

L1072990 ZIMB/03Z PPE 4135370

 **Bravo**[®] **720SC**

syngenta.

A non-systemic broad spectrum contact fungicide for the preventative control of fungal diseases as listed in tobacco, coffee, groundnuts, potatoes, tomatoes, cucurbits, lawns / turf, apples, peas and beans.

BEFORE YOU OPEN THE CONTAINER READ AND UNDERSTAND THE ENTIRE LABEL.

TO CAUSE A HAZARD IN THE USE, STORAGE OR DISPOSAL OF THIS SUBSTANCE IS AN OFFENCE.

Shelf-Life:

Two years from date of manufacture if kept in original unopened container under constant cool and dry conditions.

Date of manufacture: / Batch No: Please refer to inkjet print.

® Registered Trademark of a Syngenta Group Company

Emergency Call Number:

Swiss Toxicological Information Centre
(24 h) +41 44 251 5151

5 Litres

Product names marked ® or TM, the ALLIANCE FRAME the SYNGENTA Logo and the PURPOSE ICON are Trademarks of a Syngenta Group Company



S-PAC

DESCRIPTION:
BOOKLET 4-16 PG 130x140 MM

SCALE:
1:1

ISSUE NO:
SYN001

ISSUE DATE:
26.09.2013

4029062

PRECAUTIONS

- Handle with care, avoid splashing / contact; poisonous by swallowing, inhalation and contact with the skin.
- Do not eat, drink, or smoke while using this product.
- KEEP OUT OF REACH OF CHILDREN.
- The use of this product can cause skin rashes in some people.
- DANGEROUS TO FISH.

FOR SAFETY WHEN MIXING:

- Wear eye protection (at least glasses). Undiluted Bravo® 720 SC can irritate your eyes. If you get it in your eyes, wash it out at once. **See First Aid.**
- Wear synthetic rubber gloves. Undiluted Bravo® 720 SC can irritate your skin. If you get it on your skin, wash it off at once with plenty of water. If you spill it on your clothes, change and wash them immediately.
- After emptying the container, rinse it three times adding washings to the spray tank.

FOR SAFETY WHEN SPRAYING:

- As with all chemicals, **avoid contact with the spray** as much as you can.
- To avoid harming fish, do not spray over water.
- Dispose of unwanted spray solution by spraying off on waste ground.

FOR SAFETY AFTER SPRAYING:

- **Wash yourself.** Change and wash your work clothes.
- Decontamination of Sprayer – after use, clean the sprayer thoroughly and ensure that all traces of BRAVO® 720 SC are removed. Make use of the following method: (a) Drain tank and then rinse the tank, sprayer boom and hoses with clean water for at least 10 minutes. (b) Fill tank with clean water and add to it 1.0 litre household bleach (Sodium hypochlorite 5%) or 1.5 litres household bleach (Sodium hypochlorite 3.5%) per 200 litres of water. Rinse hoses and sprayer boom and leave in the tank for 15 minutes whilst agitating. Drain through the nozzle outlets. (c) Repeat step (b) and thereafter, rinse thoroughly with clean water and dispose of the wash water at a site designated for the disposal of pesticides.
- Empty container disposal – rinse the container 3 times with a volume of water equal to at least 10% of that of the container. And the rinsate to the contents of the spray tank. Destroy the empty container by perforation and flattening. Place it in a secure disposal area and offer it for recycling. DO NOT use it for any other purpose.

- Do not dump unwanted Bravo® 720 SC in water.
- Keep unused Bravo® 720 SC in original container, tightly closed **locked up out of reach of children** and away from food and foodstuffs.

FIRST AID

Eye Splashes: Hold eyelids apart and pour in a gentle stream of water for 10 to 15 minutes. Go to a doctor.

Skin Contact: Wash with plenty of water. Go to a doctor if skin is affected. If Bravo® 720 SC is swallowed, do not make the person vomit. Take the person, and this container, to a DOCTOR AT ONCE.

NOTE TO PHYSICIAN: If gastric lavage is performed, take care to prevent aspiration of gastric contents. Consider administration of activated charcoal and a laxative. Treat symptomatically. (There is no specific antidote.)

SYMPTOMS OF POISONING

This product causes irritation of the eyes. It can cause temporary allergic reaction, moderate bronchial irritation and reddening of the skin. There are no known symptoms of systemic poisoning.

