

SORBA 050 EC

Version 6 - This version replaces all previous versions.

Revision Date 11.05.2011

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

1.1 Product identifier

Product name : **SORBA 050 EC**

Design code : A7814K

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

Use : Insecticide

1.3 Details of the supplier of the safety data sheet

Company : Syngenta Crop Protection AG
 Postfach
 CH-4002 Basel
 Switzerland

Telephone : +41 61 323 11 11

Telefax : +41 61 323 12 12

E-mail address : safetydatasheetcoordination@syngenta.com

1.4 Emergency telephone number

**Emergency tele-
 phone number** : +44 1484 538444

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) 1272/2008

Flammable liquids	Category 3	H226
Acute toxicity	Category 4	H315
Serious eye damage	Category 1	H318
Skin sensitization	Category 1	H317
Aspiration hazard	Category 1	H304
Specific target organ toxicity - single exposure	Category 3	H336
Acute aquatic toxicity	Category 1	H401
Chronic aquatic toxicity	Category 1	H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Xn, Harmful

N, Dangerous for the environment

R10: Flammable.

R38: Irritating to skin.

R41: Risk of serious damage to eyes.

R43: May cause sensitization by skin contact.

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

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R65: Harmful: may cause lung damage if swallowed.

R67: Vapours may cause drowsiness and dizziness.

2.2 Label elements

Labelling: Regulation (EC) No. 1272/2008

Hazard pictograms



Signal word	:	Danger	
Hazard statements	:	H226 Flammable liquid and vapour. H315 Causes skin irritation. H318 Causes serious eye damage. H317 May cause an allergic skin reaction. H304 May be fatal if swallowed and enters airways. H336 May cause drowsiness or dizziness. H410 Very toxic to aquatic life with long lasting effects.	
Precautionary statements	:	P102 Keep out of reach of children. P210 Keep away from heat. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. 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. P331 Do NOT induce vomiting. P391 Collect spillage. P501 Dispose of contents/ container to an approved waste disposal plant.	
Supplemental information	:	EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

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Hazardous components which must be listed on the label:

- lufenuron
- solvent naphtha (petroleum), heavy arom.

Labelling: EU Directives 67/548/EEC or 1999/45/EC

Symbol(s)



Harmful

Dangerous
for the envi-
ronment

R-phrases(s)	:	R10 R38 R41 R43 R50/53 R65 R67	Flammable. Irritating to skin. Risk of serious damage to eyes. May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Harmful: may cause lung damage if swallowed. Vapours may cause drowsiness and dizziness.
S-phrases(s)	:	S 2 S13 S20/21 S26 S35 S36/37/39 S57 S62	Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs. When using do not eat, drink or smoke. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. 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. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
Additional Labelling	:	To avoid risks to man and the environment, comply with the instructions for use.	

Hazardous components which must be listed on the label:

- lufenuron
- solvent naphtha (petroleum), heavy arom.

2.3 Other hazards

None known.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration
solvent naphtha (petroleum), heavy arom.	64742-94-5 265-198-5	N, Xn R20 R37 R51/53 R65 R66 R67	Acute Tox.4; H332 STOT SE3; H335 Asp. Tox.1; H304 STOT SE3; H336 Aquatic Chronic2; H411	60 - 80 % W/W
cyclohexanone	108-94-1 203-631-1	Xn R10 R20/21/22 R38 R41	Flam. Liq.3; H226 Eye Dam.1; H318 Acute Tox.4; H302 Acute Tox.4; H312 Acute Tox.4; H332 Skin Irrit.2; H315	20 - 30 % W/W
lufenuron	103055-07-8	N, Xi R43 R50/53	Skin Sens.1; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410	5 % W/W
benzenesulfonic acid, tetrapro- pylene-, calcium salt	11117-11-6 234-360-7	Xi R36/38	Eye Irrit.2; H319 Skin Irrit.2; H319	0 - 5 % W/W
2-methylpropan- 1-ol	78-83-1 201-148-0	Xi R10 R37/38 R41 R67	Flam. Liq.3; H226 STOT SE3; H335 Skin Irrit.2; H315 Eye Dam.1; H318 STOT SE3; H336	0 - 5 % W/W

Substances for which there are Community workplace exposure limits.

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

- 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 : Move the victim 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.

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- 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: contains petroleum distillates and/or aromatic solvents.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Aspiration may cause pulmonary oedema and pneumonitis.

