SAFETY DATA SHEET (SDS)	
TITLE:	**CHLOROTHALONIL 720 SC**

1.0 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY / UNDERTAKING

1.1 Product Identifier

Identification on the label / Trade name	:	CIBA CHLOROTHALONIL 720 SC
Common Name	:	CHLOROTHALONIL 720 SC
CAS No.	:	1897-45-6
EC No.	:	N/A
Index Number	:	N/A
REACH registration No.	:	N/A

1.2 Relevant identified uses of the substance and uses advised against:

1.2.1 **Agricultural Fungicide**

1.3 Details of the Manufacturer / Supplier of the safety data sheet:

Supplier	CIBA AGRIPHARMA SARL 78 Boulevard Haussmann 75008 Paris , France
Tel	Tel: +33 6 51 39 90 00
E-mail	administration@ciba- agripharma.com
Webpage	www. ciba- agripharma.com

1.4 Emergency Phone Number (24 hours)

+33 6 51 39 90 00

2.0 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Australian GHS Regulation

Serious eye damage: Category 2A
H319 Causes serious eye irritation.

Skin sensitisation: Category 1
H317 May cause an allergic skin reaction.

Carcinogenicity: Category 2
H351 Suspected of causing cancer.

Specific target organ toxicity - single exposure: Category 3
H335 May cause respiratory irritation.

Acute aquatic toxicity: Category 1
H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1
H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

Chlorothalonil
Pyrimethanil

Signal word: Warning

Hazard statements

H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H335	May cause respiratory irritation.

Precautionary statements

P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing mist and spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of water/ soap.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor/physician if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulation.

2.3 Other hazards
No other hazards known.

3.0 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Chemical nature Suspension concentrate (=flowable concentrate)(SC)

Chemical Name	CAS-No.	Concentration [%]
Chlorothalonil	1897-45-6	72.00
1,2-Propanediol	57-55-6	>= 1.00 - <= 5.00
Other ingredients (non-hazardous) to 100%		

4.0 FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Safety Data Sheet to the doctor.

4.1 Description of first aid measures

Inhalation	Move to fresh air. If symptoms persist, call a physician.
Skin contact	Take off contaminated clothing and shoes immediately. Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
Eye contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Protect unharmed eye. Call a physician or poison control center immediately.
Ingestion	Rinse out mouth and give water in small sips to drink. Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	Local: Skin, eye and mucous membrane irritation, Hrythema, Vensitisation Systemic: Respiratory disorder, Jastrointestinal discomfort, Eloody urine

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	Treat symptomatically. There is no specific antidote. Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate.

5.0 FIRE – FIGHTING MEASURES

5.1 Extinguishing media

Suitable	Water, Foam, Sand, Carbon dioxide (CO2)

5.2 Special hazards arising from the substance or mixture

5.3 Advice for firefighters

Special protective equipment for firefighters

6.0 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions	Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke. Use personal protective equipment. Keep unauthorized people away.
6.2 Environmental precautions	Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container.
6.4 Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

7.0 HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	Use only in area provided with appropriate exhaust ventilation.
Advice on protection against fire and explosion	No special precautions required.
Hygiene measures	When using, do not eat, drink or smoke. Remove soiled clothing immediately and clean thoroughly before using again. Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Keep out of the reach of children. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Protect from frost.

Advice on common storage Keep away from food, drink and animal feedingstuffs.

8.0 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Chlorothalonil	1897-45-6	0.2 mg/m3 (TWA)		OES BCS*
Pyrimethanil	53112-28-0	5.6 mg/m3 (TWA)		OES BCS*
1,2-Propanediol (Total vapour and	57-55-6	474 mg/m3/150 ppm (TWA)	12 2011	AU NOEL
particulates.)				
1,2-Propanediol (Particulate.)	57-55-6	10 mg/m3 (TWA)	12 2011	AU NOEL

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

8.2 Exposure controls

Respiratory protection Respiratory protection is not required under anticipated circumstances of exposure.
Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Hand protection Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0,4 mm). Wash when contaminated and dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

Eye protection Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Skin and body protection Wear standard coveralls and Category 3 Type 3 suit.
Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

General protective measures Avoid contact with skin and eyes.
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the above mentioned recommendations would apply.

Engineering Controls

Advice on safe handling Use only in area provided with appropriate exhaust ventilation.

9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	viscous, suspension
Colour	brown
Odour	almost odourless
pH	6.0 - 8.0 at 100 % (23 °C)
Freezing temperature	-1.9 °C
Boiling point/boiling range	100 °C
Flash point	No flash point - Determination conducted up to the boiling point.
Density	ca. 1.21 g/cm³ at 20 °C

Partition coefficient: n- octanol/water
Chlorothalonil: log Pow: 2.94

10.0 STABILITY AND RELIABILITY

10.1 Reactivity

Thermal decomposition Stable under normal conditions.