WARRANTY / USER'S RISK

All products supplied by Syngenta are to be used only in accordance with the recommendations and instructions given on the labels provided with this pack. Further, although it is believed that all products supplied by us are of high quality and are suitable for the purposes indicated on the label, since we cannot exercise control over the everyday use of products, we do not give any warranty whatsoever as to their quality and fitness for purposes and we will not accept any responsibility whatsoever for damage arising from the storage, handling, application or use of our products.

WARNINGS

1. PRE HARVEST INTERVAL

Minimum number of days between last application and harvesting:
Tobacco seedlings: 7 days; Tomatoes, potatoes, cucurbits: 3 days;
Groundnut hay: 42 days; Apples: 21 days; Coffee: 14 days; peas: 14 days;
beans: 10 days.

2. COMPATIBILITY

Bravo® 720 SC is compatible with most insecticides and fungicides. As compatibility can be adversely affected by the quality of the water used in the mixture, the manufacturer recommends that a trial mixture be done using the water intended for spraying.

3. MODE OF ACTION AND RESISTANCE MANAGEMENT

Bravo® 720 SC belongs to the Chloronitrile Chemical Class (FRAC Group M5) which are multi-site fungicides with contact activity. For resistance management Bravo® 720 SC is generally considered as a low resistance risk fungicide. Therefore, Bravo® 720 SC offers the possibility for use as a mixing partner or alternating with single site and other medium to high resistance risk fungicides.

DIRECTIONS FOR USE.

1. MIXING

Half fill the sprayer tank with clean water. Shake the Bravo® 720 SC container well. Add the recommended volume of Bravo® 720 SC to the water while agitating. Top up tank with required volume of water.

2. APPLICATION

In all cases apply as a full cover preventative spray. Avoid run-off. Spray intervals: 7-21 days. Short intervals are for wet / humid conditions. Long intervals can be followed under dry conditions. Repeat application if rain falls before the spray is dry on the leaves. Use suitable sprayers that are in good order and are properly calibrated.

3. RATES – TOBACCO

Crop	Disease	Method and rate of application	Volume of application per 100 m ²	Target amount of fungicide per 100 m ²	Remarks
Tobacco seedbeds. TRB Certificate No: 21-24-B-43. Always consult TRB Handbook for detailed instructions.	Alternaria	High Volume Sprays: 140 ml / 10 litres of water.	Sprays 1 & 2: 2 litres Sprays 3 & 4: 4 litres Sprays 5 & 6: 6 litres	40 ml 80 ml 120 ml	Start spraying 4 weeks after emergence. Repeat every 7 days.
		Ultra Low Volume Sprays: 70 ml / litre of water	Sprays 1 & 2: 400 ml	40 ml	
		140 ml / litre of water	Sprays 3 & 4: 400 ml Sprays 5 & 6: 600 ml	80 ml 120 m	

4. RATES – OTHER CROPS

CROP	DISEASE	DOSAGE	REMARKS
APPLES	<i>Alternaria</i> spp.	200 ml / 100 litres water	Apply 5-6 sprays at 14 day intervals from about 2 weeks after 100% petal fall.
BEANS (fine, French, green, sugarbeans)	Rust (<i>Uromyces appendiculatus</i>)	1,4 litres / ha – maximum 3 sprays	Apply in a spray programme every 12 days as a preventative treatment in 250-500 litres water/ha.

CROP	DISEASE	DOSAGE	REMARKS
COFFEE	Coffee Berry Disease	2.2 litres / ha + 5.0 kg / ha Copper oxychloride 85 WP or 5.0 litres / ha Copper oxychloride 60 FW	Apply as tank mix in 1000 litres water/ha ensuring good coverage of the berries. First spray should be applied 4 weeks after main flowering and repeat after every 100 mm of rainfall or 2-3 weeks whichever comes first (total of 6-8 sprays). DO NOT APPLY Bravo® 720 SC ON ITS OWN FOR CBD CONTROL.
CUCURBITS	Downy mildew (<i>Pseudoperonospora</i> spp.) and Anthracnose (<i>Colletotrichum</i> spp.)	1,4 litres / ha.	Apply in a sufficient volume of water to ensure thorough wetting of the upper and lower leaf surfaces. Commence spraying at first sign of disease and repeat at 7-10 days intervals depending on the weather.
GROUND-NUTS	Leafspot disease (<i>Cercospora</i> spp.)	1,4-1,7 litres/ha	Ground Application (High volume) Apply a minimum of 300 litres spray mixture / ha. Start spraying when first disease symptoms are seen (6-10 weeks after planting) and apply 6-8 sprays at 7-14 days intervals. Use the shorter interval under wet, humid conditions. Spinning Disc (ULV) Apply 5 litres spray mixture/ha (2 parts Bravo® 720 SC + 3 parts water). Application timing as above.
	Web blotch (<i>Phoma</i> spp.)	1,4-1,7 litres/ha	
LAWNS & TURF	Brown patch	60 ml / 100 m ² 108 ml / 100 m ²	Preventive Treatment Apply in 20-60 litres water / 100 m ² . Corrective Treatment Apply in 20-60 litres water / 100 m ² . The first spray should be followed up 3 weeks later and thereafter at 14-21 days intervals if necessary with the lower rate (i.e. 60 ml / 100 m ²).

