

AXIAL 050 EC

Version 7 - This version replaces all previous versions.

Revision Date 18.07.2014

Print Date 12.02.2015

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

1.1 Product identifier

Product name : **AXIAL 050 EC**

Design code : A13617AV

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

Use : Herbicide

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 : sds.ch@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

| | | |
|--------------------------|--------------------|------|
| Skin sensitisation | Sub-category 1B | H317 |
| Chronic aquatic toxicity | Category 2 | H411 |

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

Xi, Irritant

N, Dangerous for the environment

R38: Irritating to skin.

R43: May cause sensitisation by skin contact.

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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2.2 Label elements

Labelling: Regulation (EC) No. 1272/2008

Hazard pictograms



| | | | |
|--------------------------|---|--|---|
| Signal word | : | Warning | |
| Hazard statements | : | H317 H411 | May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects. |
| Precautionary statements | : | P102 P261 P280 P302 + P352 P321 P333 + P313 P391 P501 | Keep out of reach of children. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/ protective clothing. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (see supplemental first aid instructions on this label). If skin irritation or rash occurs: Get medical advice/ attention. Collect spillage. Dispose of contents/ container to an approved waste disposal plant. |
| Supplemental information | : | EUH401 EUH066 | To avoid risks to human health and the environment, comply with the instructions for use. Repeated exposure may cause skin dryness or cracking. |

Hazardous components which must be listed on the label:

- pinoxaden
- cloquintocet-mexyl

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

Symbol(s)



Irritant



**Dangerous
for the envi-
ronment**

| | | | |
|--------------|---|----------------------|--|
| R-phrases(s) | : | R38 R43 R51/53 | Irritating to skin. May cause sensitisation by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
|--------------|---|----------------------|--|

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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.
 S35 This material and its container must be disposed of in a safe way.
 S36/37 Wear suitable protective clothing and gloves.
 S57 Use appropriate container to avoid environmental contamination.

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:

- pinoxaden
- cloquintocet-mexyl

2.3 Other hazards

None known.

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 |
|---|---|---|---|---------------|
| tris(2-ethylhexyl) phosphate | 78-42-2 201-116-6 | Xi R38 | - | 30 - 40 % W/W |
| solvent naphtha (petroleum), highly arom. | 64742-94-5 265-198-5 922-153-0 01-2119451097-39-0002 | Xn, N R51/53 R65 R66 | Asp. Tox.1; H304 Aquatic Chronic2; H411 | 20 - 30 % W/W |
| 2-methylpentan e-2,4-diol | 107-41-5 203-489-0 01-2119539582-35-0000 | Xi R36/38 | Skin Irrit.2; H315 Eye Irrit.2; H319 | 15 - 25 % W/W |
| pinoxaden | 243973-20-8 | Xn R20 R36/37/38 R43 R52/53 | Acute Tox.4; H332 Skin Irrit.2; H315 Skin Sens.1; H317 Eye Irrit.2; H319 STOT SE3; H335 Aquatic Chronic3; H412 | 5.2 % W/W |
| clo- quintocet-mexyl | 99607-70-2 01-2119381871-32-0000 01-2119387592-28-0000 | Xi, N R43 R50/53 | Skin Sens.1; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410 | 1.3 % 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.

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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.
- 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: FIREFIGHTING 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
or
Water spray

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

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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.

5.3 Advice for firefighters

Wear full protective clothing and self-contained breathing apparatus.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Refer to protective measures listed in sections 7 and 8.

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.

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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for 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.

7.2 Conditions for safe storage, including any incompatibilities

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.

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

7.3 Specific end use(s)

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

| Components | Exposure limit(s) | Type of exposure limit | Source |
|---|-------------------------------|------------------------|----------|
| cloquintocet-mexyl | 10 mg/m ³ | 8 h TWA | SYNGENTA |
| solvent naphtha (petroleum), highly arom. | 15 ppm, 100 mg/m ³ | 8 h TWA | SUPPLIER |
| pinoxaden | 0.1 mg/m ³ | Ceiling Limit Value | SYNGENTA |

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

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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 : No personal respiratory protective equipment normally required.
A particulate filter respirator may be necessary until effective technical measures are installed.
- Hand protection : Suitable material:Nitrile rubber
Break through time: > 480 min
Glove thickness: 0.5 mm
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.
- Eye protection : Eye protection is not usually required.
Follow any site specific eye protection policies.
- 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

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

| | |
|---|---|
| Physical state | : liquid |
| Form | : liquid clear |
| Colour | : light yellow to orange brown |
| Odour | : sweetish |
| Odour Threshold | : No data available |
| pH | : 4.5 at 1 % w/v |
| Melting point/range | : No data available |
| Boiling point/boiling range | : No data available |
| Flash point | : 103 °C at 102.5 kPa Pensky-Martens c.c. |
| 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 | : 0.965 g/ml at 20 °C |
| Solubility in other solvents | : No data available |
| Partition coefficient: n-octanol/water | : No data available |
| Auto-ignition temperature | : 380 °C |
| Thermal decomposition | : No data available |
| Viscosity, dynamic | : 50 mPa.s at 20 °C |
| | : 22.39 mPa.s at 40 °C |
| Viscosity, kinematic | : 24.23 mm ² /s at 40 °C |
| Explosive properties | : Not explosive |
| Oxidizing properties | : not oxidizing |

9.2 Other information

| | |
|-----------------|----------------------|
| Miscibility | : Miscible |
| Surface tension | : 30.0 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.