4.3 Indication of any immediate medical attention and special treatment needed

- Medical advice : There is no specific antidote available.
Treat symptomatically.
Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

SECTION 5. FIRE-FIGHTING MEASURES**5.1 Extinguishing media**

Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires
Alcohol-resistant foam

Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

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.
Flash back possible over considerable distance.

5.3 Advice for firefighters

Wear full protective clothing and self-contained breathing apparatus.

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SECTION 6. ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Refer to protective measures listed in sections 7 and 8.
Keep people away from and upwind of spill/leak.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Remove all sources of ignition.
Pay attention to flashback.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and 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).

If the product contaminates rivers and lakes or drains inform respective authorities.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8.
Refer to disposal considerations listed in section 13.

SECTION 7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

Avoid contact with skin and eyes.
When using do not eat, drink or smoke.
Use only in an area containing flame proof equipment.
Take precautionary measures against static discharges.
For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.
Keep out of the reach of children.
Keep away from combustible material.
Keep in an area equipped with sprinklers.
Keep away from food, drink and animal feedingstuffs.
No smoking.

7.3 Specific end uses

Registered Crop Protection products: For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components	Exposure limit(s)	Type of exposure limit	Source
lufenuron	5 mg/m ³	8 h TWA	SYNGENTA
cyclohexanone	100 mg/m ³ 200 mg/m ³ 80 mg/m ³ 100 mg/m ³ 700 ppm 10 ppm, 41 mg/m ³ (Skin) 20 ppm, 82 mg/m ³ (Skin) 10 ppm, 40.8 mg/m ³ (Skin) 20 ppm, 81.6 mg/m ³	8 h TWA 15 min STEL 8 h TWA 8 h TWA IDLH 8 h TWA 15 min STEL 8 h TWA 15 min STEL	SUVA SUVA DFG ACGIH NIOSH UK HSE UK HSE IOELV IOELV
solvent naphtha (petroleum), heavy arom.	100 mg/m ³	8 h TWA	SUPPLIER
2-methylpropan-1-ol	1,600 ppm 50 ppm 100 ppm 50 ppm 100 ppm 50 ppm, 231 mg/m ³	8 h TWA 15 min STEL 8 h TWA 8 h TWA 8 h TWA	NIOSH SUVA SUVA ACGIH DFG UK HSE

The following recommendations for exposure controls/personal protection are intended for the manufacture, formulation and packaging of the product.

8.2 Exposure controls

- 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.
- 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 combination gas, vapor and particulate 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,

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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 discarded and replaced if there is any indication of degradation or chemical breakthrough.
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 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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	: liquid
Form	: liquid
Colour	: light yellow to brownish
Odour	: no data available
Odour Threshold	: no data available
pH	: 3 - 7 at 1 % w/v
Melting point/range	: no data available
Boiling point/boiling range	: no data available
Flash point	: 51 °C at 763 mmHg
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Lower explosion limit	: no data available
Upper explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Density	: 0.933 g/cm ³
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Autoignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: 1.8 mPa.s at 40 °C : 2.6 mPa.s at 20 °C
Viscosity, kinematic	: no data available
Explosive properties	: no data available

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Oxidizing properties : no data available

9.2 Other information

Surface tension : 32.4 mN/m at 20 °C

SECTION 10. STABILITY AND REACTIVITY**10.1 Reactivity**

No information available.

10.2 Chemical stability

No information available.

10.3 Possibility of hazardous reactions

None known.

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

Combustion or thermal decomposition will evolve toxic and irritant vapors.

SECTION 11. TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects**

Acute oral toxicity : LD50 male and female rat, > 3,000 mg/kg

Acute inhalation toxicity : LC50 rat, > 5.3 mg/l , 4 h

Acute dermal toxicity : LD50 rat, > 4,000 mg/kg

Skin corrosion/irritation : rabbit: irritating

Serious eye damage/eye irritation : rabbit: Risk of serious damage to eyes.

Respiratory or skin sensitization : guinea pig: A skin sensitizer

Germ cell mutagenicity

lufenuron : Did not show mutagenic effects in animal experiments.

2-methylpropan-1-ol : Did not show mutagenic effects in animal experiments.

Carcinogenicity

lufenuron : Did not show carcinogenic effects in animal experiments.

2-methylpropan-1-ol : Did not show carcinogenic effects in animal experiments.

