

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier****Product name** : TOPIK 100 EC**Design code** : A7957E**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 telephone number** : +44 1484 538444**SECTION 2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

Classification according to Regulation (EU) 1272/2008

Aspiration hazard	Category 1	H304
Eye irritation	Category 2	H319
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
R36/38: Irritating to eyes and skin.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

2.2 Label elements

Labelling: Regulation (EC) No. 1272/2008

Hazard pictograms



Signal word	:	Danger
Hazard statements	:	H304 H319 H411 May be fatal if swallowed and enters airways. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.
Precautionary statements	:	P102 P280 P301 + P310 P305 + P351 + P338 P331 P337 + P313 P391 P501 Keep out of reach of children. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do NOT induce vomiting. If eye irritation persists: 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. Contains clodinafop-propargyl and cloquintocet-mexyl. May produce an allergic reaction.

Hazardous components which must be listed on the label:

- solvent naphtha (petroleum), highly arom.

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

Symbol(s)



TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

R-phrases(s)	:	R36/38 R51/53	Irritating to eyes and skin. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrases(s)	:	S 2 S13 S20/21 S35 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. Use appropriate container to avoid environmental contamination.
Additional Labelling	:	Contains clodinafop-propargyl and cloquintocet-mexyl. May produce an allergic reaction. To avoid risks to man and the environment, comply with the instructions for use.	

Hazardous components which must be listed on the label:

- solvent naphtha (petroleum), highly arom.

2.3 Other hazards

None known.

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

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), highly arom.	64742-94-5 265-198-5 01-2119451097-39	Xn, N R51/53 R65 R66	Asp. Tox.1; H304 Aquatic Chronic2; H411	45 - 60 % W/W
propylene car- bonate	108-32-7 203-572-1 01-2119537232-48-0 000	Xi R36	Eye Irrit.2; H319	10 - 20 % W/W
clodinafop-prop argyl	105512-06-9	Xn, N R22 R43 R48/22 R50/53	Acute Tox.4; H302 Skin Sens.1; H317 STOT RE2; H373 Aquatic Acute1; H400 Aquatic Chronic1; H410	9.4 % W/W
2-methylpropan- 1-ol	78-83-1 201-148-0 01-2119484609-23-0 012	Xi R10 R37/38 R41 R67	Flam. Liq.3; H226 STOT SE3; H335 Skin Irrit.2; H315 Eye Dam.1; H318 STOT SE3; H336	1 - 5 % W/W
calcium do- decylbenzene sulphonate	26264-06-2 84989-14-0 90194-26-6 247-557-8 284-903-7 290-635-1	Xi R38 R41	Skin Irrit.2; H315 Eye Dam.1; H318	1 - 5 % W/W
clo- quintocet-mexyl	99607-70-2 01-2119381871-32-0 000 01-2119387592-28-0 000	Xi, N R43 R50/53	Skin Sens.1; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410	2.4 % 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.

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

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.

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

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.

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

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
clodinafop-propargyl	1 mg/m ³	8 h TWA	SYNGENTA
cloquintocet-mexyl	10 mg/m ³	8 h TWA	SYNGENTA
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
solvent naphtha (petroleum), highly arom.	8 ppm, 50 mg/m ³	8 h TWA	SUPPLIER

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

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

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, 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.
- 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	: yellow to orange brown

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

Odour	: characteristic
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	: 65 °C at 756 mmHg 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	: 1.065 g/cm ³ at 20 °C
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: 485 °C
Thermal decomposition	: no data available
Viscosity, dynamic	: 6.4 mPa.s at 40 °C : 12.2 mPa.s at 20 °C
Viscosity, kinematic	: no data available
Explosive properties	: Not explosive
Oxidizing properties	: not oxidizing
9.2 Other information	
Surface tension	: 36.0 mN/m at 25 °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.

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

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 , > 5.0 mg/l

Acute dermal toxicity : LD50 male and female rat, > 2,000 mg/kg

Skin corrosion/irritation : rabbit: Moderately irritating

Serious eye damage/eye irritation : rabbit: Moderately irritating

Respiratory or skin sensitisation : Buehler Test guinea pig: Not a skin sensitizer in animal tests.

Germ cell mutagenicity

- solvent naphtha (petroleum), highly arom. : Did not show mutagenic effects in animal experiments.
- clodinafop-propargyl : Did not show mutagenic effects in animal experiments.
- 2-methylpropan-1-ol : Did not show mutagenic effects in animal experiments.
- calcium dodecylbenzene sulphonate : Did not show mutagenic effects in animal experiments.
- cloquintocet-mexyl : Did not show mutagenic effects in animal experiments.

