

# SAFETY DATA SHEET

## TAK KILL BC1

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

#### 1.1. Product identifier

Product name                    TAK KILL BC1  
 Product number                C8705

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

Identified uses                Biocides for water treatment.

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

Supplier                        ORAPI APPLIED LIMITED,  
 SPRING ROAD,  
 SMETHWICK,  
 WEST MIDLANDS, B66 1PT, ENGLAND  
 Tel: 0121-525-4000  
 Fax: 0121-525-4919  
 lee.baughan@orapiapplied.com

Contact person                Lee Baughan

#### 1.4. Emergency telephone number

Emergency telephone        0121 525 4000 (09:00 - 17:00 hrs)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (EC 1272/2008)

Physical hazards                Met. Corr. 1 - H290  
 Health hazards                 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317  
 Environmental hazards        Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411

**Human health**                Corrosive to skin and eyes. Corrosive. Prolonged contact causes serious eye and tissue damage. The product contains a sensitising substance. May cause sensitisation or allergic reactions in sensitive individuals.

**Environmental**                The product contains a substance which is very toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

**Physicochemical**              May be corrosive to metals.

#### 2.2. Label elements

##### Pictogram



Signal word                      Danger

Hazard statements              H290 May be corrosive to metals.  
 H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H400 Very toxic to aquatic life.  
 H411 Toxic to aquatic life with long lasting effects.

## TAK KILL BC1

<b>Precautionary statements</b>	<p>P262 Do not get in eyes, on skin, or on clothing.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P391 Collect spillage.</p>
<b>Contains</b>	Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one (EINECS 247-500-7) and 2-methyl-2H-isothiazol-3-one (EINECS 220-239-6)
<b>Supplementary precautionary statements</b>	<p>P234 Keep only in original container.</p> <p>P260 Do not breathe vapour/ spray.</p> <p>P261 Avoid breathing vapour/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273 Avoid release to the environment.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P310 Immediately call a POISON CENTER/ doctor.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P390 Absorb spillage to prevent material damage.</p> <p>P405 Store locked up.</p> <p>P406 Store in corrosive resistant container with a resistant inner liner.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>

### 2.3. Other hazards

#### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

<b>Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one (EINECS 247-500-7) and 2-methyl-2H-isothiazol-3-one (EINECS 220-239-6)</b>	<b>1-3%</b>
CAS number: 55965-84-9	
M factor (Acute) = 10                      M factor (Chronic) = 10	
<b>Classification</b> Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 3 - H331 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	

# TAK KILL BC1

<b>COPPER NITRATE</b>	<b>0.1-1%</b>
CAS number: 10031-43-3	
M factor (Acute) = 10	
<b>Classification</b>	
Ox. Sol. 2 - H272	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
Aquatic Acute 1 - H400	
Aquatic Chronic 2 - H411	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General information</b>	Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Do not induce vomiting. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Give milk instead of water if readily available.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.
<b>Eye contact</b>	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

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

<b>General information</b>	Treat symptomatically.
<b>Inhalation</b>	No specific symptoms known.
<b>Ingestion</b>	Chemical burns. May cause chemical burns in mouth and throat. May cause discomfort if swallowed. May cause stomach pain or vomiting.
<b>Skin contact</b>	Chemical burns. Burning pain and severe corrosive skin damage. May cause sensitisation or allergic reactions in sensitive individuals.
<b>Eye contact</b>	Causes burns. Severe irritation, burning and tearing.

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

<b>Notes for the doctor</b>	No specific recommendations.
-----------------------------	------------------------------

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media** The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	No unusual fire or explosion hazards noted.
<b>Hazardous combustion products</b>	Fire or high temperatures create: Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). Nitrous gases (NO <sub>x</sub> ). Hydrogen chloride (HCl). Sulphurous gases (SO <sub>x</sub> ).

### 5.3. Advice for firefighters

## TAK KILL BC1

**Protective actions during firefighting** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Move containers from fire area if it can be done without risk. Use water to keep fire exposed containers cool and disperse vapours.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Avoid inhalation of vapours and contact with skin and eyes.

