



SAFETY DATA SHEET

DOW CHEMICAL COMPANY LIMITED

Safety Data Sheet according to Reg. (EU) No 2015/830

KATHON™ FP 1.5

Revision Date: 14.06.2016

Version: 5.0

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DOW CHEMICAL COMPANY LIMITED encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name: KATHON™ FP 1.5 BIOCIDE

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

Identified uses: Biocidal product

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION

DOW CHEMICAL COMPANY LIMITED
DIAMOND HOUSE, LOTUS PARK,
KINGSBURY CRESCENT,
STAINES
England
TW18 3AG
UNITED KINGDOM

Customer Information Number:

+44 (0) 203 139 4000
SDSQuestion@dow.com

1.4 EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 0031 115 694 982

Local Emergency Contact: 00 31 115 69 4982

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:

Skin irritation - Category 2 - H315

Serious eye damage - Category 1 - H318

Skin sensitisation - Category 1 - H317

Chronic aquatic toxicity - Category 3 - H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

Hazard pictograms



Signal word: **DANGER**

Hazard statements

- H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ eye protection/ face protection.
 P305 + P351 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/doctor.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.

Supplemental information

----- Restricted to professional users.

Contains Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

2.3 Other hazards

No data available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Aqueous solution of organic and inorganic compounds

3.2 Mixtures

This product is a mixture.

CASRN / EC-No. / Index-No.	REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008

CASRN 55965-84-9 EC-No. — Index-No. 613-167-00-5	—	>= 1.0 - < 2.5 %	Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	Acute Tox. - 3 - H301 Acute Tox. - 2 - H330 Acute Tox. - 2 - H310 Skin Corr. - 1B - H314 Eye Dam. - 1 - H318 Skin Sens. - 1 - H317 Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410
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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

Inhalation: Move to fresh air. Give artificial respiration if breathing has stopped. If symptoms persist, call a physician.

Skin contact: IMMEDIATELY get under a safety shower. Remove contaminated clothing. Wash off with soap and water. Immediate medical attention is required. Wash contaminated clothing before re-use. Do not take clothing home to be laundered. Discard contaminated shoes, belts, and other articles made of leather.

Eye contact: Rinse immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Ingestion: Drink 1 or 2 glasses of water. IMMEDIATELY see a physician. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Treatment should be directed at preventing absorption, administering to symptoms (if they occur), and providing supportive therapy.

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media: No data available

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: No data available

Unusual Fire and Explosion Hazards: Combustion generates toxic fumes of the following: hydrogen chloride Nitrogen oxides (NOx) sulfur oxides

5.3 Advice for firefighters

Fire Fighting Procedures: Cool containers/tanks with water spray. Minimize exposure. Do not breathe fumes. Contain run-off.

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Wear a CEN approved (or equivalent) respirator (with organic vapor/acid gas cartridge and a dust/mist filter) during spill clean-ups and deactivation of this material. If exposed to material during clean-up operations, IMMEDIATELY remove all contaminated clothing and wash exposed skin areas with soap and water. See SECTION 4, First Aid Measures, for further information.

6.2 Environmental precautions: Do not allow material to contaminate ground water system. Prevent product from entering drains.

6.3 Methods and materials for containment and cleaning up: WARNING: KEEP SPILLS AND CLEAN-UP RESIDUALS OUT OF MUNICIPAL SEWERS AND OPEN BODIES OF WATER. Adsorb the spill with spill pillows or inert solids such as clay or vermiculite, and transfer contaminated materials to suitable containers for disposal. Deactivate spill area with freshly prepared solution of 5% sodium bicarbonate and 5% sodium hypochlorite in water. Apply solution to the spill area at a ratio of 10 volumes deactivation solution per estimated volume of residual spill to deactivate any residual active ingredient. Let stand for 30 minutes. Flush the spill area with copious amounts of water to chemical sewer (if in accordance with local procedures, permits and regulations). DO NOT add deactivation solution to the waste pail to deactivate the adsorbed material. See Section 13, "Disposal Considerations", for information regarding the disposal of contained materials.

