

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2015/830 - New Zealand

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Product name : HEMPEL'S A/F GLOBIC NCT 8190M  
Product identity : 8190M19990  
Product type : antifouling paint

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

Field of application : ships and shipyards.  
Identified uses : Industrial applications, Professional applications, Used by spraying.

#### 1.3 Details of the supplier of the safety data sheet

Company details :	HEMPEL (New Zealand) 18 Cryers road East Tamaki 2013 Tel: +64 (0) 9 2740201 Fax: +64 (0) 9 2740206 Email: dpat@hempel.com	Emergency telephone number  Poisons Centre New Zealand: 0800 764 766 See section 4 First aid measures.
Date of Preparation :	14 March 2016	
Date of previous issue	31 October 2014.	

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Product definition : Mixture

#### GHS Classification

 FLAMMABLE LIQUIDS - Category 3  
ACUTE TOXICITY (inhalation) - Category 4  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS)) - Category 2  
AQUATIC HAZARD (ACUTE) - Category 1  
AQUATIC HAZARD (LONG-TERM) - Category 1

#### 2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements :  Flammable liquid and vapor.  
Harmful if inhaled.  
Causes serious eye damage.  
Causes skin irritation.  
May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS))  
Very toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention :  Avoid breathing vapors, spray or mists. Wear protective gloves/protective clothing/eye protection/face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage : Keep cool.

Hazardous ingredients :  Copper (I) oxide  
xylene  
zinc oxide  
copper pyrithione  
copper (metallic)  
white spirit

### SECTION 2: Hazards identification

#### 2.3 Other hazards

Other hazards which do not result in classification :

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

Product/ingredient name	Identifiers	%	GHS Classification
copper (I) oxide	1317-39-1	≥25 - ≤50	ACUTE TOXICITY (oral) - Category 4 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1
xylene	1330-20-7	≥10 - ≤25	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 2
zinc oxide	1314-13-2	≥5 - ≤10	AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1
ethylbenzene	100-41-4	≥3 - ≤5	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs) - Category 2
o-xylene	95-47-6	≥3 - ≤5	ASPIRATION HAZARD - Category 1 FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 2
copper pyrrithione	14915-37-8	≥3 - ≤5	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
copper (metallic)	7440-50-8	≥1 - ≤3	AQUATIC HAZARD (ACUTE) - Category 1 FLAMMABLE SOLIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4
4-methylpentan-2-one	108-10-1	≥1 - ≤3	AQUATIC HAZARD (ACUTE) - Category 1 FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
white spirit	*64742-88-7	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS)) (inhalation) - Category 1 ASPIRATION HAZARD - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 2

Occupational exposure limits, if available, are listed in Section 8.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

General :	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 112 and give immediate treatment (first aid).
Eye contact :	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. In all cases of doubt, or when symptoms persist, seek medical attention.
Inhalation :	Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately.
Skin contact :	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

### SECTION 4: First aid measures

Ingestion :	If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.
Protection of first-aiders :	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

#### 4.2 Most important symptoms and effects, both acute and delayed

##### Potential acute health effects

Eye contact :	Causes serious eye damage.
Inhalation :	<input checked="" type="checkbox"/> Harmful if inhaled.
Skin contact :	<input checked="" type="checkbox"/> Causes skin irritation. Defatting to the skin.
Ingestion :	<input checked="" type="checkbox"/> No known significant effects or critical hazards.

##### Over-exposure signs/symptoms

Eye contact :	Adverse symptoms may include the following: pain watering redness
Inhalation :	No specific data.
Skin contact :	<input checked="" type="checkbox"/> Adverse symptoms may include the following: pain or irritation redness dryness cracking blistering may occur
Ingestion :	Adverse symptoms may include the following: stomach pains

#### 4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician :	If gasses have been inhaled, from the decomposition of the product, symptoms may be delayed. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments :	No specific treatment.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Extinguishing media :	Recommended: alcohol resistant foam, CO <sub>2</sub> , powders, water spray. Not to be used: waterjet.
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#### 5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture :	Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous combustion products :	Decomposition products may include the following materials: carbon oxides nitrogen oxides sulfur oxides metal oxide/oxides

#### 5.3 Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Avoid all direct contact with the spilled material. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

**6.2 Environmental precautions**

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

**6.3 Methods and materials for containment and cleaning up**

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product.

