS**

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.

**14. TRANSPORT INFORMATION**

**LYRIC®**

Version 3.0

Revision Date 20.07.2009

Ref. 130000030895

**ADR**

Class: 9  
 Packaging group: III  
 Classification Code: M6  
 HI No.: 90  
 UN-Number: 3082  
 Labelling No.: 9  
 Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Flusilazole)

**IATA\_C**

Class: 9  
 Packaging group: III  
 UN-Number: 3082  
 Labelling No.: 9MI  
 Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Flusilazole)

**IMDG**

Class: 9  
 Packaging group: III  
 UN-Number: 3082  
 Labelling No.: 9  
 Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Flusilazole)

Further information : ICAO / IATA cargo aircraft only

**15. REGULATORY INFORMATION****Labelling according to EC Directives**

Symbol(s) : T Toxic  
 N Dangerous for the environment

Hazardous components: Flusilazole  
 2,6-Dimethylheptan-4-one  
 Polyethylene Oxide Mono<Tris(Alpha-Methylbenzyl)Phenyl> Ether  
 1,2-Benzisothiazol-3(2H)-one

R-phrase(s) : R22 Harmful if swallowed.  
 R38 Irritating to skin.  
 R40 Limited evidence of a carcinogenic effect.  
 R61 May cause harm to the unborn child.  
 R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s) : S 2 Keep out of the reach of children.  
 S13 Keep away from food, drink and animal feedingstuffs.  
 S20/21 When using do not eat, drink or smoke.  
 S23 Do not breathe spray.  
 S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S35 This material and its container must be disposed of in a safe way.  
 S36/37 Wear suitable protective clothing and gloves.

**LYRIC<sup>®</sup>**

Version 3.0

Revision Date 20.07.2009

Ref. 130000030895

S38	In case of insufficient ventilation, wear suitable respiratory equipment.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S53	Avoid exposure - obtain special instructions before use.
S57	Use appropriate container to avoid environmental contamination.

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

Sensitising components contains:  
1,2-Benzisothiazol-3(2H)-one  
May produce an allergic reaction.

Further information : Restricted to professional users.

**16. OTHER INFORMATION****Text of R-phrases mentioned in Section 3**

R10	Flammable.
R20/21	Harmful by inhalation and in contact with skin.
R22	Harmful if swallowed.
R37	Irritating to respiratory system.
R38	Irritating to skin.
R40	Limited evidence of a carcinogenic effect.
R51	Toxic to aquatic organisms.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53	May cause long-term adverse effects in the aquatic environment.
R61	May cause harm to the unborn child.

**Further information**

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

<sup>®</sup> Registered trademark of E. I. du Pont de Nemours and Company

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 guidance 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.