CROP	DISEASE	DOSAGE	REMARKS
PEAS (shelling, snap, snow, mange-tout)	Ascochyta blight (<i>Ascochyta</i> spp.)	1,4 litres / ha – maximum 3 sprays	Apply in a spray programme every 12 days from early flowering stage or at first sign of disease in 500-1000 litres water/ha.
POTATOES	Early blight (<i>Alternaria solani</i>) and (<i>Phytophthora infestans</i>)	1,4 litres / ha	Commence spraying preventatively when plants come into flower or when blight threatens and repeat at 7-10 days intervals depending on the weather, and after rain. Continue application until tubers are ready for lifting. Do not apply less than 1,4 litres / ha Bravo® 720 SC on mature plants – apply proportionately less on smaller plants.
TOMATOES	Early blight (<i>Alternaria solani</i>) and (<i>Phytophthora infestans</i>)	1.4 litres / ha or 140 ml / 100 litres water 280 ml / 100 litres water	High Volume Application (Approximately 1000 litres / ha spray mixture on mature plants.) Do not apply less than 1,4 litres / ha Bravo® 720 SC on mature plants – apply proportionately less on smaller plants. Commence spraying when plants are 100 mm tall or when blight threatens. Repeat at 7-10 day intervals depending on the weather, and after rain. Low Volume Application (Approximately 500 litres spray mixture / ha on mature plants.) Do not apply less than 1,4 litres Bravo® 720 SC on mature plants – apply proportionately less on smaller plants.

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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier****Product name** : BRAVO 72SC**Design code** : A12531B**1.2 Relevant identified uses of the substance or mixture and uses advised against****Use** : Fungicide**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

Acute toxicity (Oral)	Category 4	H302
Skin sensitisation	Category 1	H317
Acute toxicity (Inhalation)	Category 4	H332
Specific target organ toxicity - single exposure	Category 3	H335
Carcinogenicity	Category 2	H351
Acute aquatic toxicity	Category 1	H400
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****R20/22: Harmful by inhalation and if swallowed.****R37: Irritating to respiratory system.****R40: Limited evidence of a carcinogenic effect.****R43: May cause sensitisation by skin contact.****R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic en-**

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environment.

2.2 Label elements

Labelling: Regulation (EC) No. 1272/2008

Hazard pictograms



Signal word	:	Warning
Hazard statements	:	H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H332 Harmful if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	:	P102 Keep out of reach of children. P280 Wear protective gloves/ protective clothing. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P312 Call a POISON CENTER or doctor/ physician if you feel unwell. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. 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.

Hazardous components which must be listed on the label:

- chlorothalonil

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

Symbol(s)



Harmful



**Dangerous
for the envi-
ronment**

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R-phrases(s) : R20/22 Harmful by inhalation and if swallowed.
 R37 Irritating to respiratory system.
 R40 Limited evidence of a carcinogenic effect.
 R43 May cause sensitisation by skin contact.
 R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases(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:

- chlorothalonil

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
chlorothalonil	1897-45-6 217-588-1	T+, N R26 R37 R40 R41 R43 R50/53	Skin Sens.1; H317 Eye Dam.1; H318 Acute Tox.2; H330 STOT SE3; H335 Carc.2; H351 Aquatic Acute1; H400 Aquatic Chronic1; H410	54 % W/W
propane-1,2-diol	57-55-6 200-338-0	-	-	1 - 5 % W/W
silicon dioxide, chemically prepared	112926-00-8 7631-86-9 231-545-4 01-2119379499-16-0 000	-	-	1 - 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.