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known. Stable under recommended storage conditions.

10.4 Conditions to avoid Elevated temperatures

10.5 Incompatible materials Oxidizing agents, Acids, Bases

10.6 Hazardous decomposition products

Thermal decomposition can lead to release of: Hydrogen chloride (HCl)
Hydrogen cyanide (hydrocyanic acid) Carbon monoxide
Nitrogen oxides (NOx)

11.0 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity	LD50 (Rat) > 2,000 mg/kg
Acute inhalation toxicity	LC50 (Rat) > 1.98 mg/l Exposure time: 4 h The value mentioned relates to the active ingredient pyrimethanil. LC50 (Rat) 0.1 mg/l Exposure time: 4 h The value mentioned relates to the active ingredient chlorothalonil.
Acute dermal toxicity	LD50 (Rat) > 4,000 mg/kg

Skin irritation	No skin irritation (Rabbit)
Eye irritation	Irritating to eyes. (Rabbit)
Sensitisation	Sensitising (Guinea pig) OECD Test Guideline 406, Magnusson & Kligman test May cause sensitisation by skin contact.

Assessment mutagenicity

Chlorothalonil was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Chlorothalonil caused at high dose levels an increased incidence of tumours in the following organ(s): Kidney, forestomach. The tumours seen with Chlorothalonil were caused through a non-genotoxic mechanism, which is not relevant at low doses.

Assessment toxicity to reproduction

Chlorothalonil did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Chlorothalonil did not cause developmental toxicity in rats and rabbits.

Assessment STOT Specific target organ toxicity – repeated exposure

Chlorothalonil did not cause specific target organ toxicity in experimental animal studies.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

Harmful if inhaled. Irritation of mucous membranes
May cause skin irritation. Repeated contact may sensitize the skin, leading to allergic reactions.
Causes eye irritation.
Harmful if swallowed.

Early onset symptoms related to exposure
Refer to Section 4

Delayed health effects from exposure
Refer to Section 11

Exposure levels and health effects
Refer to Section 4

Interactive effects
Not known

When specific chemical data is not available
Not applicable

Mixture of chemicals
Refer to Section 2.1

Further information

No further toxicological information is available.

12.0 ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 0.145 mg/l Exposure time: 96 h
	LC50 (Lepomis macrochirus (Bluegill sunfish)) 0.059 mg/l Exposure time: 96 h
	LC50 (Oncorhynchus mykiss (rainbow trout)) 0.047 mg/l Exposure time: 96 h
	LC50 (Cyprinus carpio (Carp)) 35.4 mg/l Exposure time: 96 h
	LC50 (Oncorhynchus mykiss (rainbow trout)) 10.6 mg/l Exposure time: 96 h
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 0.26 mg/l Exposure time: 48 h
	LC50 (Daphnia magna (Water flea)) 0.07 mg/l Exposure time: 48 h
	LC50 (Daphnia magna (Water flea)) 2.9 mg/l Exposure time: 48 h
Toxicity to aquatic plants	IC50 (Raphidocelis subcapitata (freshwater green alga)) 0.88 mg/l Exposure time: 72 h
	EC50 (Navicula pelliculosa (Freshwater diatom)) 0.0051 mg/l Exposure time: 72 h
	EC50 (Raphidocelis subcapitata (freshwater green alga)) 0.021 mg/l Exposure time: 120 h

13.0 DISPOSAL CONSIDERATIONS

Refillable containers:
Empty contents fully into application equipment. Close all valves and return to point of purchase. Refer to product label for further information.
Metal drums and plastic containers:
Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.
Do not reuse container for any other purpose.

14.0 TRANSPORT INFORMATION

ADG

UN number	**3082**
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLOROTHALONIL, PYRIMETHANIL SOLUTION)
Hazchem Code	•3Z

According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code

IMDG

UN number	**3082**
Transport hazard class(es)	9
Subsidiary Risk	None Packaging
group	III Marine
pollutant	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLOROTHALONIL, PYRIMETHANIL SOLUTION)

IATA

UN number	**3082**
Transport hazard class(es)	9
Subsidiary Risk	None Packaging
group	III Environm.
Hazardous Mark	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLOROTHALONIL, PYRIMETHANIL SOLUTION)

15.0 REGULATORY INFORMATION

Hazard and Precautionary statements in accordance with the regulation 1272/2008/EC

16.0 OTHER INFORMATION

The information contained herein relates only to the specified material identified. CIBA AGRIPHARMA believes that such information is accurate and reliable as of the data of this material safety data sheet, but no representation, guarantee or warranty, expressed or implied, is made as to the accuracy, reliability, or completeness of the information. CIBA AGRIPHARMA urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application.

This material safety data sheet adopts the provisions of the European Commission Directive 2001/58/EC and Regulations 1272/2008 (CLP) and 453/2010 (REACH).