#### 6.2. Environmental precautions

**Environmental precautions** Avoid discharge to the aquatic environment. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

#### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up** Stop leak if safe to do so. Inform authorities if large amounts are involved. Absorb spillage with non-combustible, absorbent material. Flush contaminated area with plenty of water. Contain spillage with sand, earth or other suitable non-combustible material.

#### 6.4. Reference to other sections

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

**Usage precautions** Read and follow manufacturer's recommendations. Avoid inhalation of vapours and contact with skin and eyes. Avoid spilling. Wear suitable protective equipment for prolonged exposure and/or high concentrations of vapours, spray or mist.

#### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions** Store in tightly-closed, original container in a dry, cool and well-ventilated place. Protect from freezing and direct sunlight. Keep away from food, drink and animal feeding stuffs.

**Storage class** Corrosive storage.

#### 7.3. Specific end use(s)

### SECTION 8: Exposure Controls/personal protection

#### 8.1. Control parameters

#### COPPER NITRATE (CAS: 10031-43-3)

PNEC

- Fresh water; 7.8 µg/l
- Marine water; 5.2 µg/l
- STP; 230 µg/l
- Sediment (Freshwater); 87 mg/kg
- Sediment (Marinewater); 676 mg/kg
- Soil; 65 mg/kg

#### 8.2. Exposure controls

Protective equipment



## TAK KILL BC1

<b>Appropriate engineering controls</b>	Provide adequate general and local exhaust ventilation.
<b>Eye/face protection</b>	Wear chemical splash goggles.
<b>Hand protection</b>	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.
<b>Other skin and body protection</b>	Provide eyewash station. Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear apron or protective clothing in case of contact.
<b>Hygiene measures</b>	Wash promptly with soap and water if skin becomes contaminated.
<b>Respiratory protection</b>	Respiratory protection may be required if excessive airborne contamination occurs.

### SECTION 9: Physical and Chemical Properties

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

<b>Appearance</b>	Clear liquid. Liquid.
<b>Colour</b>	Green-yellow.
<b>Odour</b>	Mild.
<b>pH</b>	pH (concentrated solution): 1.8 - 2.6
<b>Relative density</b>	1.022 - 1.032 @ 20°C
<b>Solubility(ies)</b>	Miscible with water.

#### 9.2. Other information

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
-------------------	---------------------------------------------------------------------

#### 10.2. Chemical stability

<b>Stability</b>	No particular stability concerns.
------------------	-----------------------------------

#### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	May be corrosive to metals.
-------------------------------------------	-----------------------------

#### 10.4. Conditions to avoid

<b>Conditions to avoid</b>	Strong alkalis. Avoid contact with the following materials: Oxidising agents. Reducing agents.
----------------------------	------------------------------------------------------------------------------------------------

#### 10.5. Incompatible materials

<b>Materials to avoid</b>	Strong oxidising agents. Strong reducing agents. Strong alkalis.
---------------------------	------------------------------------------------------------------

#### 10.6. Hazardous decomposition products

<b>Hazardous decomposition products</b>	Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide (CO). Nitrous gases (NO <sub>x</sub> ). Hydrogen chloride (HCl). Sulphurous gases (SO <sub>x</sub> ).
-----------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<b>Toxicological effects</b>	No information available.
------------------------------	---------------------------

#### Acute toxicity - oral

## TAK KILL BC1

ATE oral (mg/kg) 6,666.67

### Acute toxicity - dermal

ATE dermal (mg/kg) 20,000.0

### Acute toxicity - inhalation

ATE inhalation (gases ppm) 46,666.67

ATE inhalation (vapours mg/l) 200.0

ATE inhalation (dusts/mists mg/l) 33.33

**Inhalation** Gas or vapour may irritate the respiratory system.

**Ingestion** Causes burns. Corrosive. Small amounts may cause serious damage. Swallowing concentrated chemical may cause severe internal injury.

**Skin contact** Causes burns. May cause sensitisation by skin contact. Corrosive. Prolonged contact causes serious tissue damage. May cause sensitisation or allergic reactions in sensitive individuals.