**6.4 Reference to other sections**

See Section 1 for emergency contact information.  
 See Section 8 for information on appropriate personal protective equipment.  
 See Section 13 for additional waste treatment information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used.

Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in accordance with local regulations. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

**7.3 Specific end use(s)**

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

Product/ingredient name	Exposure limit values
xylene	<b>NZ OSH (New Zealand, 2/2013).</b> WES-TWA: 217 mg/m <sup>3</sup> 8 hours.
zinc oxide	WES-TWA: 50 ppm 8 hours.
ethylbenzene	<b>NZ OSH (New Zealand, 2/2013).</b> WES-STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Fume WES-TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Fume WES-TWA: 10 mg/m <sup>3</sup> 8 hours. Form: The value for inhalable dust containing no asbestos and less than 1% free silica.
o-xylene	<b>NZ OSH (New Zealand, 2/2013).</b> WES-STEL: 543 mg/m <sup>3</sup> 15 minutes. WES-STEL: 125 ppm 15 minutes. WES-TWA: 434 mg/m <sup>3</sup> 8 hours. WES-TWA: 100 ppm 8 hours.
carbonblack	<b>NZ OSH (New Zealand, 2/2013).</b> WES-TWA: 217 mg/m <sup>3</sup> 8 hours. WES-TWA: 50 ppm 8 hours. <b>NZ OSH (New Zealand, 2/2013).</b>

**SECTION 8: Exposure controls/personal protection**

copper (metallic)	WES-TWA: 3 mg/m <sup>3</sup> 8 hours. <b>NZ OSH (New Zealand, 2/2013).</b> WES-TWA: 1 mg/m <sup>3</sup> , (as Cu) 8 hours. Form: Dusts and Mists WES-TWA: 0.2 mg/m <sup>3</sup> , (as Cu) 8 hours. Form: Fume
4-methylpentan-2-one	<b>NZ OSH (New Zealand, 2/2013).</b> WES-STEL: 307 mg/m <sup>3</sup> 15 minutes. WES-STEL: 75 ppm 15 minutes. WES-TWA: 205 mg/m <sup>3</sup> 8 hours. WES-TWA: 50 ppm 8 hours.

**Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**8.2 Exposure controls**

**Appropriate engineering controls**

Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapors or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the workstation location.

**Individual protection measures**

General : Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.



Hygiene measures : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection : Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances.

Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice:

Recommended: Silver Shield / 4H gloves, polyvinyl alcohol (PVA), Viton®  
 May be used: nitrile rubber  
 Short term exposure: neoprene rubber, butyl rubber, natural rubber (latex), polyvinyl chloride (PVC)

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product.  
 Wear suitable protective clothing. Always wear protective clothing when spraying.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If working areas have insufficient ventilation: When the product is applied by means that will not generate an aerosol such as, brush or roller wear half or totally covering mask equipped with gas filter of type A, when grinding use particle filter of type P. Be sure to use an approved/certified respirator or equivalent.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Physical state :	Liquid.
Color :	Black.
Odor :	Solvent-like
pH :	Testing not relevant or not possible due to nature of the product.
Melting point/freezing point :	439.835°C This is based on data for the following ingredient: copper (I) oxide
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Closed cup: 27°C (80.6°F) Open cup: 27°C (80.6°F) [Setaflash.]
Evaporation rate :	Testing not relevant or not possible due to nature of the product.
Flammability :	Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat. Flammable in the presence of the following materials or conditions: oxidizing materials and reducing materials.
Lower and upper explosive (flammable) limits :	0.6 - 7.5 vol %
Vapor pressure :	Testing not relevant or not possible due to nature of the product.
Vapor density :	Testing not relevant or not possible due to nature of the product.
Relative density :	1.69 g/cm <sup>3</sup>
Solubility(ies) :	Partially soluble in the following materials: cold water and hot water.
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Testing not relevant or not possible due to nature of the product.
Decomposition temperature :	Testing not relevant or not possible due to nature of the product.
Viscosity :	Aspiration hazard (H304) Not classified. Testing not relevant due to nature of the product.
Explosive properties :	Highly explosive in the presence of the following materials or conditions: heat. Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, oxidizing materials and reducing materials.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.

#### 9.2 Other information

Solvent(s) % by weight :	Weighted average: 26 %
Water % by weight :	Weighted average: 0 %
VOC content :	33 g/l
TOC Content :	Weighted average: 387 g/l
Solvent Gas :	Weighted average: 0.097 m <sup>3</sup> /l

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

#### 10.2 Chemical stability

The product is stable.