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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.
- 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.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms** : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

- Medical advice** : There is no specific antidote available.
Treat symptomatically.

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.

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
chlorothalonil	0.1 mg/m ³	8 h TWA	SYNGENTA
propane-1,2-diol	10 mg/m ³ (Particulates) 150 ppm, 470 mg/m ³ (Total (vapour & particulates))	8 h TWA 8 h TWA	UK HSE UK HSE
silicon dioxide, chemically prepared	4 mg/m ³ 10 mg/m ³ 3,000 ppm 4 mg/m ³ 2.4 mg/m ³ (Respirable dust) 6 mg/m ³ (Inhalable fraction)	8 h TWA 8 h TWA IDLH 8 h TWA 8 h TWA 8 h TWA	SUVA ACGIH NIOSH DFG UK HSE UK HSE

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** : 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** : 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	: suspension
Colour	: No data available
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Melting point/range	: -5 °C
Boiling point/boiling range	: 100 °C
Flash point	: No data available
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	: 1.333 g/cm ³ at 20 °C
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Thermal decomposition	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: not oxidizing

9.2 Other information

: No data available

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
The toxicological data has been taken from products of similar composition.
- Acute inhalation toxicity** : LC50 male rat, > 1.5 mg/l, 4 h
The toxicological data has been taken from products of similar composition.
- : LC50 female rat, < 1.5 mg/l, 4 h
The toxicological data has been taken from products of similar composition.
- Acute dermal toxicity** : LD50 male and female rabbit, > 2,000 mg/kg
The toxicological data has been taken from products of similar composition.
- Skin corrosion/irritation** : rabbit: Mildly irritating
The toxicological data has been taken from products of similar composition.
- Serious eye damage/eye irritation** : rabbit: Mildly irritating
- Respiratory or skin sensitisation** : Buehler Test guinea pig: A skin sensitizer in animal tests.
The toxicological data has been taken from products of similar composition.
- Germ cell mutagenicity
- chlorothalonil : Did not show mutagenic effects in animal experiments.
- silicon dioxide, chemically prepared : Did not show mutagenic effects in animal experiments.
- Carcinogenicity
- chlorothalonil : Chlorothalonil causes kidney tumours in rats and mice via a non-genotoxic mode of action secondary to target organ toxicity.
- silicon dioxide, chemically prepared : Did not show carcinogenic effects in animal experiments.
- Reproductive toxicity
- chlorothalonil : Did not show reproductive toxicity effects in animal experiments.
- silicon dioxide, chemically : Did not show reproductive toxicity effects in animal experiments.

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prepared

STOT - single exposure : May cause respiratory irritation.

STOT - repeated exposure

chlorothalonil : No adverse effect has been observed in chronic toxicity tests.
silicon dioxide, chemically prepared : 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), 61 µg/l , 96 h
Based on test results obtained with similar product.

Toxicity to aquatic invertebrates : EC50 *Daphnia magna* (Water flea), 180 µg/l , 48 h
Based on test results obtained with similar product.

Toxicity to aquatic plants

chlorothalonil : EbC50 *Selenastrum capricornutum* (green algae), 0.21 mg/l , 120 h

12.2 Persistence and degradability

Stability in water

chlorothalonil : Degradation half life: < 5 d at 20 °C
Not persistent in water.

Stability in soil

chlorothalonil : Degradation half life: ca. 7 d
Not persistent in soil.

12.3 Bioaccumulative potential

chlorothalonil : Chlorothalonil has low potential for bioaccumulation.

12.4 Mobility in soil

chlorothalonil : Chlorothalonil has low to slight mobility in soil.

12.5 Results of PBT and vPvB assessment

chlorothalonil : This substance is not considered to be very persistent nor very bioaccumulating (vPvB).
This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

12.6 Other adverse effects

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

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

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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	:	Warning
Hazard statements	:	H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H332 Harmful if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	:	P102 Keep out of reach of children. P280 Wear protective gloves/ protective clothing. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P312 Call a POISON CENTER or doctor/ physician if you feel unwell. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P391 Collect spillage. P501 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:

- chlorothalonil

BRAVO 72SC

Version 2 - This version replaces all previous versions.

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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:

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

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

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic 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)

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

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