**Eye contact** Causes burns. Severe irritation, burning and tearing.

## SECTION 12: Ecological Information

**Ecotoxicity** The product contains a substance which is very toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

### 12.1. Toxicity

**Toxicity** Very toxic to aquatic life with long lasting effects.

### 12.2. Persistence and degradability

**Persistence and degradability** The product is slowly degradable.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** The product is not bioaccumulating.

### 12.4. Mobility in soil

**Mobility** The product is soluble in water.

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

### 12.6. Other adverse effects

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**Disposal methods** Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

## SECTION 14: Transport information

### 14.1. UN number

UN No. (ADR/RID) 3265

UN No. (IMDG) 3265

## TAK KILL BC1

UN No. (ICAO) 3265

UN No. (ADN) 3265

### 14.2. UN proper shipping name

**Proper shipping name (ADR/RID)** Corrosive Liquid, Acidic, Organic, n.o.s. (contains 5-Chloro-2-Methyl-4-Isothiazol-3-one and 2-Methyl-2H-Isothiazol-3-one), Environmentally Hazardous

**Proper shipping name (IMDG)** Corrosive Liquid, Acidic, Organic, n.o.s. (contains 5-Chloro-2-Methyl-4-Isothiazol-3-one and 2-Methyl-2H-Isothiazol-3-one), Marine Pollutant

**Proper shipping name (ICAO)** Corrosive Liquid, Acidic, Organic, n.o.s. (contains 5-Chloro-2-Methyl-4-Isothiazol-3-one and 2-Methyl-2H-Isothiazol-3-one), Environmentally Hazardous

**Proper shipping name (ADN)** Corrosive Liquid, Acidic, Organic, n.o.s. (contains 5-Chloro-2-Methyl-4-Isothiazol-3-one and 2-Methyl-2H-Isothiazol-3-one), Environmentally Hazardous

### 14.3. Transport hazard class(es)

ADR/RID class 8

ADR/RID classification code C3

ADR/RID label 8

IMDG class 8

ICAO class/division 8

ADN class 8

#### Transport labels



### 14.4. Packing group

ADR/RID packing group II

IMDG packing group II

ADN packing group II

ICAO packing group II

### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



### 14.6. Special precautions for user

EmS F-A, S-B

ADR transport category 2

Emergency Action Code 2X

Hazard Identification Number (ADR/RID) 80

Tunnel restriction code (E)

## TAK KILL BC1

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

#### SECTION 15: Regulatory information

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

<b>National regulations</b>	Control of Substances Hazardous to Health Regulations 2002 (as amended). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
<b>EU legislation</b>	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Commission Regulation (EU) No 2015/830 of 28 May 2015.
<b>Guidance</b>	Workplace Exposure Limits EH40.

##### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

#### SECTION 16: Other information

<b>Abbreviations and acronyms used in the safety data sheet</b>	ATE: Acute Toxicity Estimate. ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. CAS: Chemical Abstracts Service. DNEL: Derived No Effect Level. GHS: Globally Harmonized System. IATA: International Air Transport Association. ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air. IMDG: International Maritime Dangerous Goods. LC <sub>50</sub> : Lethal Concentration to 50 % of a test population. LD <sub>50</sub> : Lethal Dose to 50% of a test population (Median Lethal Dose). PBT: Persistent, Bioaccumulative and Toxic substance. PNEC: Predicted No Effect Concentration. REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. SVHC: Substances of Very High Concern. vPvB: Very Persistent and Very Bioaccumulative. cATpE: Converted Acute Toxicity Point Estimate. EC <sub>50</sub> : 50% of maximal Effective Concentration. UN: United Nations.
<b>General information</b>	For further information or advice contact our technical service line during regular office hours on 0121-524-1000.  This safety data sheet has been compiled for the product as supplied, properties and hazards will vary if the product is diluted with water or mixed with any other material.
<b>Revision date</b>	03/08/2017
<b>Revision</b>	6



## TAK KILL BC1

<b>Supersedes date</b>	19/08/2015
<b>SDS status</b>	Approved.
<b>Hazard statements in full</b>	H272 May intensify fire; oxidiser. H290 May be corrosive to metals. H301 Toxic if swallowed. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H331 Toxic if inhaled. 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.
<b>Signature</b>	Health and Safety Manager

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.