#### 10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

#### 10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

#### 10.5 Incompatible materials

Highly reactive or incompatible with the following materials: oxidizing materials, reducing materials and acids.  
Reactive or incompatible with the following materials: organic materials, alkalis and moisture.

**SECTION 10: Stability and reactivity**

**10.6 Hazardous decomposition products**

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

Decomposition products may include the following materials: carbon oxides nitrogen oxides sulfur oxides metal oxide/oxides

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
8190M19990	LD50 Dermal	Rat	>2000 mg/kg	-
copper (I) oxide	LD50 Oral	Rat	>2000 mg/kg	-
	LC50 Inhalation Vapor	Rat	3340 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
xylene	LD50 Oral	Rat	400 mg/kg	-
	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	6350 ppm	4 hours
zinc oxide	LD50 Oral	Rat	4300 mg/kg	-
	LC50 Inhalation Vapor	Rat	>5.7 mg/l	4 hours
ethylbenzene	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
o-xylene	LD50 Oral	Rat	3500 mg/kg	-
	LD50 Oral	Rat	3567 mg/kg	-
copper pyrrhione	LC50 Inhalation Dusts and mists	Rat	70 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
copper (metallic)	LD50 Oral	Rat	1075 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	1.5 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
4-methylpentan-2-one	TDLo Oral	Human	0.01 mg/kg	-
	LD Dermal	Rabbit	>3 g/kg	-

**Acute toxicity estimates**

Route	ATE value
Inhalation (gases)	34113.2 ppm
Inhalation (vapors)	63.55 mg/l
Inhalation (dusts and mists)	3.194 mg/l

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure
copper (I) oxide	Eyes - Irritant	Rabbit	-	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams
zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams
ethylbenzene	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams
	Respiratory - Mild irritant	Rabbit	-	-
4-methylpentan-2-one	Eyes - Mild irritant	Rabbit	-	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 microliters
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams

**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
4-methylpentan-2-one	Category 3	Not applicable.	Respiratory tract irritation
white spirit	Category 3	Not applicable.	Narcotic effects

**Specific target organ toxicity (repeated exposure)**

## SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene white spirit	Category 2 Category 1	Not determined Inhalation	ears central nervous system (CNS)

### Aspiration hazard

Product/ingredient name	Result
ethylbenzene white spirit	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

### Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential chronic health effects

Other information : No additional known significant effects or critical hazards.

## SECTION 12: Ecological information

### 12.1 Toxicity

Do not allow to enter drains or watercourses. Very toxic to aquatic life with long lasting effects.

Product/ingredient name	Result	Species	Exposure
copper (I) oxide	Acute EC50 30 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	4 days
	Acute EC50 0.042 mg/l Fresh water	Daphnia - Daphnia similis	48 hours
	Acute LC50 350 µg/l Marine water	Crustaceans - Balanus improvisus - Nauplii	48 hours
	Acute LC50 0.075 mg/l Fresh water	Fish - Danio rerio	96 hours
zinc oxide	Chronic IC10 0.009 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 0.042 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 98 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1.1 - 2.5 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
ethylbenzene copper pyrithione	Chronic NOEC 0.017 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Chronic NOEC <1000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 0.022 mg/l	Daphnia	48 hours
	Acute LC50 0.0032 mg/l	Fish	96 hours
copper (metallic)	Acute EC50 1100 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute EC50 2.1 µg/l Fresh water	Daphnia - Daphnia longispina - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute IC50 13 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute IC50 5.4 mg/l Marine water	Aquatic plants - Plantae - Exponential growth phase	72 hours
4-methylpentan-2-one	Acute LC50 0.072 µg/l Marine water	Crustaceans - Amphipoda - Adult	48 hours
	Acute LC50 7.56 µg/l Marine water	Fish - Periopthalmus waltoni - Adult	96 hours
	Chronic NOEC 2.5 µg/l Marine water	Algae - Nitzschia closterium - Exponential growth phase	72 hours
	Chronic NOEC 7 mg/l Fresh water	Aquatic plants - Ceratophyllum demersum	3 days
	Chronic NOEC 0.02 mg/l Fresh water	Crustaceans - Cambarus bartonii - Mature	21 days
	Chronic NOEC 2 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.8 µg/l Fresh water	Fish - Oreochromis niloticus - Juvenile (Fledgling, Hatchling, Weanling)	6 weeks
		Daphnia - Daphnia magna	21 days
	Chronic NOEC 7800 - 39000 µg/l Fresh water	Fish - Pimephales promelas - Embryo	33 days
	Chronic NOEC 168 mg/l Fresh water		