6.4 Reference to other sections: References to other sections, if applicable, have been provided in the previous sub-sections.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling: This material is a severe irritant. For personal protection see section 8. Do not handle material near food, feed or drinking water.

7.2 Conditions for safe storage, including any incompatibilities: Keep in a well-ventilated place. The product as supplied may evolve gas (largely carbon dioxide) slowly. To prevent the buildup of pressure the product is packaged in specially vented containers, where necessary. Keep this product in the original container when not in use. Container must be stored and transported in an upright position to prevent spilling the contents through the vent, where fitted. Do not store this material in containers made of the following: steel Do not store this material near food, feed or drinking water. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied. Expiration date based only on retention of >95% actives during storage at 20°C-25°C (68°F-77°F).

Storage stability**Storage temperature:** 1 - 55 °C**7.3 Specific end use(s):** See the technical data sheet on this product for further information.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limits are listed below, if they exist.

8.2 Exposure controls**Engineering controls:** Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75 m/sec.) at the point of dust or mist evolution. Refer to the current edition of "Industrial Ventilation: A Manual of Recommended Practice" published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.**Protective measures:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.**Individual protection measures****Eye/face protection:** Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.**Skin protection****Hand protection:** Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation.(Gloves of other chemically resistant materials may not provide adequate protection):
butyl-rubber

Nitrile rubber

Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. NOTE: Material is a possible skin sensitizer.

Other protection: Wear as appropriate:

Chemical resistant apron

Complete suit protecting against chemicals

Respiratory protection: Typical use of this material does not result in workplace exposures that exceed the exposure limits listed in the Exposure Limit Information Section. For those special workplace conditions where the listed exposure limits are exceeded, a respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed. For concentrations up to 10 times the exposure limit, wear a properly fitted NIOSH approved (or equivalent) half-mask or full facepiece air purifying respirator equipped with organic vapor cartridges and N95 filters. If oil mist is present, use R95 or P95 filters. For those unlikely situations where exposure may greatly exceed the listed exposure limits (i.e. greater than 10-fold), or in any emergency situation, wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode or a full facepiece airline respirator in the pressure demand mode with emergency escape provision. See SECTION 6, Accidental Release Measures, for respirator and protective clothing requirements for spill clean-up and decontamination of this material.**Environmental exposure controls**

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	colorless to pale yellow clear
Odor	aromatic
Odor Threshold	No data available
pH	4.4
Melting point/range	No data available
Freezing point	< -20 °C
Boiling point (760 mmHg)	229.00 °C Solvent
Flash point	138.00 °C <i>PENSKY MARTENS CLOSED CUP</i>
Evaporation Rate (Butyl Acetate = 1)	<1.00 Water
Flammability (solid, gas)	Not Applicable
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	0.08 hPa solvent-like
Relative Vapor Density (air = 1)	0.6500
Relative Density (water = 1)	1.0440 at 25.00 °C
Water solubility	completely soluble
Partition coefficient: n-octanol/water	log Pow: 0.401 <i>Measured</i> log Pow: -0.486 <i>Measured</i>
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic Viscosity	97.800 mPa.s at 25.00 °C
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other information

Molecular weight	No data available
Percent volatility	< 97.00 %

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity: No data available

10.2 Chemical stability: No data available

10.3 Possibility of hazardous reactions: Stable under recommended storage conditions. Product will not undergo polymerization.

10.4 Conditions to avoid: No data available

10.5 Incompatible materials: Avoid contact with the following: Oxidizing agents Amines Reducing agents Mercaptans.

10.6 Hazardous decomposition products: Nitrogen oxides (NO_x) Sulphur oxides hydrogen chloride

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

11.1 Information on toxicological effects**Acute toxicity****Acute oral toxicity**

LD50, Rat, female, 3,723 mg/kg

LD50, Rat, male, 3,600 mg/kg

Acute dermal toxicity

LD50, Rabbit, female, > 3,600 mg/kg

LD50, Rabbit, male, 3,500 mg/kg

Acute inhalation toxicity

Product test data not available. Refer to component data.

