

# CURATOR

Version 2

Revision Date 03.12.2007

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## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### PRODUCT INFORMATION

**Product name** : CURATOR  
**Design Code** : A14111B  
**Use** : Fungicide  
**Company** : Syngenta Crop Protection AG  
 Postfach  
 CH-4002 Basel  
 Switzerland  
**Telephone** : +41 61 323 11 11  
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Harmful



Dangerous for the environment

## 2. HAZARDS IDENTIFICATION

Harmful by inhalation.  
 Irritating to respiratory system.  
 Risk of serious damage to eyes.  
 May cause sensitization by skin contact.  
 Limited evidence of a carcinogenic effect.  
 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Hazardous components

Chemical Name	CAS-No.	EC-No.	Symbol(s)	R-phrases(s)	Concentration
azoxystrobin	131860-33-8		T, N	R23 R50/53	6.6 % W/W
chlorothalonil	1897-45-6	217-588-1	T+, N	R26 R37 R40 R41 R43 R50/53	32.8 % W/W
1,2-propanediol	57-55-6	200-338-0			1 - 5 % W/W
fatty alcohol ethoxylate			Xn	R22 R41	1 - 5 % W/W
alcohol alkoxyate	127036-24-2		Xn	R22 R41	1 - 5 % W/W

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

### 4. FIRST AID MEASURES

- General advice** : Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control center or physician, or going for treatment.
- Inhalation** : Remove to fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
Keep patient warm and at rest.  
Call a physician or Poison Control Centre immediately.
- Skin contact** : Take off all contaminated clothing immediately.  
Wash off immediately with plenty of water.  
If skin irritation persists, call a physician.  
Wash contaminated clothing before re-use.
- Eye contact** : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Remove contact lenses.  
Immediate medical attention is required.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label.  
Do NOT induce vomiting.
- Medical advice** : There is no specific antidote available. Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media** : Extinguishing media - small fires  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
Extinguishing media - large fires  
Alcohol-resistant foam  
or  
Water spray
- Extinguishing media which shall not be used for safety reasons** : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during fire fighting** : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).  
Exposure to decomposition products may be a hazard to health.
- Special protective equipment for fire-** : Wear full protective clothing and self-contained breathing apparatus.

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**fighters**

**Further information** : Do not allow run-off from fire fighting to enter drains or water courses.  
Cool closed containers exposed to fire with water spray.

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**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions** : Refer to protective measures listed in sections 7 and 8.

**Environmental precautions** : Prevent further leakage or spillage if safe to do so.  
Do not flush into surface water or sanitary sewer system.

**Methods for cleaning up** : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

**Additional advice** : If the product contaminates rivers and lakes or drains inform respective authorities.

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**7. HANDLING AND STORAGE****HANDLING**

**Advice on safe handling** : No special protective measures against fire required.  
Avoid contact with skin and eyes.  
When using, do not eat, drink or smoke.  
For personal protection see section 8.

**STORAGE**

**Requirements for storage areas and containers** : No special storage conditions required.  
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.

**Other data** : Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	Exposure limit(s)	Type of exposure limit	Source
azoxystrobin	2 mg/m <sup>3</sup>	8 h TWA	SYNGENTA
chlorothalonil	0.1 mg/m <sup>3</sup>	8 h TWA	SYNGENTA
1,2-propanediol	10 mg/m <sup>3</sup> 150 ppm 470 mg/m <sup>3</sup>	Particulates Total (vapour & particulates)	8 h TWA UK HSE

#### ENGINEERING MEASURES

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

If airborne mists or vapors are generated, use local exhaust ventilation controls.

Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit.

Where necessary, seek additional occupational hygiene advice.

#### PERSONAL PROTECTIVE EQUIPMENT

- Protective measures** : The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.
- Respiratory protection** : A particulate filter respirator may be necessary until effective technical measures are installed. Protection provided by air-purifying respirators is limited. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.
- Hand protection** : Chemical resistant gloves should be used. Gloves should be certified to an appropriate standard. Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure. The breakthrough time of gloves varies according to the thickness, material and manufacturer. Gloves should be changed when breakthrough is suspected. Suitable material:  
Nitrile rubber
- Eye protection** : If eye contact is possible, use tight-fitting chemical safety goggles and a face shield.
- Skin and body protection** : Assess the exposure and select chemical resistant clothing

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based on the potential for contact and the permeation / penetration characteristics of the clothing material.  
Wash with soap and water after removing protective clothing.  
Decontaminate clothing before re-use, or use disposable equipment (suits, aprons, sleeves, boots, etc.)  
Wear as appropriate:  
impervious protective suit

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Form</b>	: liquid
<b>Colour</b>	: light beige to beige
<b>Odour</b>	: sweet
<b>pH</b>	: 4 - 8 at 1 % w/v
<b>Flash point</b>	: > 100 °C at 753 mmHg
<b>Oxidizing properties</b>	: not oxidizing
<b>Explosive properties</b>	: Not explosive
<b>Density</b>	: 1.22 g/ml at 20 °C
<b>Viscosity, dynamic</b>	: 65.0 - 495 mPa.s at 40 °C
	: 87.0 - 572 mPa.s at 20 °C
<b>Surface tension</b>	: 29.5 mN/m at 20 °C
	: 33.9 mN/m at 20 °C
	: 33.0 mN/m at 20 °C
	: 32.4 mN/m at 20 °C

**10. STABILITY AND REACTIVITY**

<b>Hazardous decomposition products</b>	: Combustion or thermal decomposition will evolve toxic and irritant vapors.
<b>Hazardous reactions</b>	: None known. Hazardous polymerization does not occur. Stable under normal conditions.