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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 female rat, > 2,000 mg/kg
- Acute inhalation toxicity : Acute toxicity estimate rat, > 5 mg/l
Derived from components.
- Acute dermal toxicity : LD50 male and female rat, > 2,000 mg/kg
- Skin corrosion/irritation : Rabbit: Moderately irritating
- Serious eye damage/eye irritation : Rabbit: Slightly irritating
- Respiratory or skin sensitisation : Buehler Test guinea pig: A skin sensitizer in animal tests.
- Germ cell mutagenicity
 pinoxaden : Did not show mutagenic effects in animal experiments.
 cloquintocet-mexyl : Did not show mutagenic effects in animal experiments.
- Carcinogenicity
 pinoxaden : Did not show carcinogenic effects in animal experiments.
 cloquintocet-mexyl : Did not show carcinogenic effects in animal experiments.
- Reproductive toxicity
 pinoxaden : Did not show reproductive toxicity effects in animal experiments.
 cloquintocet-mexyl : Did not show reproductive toxicity effects in animal experiments.
- STOT - repeated exposure
 pinoxaden : No adverse effect has been observed in chronic toxicity tests.
 cloquintocet-mexyl : No adverse effect has been observed in chronic toxicity tests.
- Aspiration toxicity
 solvent naphtha (petroleum), highly arom. : The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

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SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity**

Toxicity to fish

2-methylpentane-2,4-diol : LC50 *Gambusia affinis* (Mosquito fish), 8,510 mg/l , 96 hpinoxaden : LC50 *Oncorhynchus mykiss* (rainbow trout), 10.3 mg/l , 96 hcloquintocet-mexyl : LC50 *Oncorhynchus mykiss* (rainbow trout), > 76 mg/l , 96 hToxicity to aquatic invertebrates : EC50 *Daphnia magna* (Water flea), 1.8 mg/l , 48 hToxicity to aquatic plants : EbC50 *Pseudokirchneriella subcapitata* (green algae), 7.5 mg/l , 72 h: ErC50 *Pseudokirchneriella subcapitata* (green algae), 61 mg/l , 72 h**12.2 Persistence and degradability**Biodegradability

pinoxaden : Not readily biodegradable.

cloquintocet-mexyl : Not readily biodegradable.

Stability in water

pinoxaden : Degradation half life: 0.3 d
Not persistent in water.cloquintocet-mexyl : Degradation half life: 0.4 d
Not persistent in water.

Stability in soil

pinoxaden : Degradation half life: 0.1 - 1.8 d
Not persistent in soil.cloquintocet-mexyl : Degradation half life: 2.4 d
Not persistent in soil.**12.3 Bioaccumulative potential**

pinoxaden : Low bioaccumulation potential.

cloquintocet-mexyl : Does not bioaccumulate.

12.4 Mobility in soil

pinoxaden : Pinoxaden has medium mobility in soil.

cloquintocet-mexyl : Cloquintocet-mexyl is immobile in soil.

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12.5 Results of PBT and vPvB assessment

- 2-methylpentane-2,4-diol : 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).
- pinoxaden : 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).
- cloquintocet-mexyl : 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

- Other information : Classification of the product is based on the summation of the concentrations of classified components.

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.

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

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

Sea transport(IMDG)

| | |
|---|---|
| 14.1 UN number: | UN 3082 |
| 14.2 UN proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SOLVENT NAPHTHA) |
| 14.3 Transport hazard class(es): | 9 |
| 14.4 Packing group: | III |
| Labels: | 9 |
| 14.5 Environmental hazards : | Marine pollutant |

Air transport (IATA-DGR)

| | |
|---|---|
| 14.1 UN number: | UN 3082 |
| 14.2 UN proper shipping name: | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SOLVENT NAPHTHA) |
| 14.3 Transport hazard class(es): | 9 |
| 14.4 Packing group: | III |
| Labels: | 9 |

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

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Hazard pictograms



| | | | |
|--------------------------|---|--|---|
| Signal word | : | Warning | |
| Hazard statements | : | H316 H317 H411 | Causes mild skin irritation. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects. |
| Precautionary statements | : | P102 P261 P280 P302 + P352 P321 P332 + P313 P333 + P313 P391 P501 | Keep out of reach of children. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves/ protective clothing. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (see supplemental first aid in- structions on this label). If skin irritation occurs: Get medical advice/ atten- tion. If skin irritation or rash occurs: Get medical advice/ attention. Collect spillage. Dispose of contents/ container to an approved waste disposal plant. |
| 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:

- pinoxaden
- cloquintocet-mexyl

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:

| | |
|-----------|---|
| R20 | Harmful by inhalation. |
| R36/37/38 | Irritating to eyes, respiratory system and skin. |
| R36/38 | Irritating to eyes and skin. |
| R38 | Irritating to skin. |
| R43 | May cause sensitisation by skin contact. |
| R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the |

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| | |
|--------|---|
| R51/53 | aquatic environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| R52/53 | Harmful 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. |

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

| | |
|------|---|
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

Full text of other abbreviations

| | | | |
|-------|---|-----------|---|
| ADR: | European Agreement Concerning the International Carriage of Dangerous Goods by Road | RID: | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| IMDG: | International Maritime Code for Dangerous Goods | IATA-DGR: | International Air Transport Association Dangerous Goods Regulations |
| LC50: | Lethal concentration, 50% | LD50: | Lethal dose, 50% |
| EC50: | Effective dose, 50% | GHS: | Globally Harmonized System of Classification and Labelling of Chemicals (GHS) |

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 information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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