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Teratogenicity

lufenuron : Did not show teratogenic effects in animal experiments.

Reproductive toxicity

lufenuron : Did not show reproductive toxicity effects in animal experiments.

2-methylpropan-1-ol : Did not show reproductive toxicity effects in animal experiments.

STOT - single exposure : May cause drowsiness or dizziness.

STOT - repeated exposure

lufenuron : No adverse effect has been observed in chronic toxicity tests.

2-methylpropan-1-ol : No adverse effect has been observed in chronic toxicity tests.

SECTION 12. ECOLOGICAL INFORMATION**12.1 Toxicity**Toxicity to fish : LC50 *Lepomis macrochirus* (Bluegill sunfish), 20 mg/l , 96 h
Based on test results obtained with similar product.Toxicity to aquatic invertebrates : EC50 *Daphnia magna* (Water flea), 0.0072 mg/l , 48 h
Based on test results obtained with similar product.Toxicity to aquatic plants : EbC50 *Pseudokirchneriella subcapitata* (green algae), 2.63 mg/l , 72 h
Based on test results obtained with similar product.**12.2 Persistence and degradability****Stability in water**lufenuron : Degradation half life: 112 d
Not persistent in water**Stability in soil**lufenuron : Degradation half life: 28 d
Not persistent in soil.**12.3 Bioaccumulative potential**

lufenuron : Lufenuron bioaccumulates.

12.4 Mobility in soil

lufenuron : Lufenuron is immobile in soil.

12.5 Results of PBT and vPvB assessmentlufenuron : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
This substance is not considered to be very persistent nor very bioaccumulating (vPvB).**12.6 Other adverse effects**

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None known.

SECTION 13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

- 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 to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**Land transport (ADR/RID)**

- 14.1 UN number: UN 1224
14.2 UN proper shipping name: KETONES, LIQUID, N.O.S. (ALKYL (C3-C5) BENZENES AND CYCLOHEXANONE AND LUFENURON)
14.3 Transport hazard class(es): 3
14.4 Packing group: III
Labels: 3
14.5 Environmental hazards : Environmentally hazardous

Sea transport(IMDG)

- 14.1 UN number: UN 1224
14.2 UN proper shipping name: KETONES, LIQUID, N.O.S. (ALKYL (C3-C5) BENZENES AND CYCLOHEXANONE AND LUFENURON)
14.3 Transport hazard class(es): 3
14.4 Packing group: III
Labels: 3
14.5 Environmental hazards : Marine pollutant

Air transport (IATA-DGR)

- 14.1 UN number: UN 1224
14.2 UN proper shipping name: KETONES, LIQUID, N.O.S. (ALKYL (C3-C5) BENZENES AND CYCLOHEXANONE AND LUFENURON)
14.3 Transport hazard class(es): 3
14.4 Packing group: III
Labels: 3

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14.6 Special precautions for user

none

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

GHS-Labeling

Hazard pictograms



Signal word	:	Danger
Hazard statements	:	<p>H226 Flammable liquid and vapour.</p> <p>H304 May be fatal if swallowed and enters airways.</p> <p>H315 Causes skin irritation.</p> <p>H318 Causes serious eye damage.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H336 May cause drowsiness or dizziness.</p> <p>H410 Very toxic to aquatic life with long lasting effects.</p>
Precautionary statements	:	<p>P102 Keep out of reach of children.</p> <p>P210 Keep away from heat.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.</p> <p>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P331 Do NOT induce vomiting.</p> <p>P391 Collect spillage.</p> <p>P501 Dispose of contents/ container to an approved waste disposal plant.</p>
Supplemental information	:	EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

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Remarks : Classified using all GHS hazard classes and categories.
Where the GHS contains options, the most conservative option has been chosen.
Regional or national implementations of GHS may not implement all hazard classes and categories.

Hazardous components which must be listed on the label:

- lufenuron
- solvent naphtha (petroleum), heavy arom.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16. OTHER INFORMATION

Further information

Full text of R-phrases referred to under sections 2 and 3:

R10	Flammable.
R20	Harmful by inhalation.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R36/38	Irritating to eyes and skin.
R37	Irritating to respiratory system.
R37/38	Irritating to respiratory system and skin.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R43	May cause sensitization by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

Full text of H-Statements referred to under sections 2 and 3.

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H401	Toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

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