**11. TOXICOLOGICAL INFORMATION**

<b>Acute oral toxicity</b>	: LD50 female Rat, 3,045 mg/kg
<b>Acute inhalation toxicity</b>	: Median lethal concentration male and female Rat, > 1.06 mg/l, 4 h Irritating to respiratory system.

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- Acute dermal toxicity** : LD50 male and female Rat, > 5,050 mg/kg
- Skin irritation** : Rabbit: Slightly Irritating
- Eye irritation** : Rabbit: Severely Irritating
- Sensitisation** : man: Sensitizing  
Derived from components.

**Long term toxicity**

Did not show mutagenic effects in animal experiments.

Chlorothalonil causes kidney tumours in rats and mice via a non-gentoxic mode of action secondary to target organ toxicity.

Did not show reproductive toxicity effects in animal experiments.

Did not show teratogenic effects in animal experiments.

No adverse effects in humans are expected at levels below the occupational exposure limit and when the product is handled and used according to the label.

This information refers to Chlorothalonil.

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**12. ECOLOGICAL INFORMATION****ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)**

- Bioaccumulation** : Azoxystrobin has medium bioaccumulation potential.  
Chlorothalonil has low potential for bioaccumulation.

- Stability in water** : Azoxystrobin is stable in water.  
: Chlorothalonil is not persistent in water.

- Stability in soil** : Azoxystrobin is not persistent in soil.  
: Chlorothalonil is not persistent in soil.

- Mobility** : Azoxystrobin has low to very high mobility in soil.  
Chlorothalonil has low to slight mobility in soil.

**ECOTOXICITY EFFECTS**

- Toxicity to fish** : LC50 *Oncorhynchus mykiss* (rainbow trout), 0.15 mg/l , 96 h

- Toxicity to aquatic invertebrates** : EC50 *Daphnia magna* (Water flea), 0.37 mg/l , 48 h

- Toxicity to algae** : EbC50 *Selenastrum capricornutum* (green algae), 0.11 mg/l , 72 h

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: ErC50 Selenastrum capricornutum (green algae), 0.69 mg/l ,  
72 h

**13. DISPOSAL CONSIDERATIONS**

- Product** : Do not contaminate ponds, waterways or ditches with chemical or used container.  
Do not dispose of waste into sewer.  
Where possible recycling is preferred to disposal or incineration.  
If recycling is not practicable, dispose of in compliance with local regulations.
- Contaminated packaging** : Empty remaining contents.  
Triple rinse containers.  
Empty containers should be taken for local recycling or waste disposal.  
Do not re-use empty containers.

**14. TRANSPORT INFORMATION****Land transport***ADR/ RID:*

UN-Number: 3082  
Class: 9  
Danger Label Number : 9  
Packaging group III  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(AZOXYSTROBIN AND CHLOROTHALONIL )

**Sea transport***IMDG:*

UN-Number: 3082  
Class: 9  
Danger Label Number : 9  
Packaging group: III  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(AZOXYSTROBIN AND CHLOROTHALONIL )

Marine pollutant : Marine pollutant

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### Air transport

#### IATA-DGR

UN-Number: 3082  
 Class: 9  
 Danger Label Number : 9  
 Packaging group: III  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
 (AZOXYSTROBIN AND CHLOROTHALONIL )

## 15. REGULATORY INFORMATION

### Labelling according to EC Directives

Hazardous components which must be listed on the label:

- azoxystrobin
- chlorothalonil

<b>Symbol(s)</b>	: Xn N	Harmful Dangerous for the environment
<b>R-phrase(s)</b>	: R20 R37 R40 R41 R43 R50/53	Harmful by inhalation. Irritating to respiratory system. Limited evidence of a carcinogenic effect. Risk of serious damage to eyes. May cause sensitisation by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>S-phrase(s)</b>	: S 2 S13  S20/21 S35  S36/37/39  S57	Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.  When using do not eat, drink or smoke. This material and its container must be disposed of in a safe way. Wear suitable protective clothing, gloves and eye/face protection. Use appropriate container to avoid environmental contamination.
<b>Special labelling of certain preparations</b>	:	To avoid risks to man and the environment, comply with the instructions for use.
<b>Note</b>	:	The preparation is classified as dangerous in accordance with Directive 1999/45/EC.



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**16. OTHER INFORMATION****Further information**

Text of R-phrases mentioned in Section 3:

<b>R22</b>	Harmful if swallowed.
<b>R23</b>	Toxic by inhalation.
<b>R26</b>	Very toxic by inhalation.
<b>R37</b>	Irritating to respiratory system.
<b>R40</b>	Limited evidence of a carcinogenic effect.
<b>R41</b>	Risk of serious damage to eyes.
<b>R43</b>	May cause sensitisation by skin contact.
<b>R50/53</b>	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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