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
xylene ethylbenzene	-	>60 % - Readily - 28 days	-	-
	-	>70 % - Readily - 28 days	-	-
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
xylene ethylbenzene	-	-	Readily Readily	

### SECTION 12: Ecological information

#### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
xylene	3.12	8.1 - 25.9	low
zinc oxide	2.2	60960	high
ethylbenzene	3.6	-	low
o-xylene	3.12	8.1 - 25.9	low
copper pyrithione	-	50	low
4-methylpentan-2-one	1.9	-	low

#### 12.4 Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : No known data available in our database.

Mobility : No known data available in our database.

#### 12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

#### 12.6 Other adverse effects

No known significant effects or critical hazards.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.

#### Packaging

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

### SECTION 14: Transport information

Transport may take place according to national regulation NZS for transport by road and train, IMDG for transport by sea, IATA for transport by air.

	14.1 UN no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env*	Additional information
<b>NZS Class</b>	UN2929	TOXIC LIQUID FLAMMABLE, ORGANIC, N.O.S. (copper pyrithione, xylene)	6.1 3   	II	Yes.	<b>Hazchem code</b> 3WE
<b>IMDG Class</b>	UN2929	TOXIC LIQUID FLAMMABLE, ORGANIC, N.O.S. (copper pyrithione, xylene). (copper (I) oxide)	6.1 3   	II	Yes.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.  <b>Emergency schedules (EmS)</b> F-E, S-D
<b>IATA Class</b>	UN2929	TOXIC LIQUID FLAMMABLE, ORGANIC, N.O.S. (copper pyrithione, xylene)	6.1 3  	II	No.	The environmentally hazardous substance mark may appear if required by other transportation regulations.

PG\* : Packing group

Env.\* : Environmental hazards

#### 14.6 Special precautions for user

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**SECTION 14: Transport information**

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

Not applicable.

**SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This material is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 and has been classified according to the Hazardous Substances (Classifications) Regulations 2001.

This material is classified as DANGEROUS GOODS according to criteria in New Zealand Standard 5433:2012 Transport of Dangerous Goods on Land.

**HSNO Classification**

- 3.1 - FLAMMABLE LIQUIDS - Category C
- 6.1 - ACUTE TOXICITY (inhalation) - Category D
- 6.3 - SKIN IRRITATION - Category A
- 8.3 - CORROSIVE TO OCULAR TISSUE - Category A
- 6.5 - SENSITIZATION - Category B (Skin)
- 6.7 - CARCINOGENICITY - Category B
- 6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY (Fertility) - Category B
- 6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY (Unborn child) - Category B
- 6.9 - SPECIFIC TARGET ORGAN TOXICITY (SINGLE OR REPEATED EXPOSURE) - Category B
- 9.1 - AQUATIC ECOTOXICITY - Category A
- 9.3 - TERRESTRIAL VERTEBRATE ECOTOXICITY - Category B

Safety, health and environmental regulations specific for the product :

HSNO Approval Number : HSR100851

**International regulations**

**IMO Anti-fouling System Convention Compliant (AFS/CONF/26)**

This product does not contain organotin compounds acting as biocides and complies with the International Convention on the Control of Harmful Anti-fouling Systems on Ships as adopted by IMO October 2001 (IMO document AFS/CONF/26)

Product type :  antifouling paint  
 Manufacturer : Hempel A/S  
 Product name and/or code : HEMPEL'S A/F GLOBIC NCT 8190M

8190M19990

Colour :  black.

Note: This name is shown on the product container. All products in HEMPEL's containers carrying this name comply with the IMO Convention (AFS/CONF/26).

Active ingredient(s) :  copper (I) oxide 1317-39-1  
 copper pyrithione 14915-37-8

**SECTION 16: Other information**

 Indicates information that has changed from previously issued version.

Classification	Justification
 FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS)) - Category 2 AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

**Notice to reader**

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical performance or suitability for particular applications.

It is always the duty of the user/employer to ascertain that the work is planned and carried out in accordance with the national regulations.