Carcinogenicity

- solvent naphtha (petroleum), highly arom. : Did not show carcinogenic effects in animal experiments.
- clodinafop-propargyl : Did not show carcinogenic effects in animal experiments.
- 2-methylpropan-1-ol : Did not show carcinogenic effects in animal experiments.
- calcium dodecylbenzene sulphonate : Did not show carcinogenic effects in animal experiments.
- cloquintocet-mexyl : Did not show carcinogenic effects in animal experiments.

Teratogenicity

- clodinafop-propargyl : Did not show teratogenic effects in animal experiments.

Reproductive toxicity

- solvent naphtha (petroleum), highly arom. : Did not show reproductive toxicity effects in animal experiments.
- clodinafop-propargyl : Did not show reproductive toxicity effects in animal experiments.
- 2-methylpropan-1-ol : Did not show reproductive toxicity effects in animal experiments.
- calcium dodecylbenzene sulphonate : Did not show reproductive toxicity effects in animal experiments.
- cloquintocet-mexyl : Did not show reproductive toxicity effects in animal experiments.

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

STOT - single exposure

2-methylpropan-1-ol : May cause drowsiness or dizziness.

STOT - repeated exposure

solvent naphtha (petroleum), highly arom. : No adverse effect has been observed in chronic toxicity tests.

clodinafop-propargyl : No adverse effect has been observed in chronic toxicity tests.

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

calcium dodecylbenzene sulphonate : No adverse effect has been observed in chronic toxicity tests.

cloquintocet-mexyl : No adverse effect has been observed in chronic toxicity tests.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish : LC50 *Oncorhynchus mykiss* (rainbow trout), 4.1 mg/l , 96 h

Toxicity to aquatic invertebrates : EC50 *Daphnia magna* (Water flea), 12 mg/l , 48 h

Toxicity to aquatic plants : EbC50 *Pseudokirchneriella subcapitata* (green algae), 2.5 mg/l , 72 h

: ErC50 *Pseudokirchneriella subcapitata* (green algae), 6.0 mg/l , 72 h

12.2 Persistence and degradability

Biodegradability

solvent naphtha (petroleum), highly arom. : Expected to be biodegradable

clodinafop-propargyl : Not readily biodegradable.

cloquintocet-mexyl : Not readily biodegradable.

Stability in water

clodinafop-propargyl : Degradation half life: < 1 d at 20 °C
Not persistent in water.cloquintocet-mexyl : Degradation half life: 0.4 d
Not persistent in water.

Stability in soil

clodinafop-propargyl : Degradation half life: < 0.5 d
Not persistent in soil.cloquintocet-mexyl : Degradation half life: 2.4 d
Not persistent in soil.

12.3 Bioaccumulative potential

solvent naphtha (petroleum), highly arom. : Accumulation in aquatic organisms is expected.

clodinafop-propargyl : Does not bioaccumulate.

cloquintocet-mexyl : Does not bioaccumulate.

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

12.4 Mobility in soil

- clodinafop-propargyl : Clodinafop-propargyl has low mobility in soil.
cloquintocet-mexyl : Cloquintocet-mexyl is immobile in soil.

12.5 Results of PBT and vPvB assessment

- propylene carbonate : 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).
- clodinafop-propargyl : 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.

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

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. (CLODINAFOP-PROPARGYL AND SOLVENT NAPHTHA)
14.3 Transport hazard class(es):	9
14.4 Packing group:	III
Labels:	9
14.5 Environmental hazards :	Environmentally hazardous

Sea transport(IMDG)

14.1 UN number:	UN 3082
14.2 UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CLODINAFOP-PROPARGYL AND 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. (CLODINAFOP-PROPARGYL AND 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

Hazard pictograms



Signal word : **Danger**

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

Hazard statements	:	H227 H303 H304 H316 H320 H373 H411	Combustible liquid May be harmful if swallowed. May be fatal if swallowed and enters airways. Causes mild skin irritation. Causes eye irritation. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.
Precautionary statements	:	P102 P280 P301 + P310 P305 + P351 + P338 P331 P337 + P313 P391 P501	Keep out of reach of children. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do NOT induce vomiting. If eye irritation persists: Get medical advice/ attention. Collect spillage. Dispose of contents/ container to an approved waste disposal plant.
Supplemental information	:		Contains clodinafop-propargyl and cloquintocet-mexyl. May produce an allergic reaction.
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:

- solvent naphtha (petroleum), highly 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.
R22	Harmful if swallowed.
R36	Irritating to eyes.
R37/38	Irritating to respiratory system and skin.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swal-

TOPIK 100 EC

Version 3 - This version replaces all previous versions.

Revision Date 21.10.2013

Print Date 21.10.2013

	lowed.
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.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
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.

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.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Product names are a trademark or registered trademark of a Syngenta Group Company.