Skin corrosion/irritation

In skin corrosion/irritation test conducted in compliance with GLP standards is considered as causing severe skin irritation.

Serious eye damage/eye irritation

In eye damage/eye irritation tests conducted in compliance with GLP standards the product caused effects which were not reversible within 21 days. Based on these observations the product is considered as causing serious damage to eyes.

Sensitization

Causes sensitisation.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Product test data not available. Refer to component data.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Product test data not available. Refer to component data.

Carcinogenicity

Product test data not available. Refer to component data.

Teratogenicity

Product test data not available. Refer to component data.

Reproductive toxicity

Product test data not available. Refer to component data.

Mutagenicity

Product test data not available. Refer to component data.

Aspiration Hazard

Product test data not available. Refer to component data.

COMPONENTS INFLUENCING TOXICOLOGY:**Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)****Acute inhalation toxicity**

LC50, Rat, 4 Hour, dust/mist, 0.33 mg/l

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

Carcinogenicity

Did not cause cancer in laboratory animals.

Teratogenicity

Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Reproductive toxicity

In animal studies, did not interfere with reproduction.

Mutagenicity

In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.

Aspiration Hazard

Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

General Information

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.1 Toxicity

Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

Acute toxicity to fish

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

LC50, *Oncorhynchus mykiss* (rainbow trout), flow-through test, 96 Hour, 0.19 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

LC50, *Daphnia magna* (Water flea), flow-through test, 48 Hour, 0.16 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

EC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, 0.027 mg/l, OECD Test Guideline 201 or Equivalent

NOEC, *Skeletonema costatum* (marine diatom), static test, 72 Hour, Growth rate, 0.0014 mg/l

Chronic toxicity to fish

NOEC, Rainbow trout (*Oncorhynchus mykiss*), flow-through, 14 d, 0.05 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, *Daphnia magna*, flow-through test, 21 d, 0.1 mg/l

12.2 Persistence and degradability

Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

Biodegradability: Considered to be rapidly degradable. Material is not readily biodegradable according to OECD/EEC guidelines.

Biodegradation: < 50 %

Exposure time: 10 d

Photodegradation

Atmospheric half-life: 0.38 - 1.3 d

12.3 Bioaccumulative potential

Bioaccumulation: 5-Chloro-2-methyl-4-isothiazolin-3-one (CMIT): 2-Methyl-4-isothiazolin-3-one(MIT):

Partition coefficient: n-octanol/water(log Pow): 0.401 Measured **Partition coefficient: n-octanol/water(log Pow):** -0.486 Measured

12.4 Mobility in soil

Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

Potential for mobility in soil is very high (Koc between 0 and 50).

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Partition coefficient (Koc): 28 Estimated.

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Incinerate liquid and contaminated solids in accordance with local, state, and federal regulations.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

SECTION 14. TRANSPORT INFORMATION

Classification for ROAD and Rail transport (ADR/RID):

- | | |
|-----------------------------------|---|
| 14.1 UN number | Not applicable |
| 14.2 Proper shipping name | Not regulated for transport |
| 14.3 Class | Not applicable |
| 14.4 Packing group | Not applicable |
| 14.5 Environmental hazards | Not considered environmentally hazardous based on available data. |
| 14.6 Special precautions for user | No data available. |

Classification for SEA transport (IMO-IMDG):

- | | |
|----------------------------|---|
| 14.1 UN number | Not applicable |
| 14.2 Proper shipping name | Not regulated for transport |
| 14.3 Class | Not applicable |
| 14.4 Packing group | Not applicable |
| 14.5 Environmental hazards | Not considered as marine pollutant based on available data. |

- 14.6 **Special precautions for user** No data available.
- 14.7 **Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code** Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

- 14.1 **UN number** Not applicable
- 14.2 **Proper shipping name** Not regulated for transport
- 14.3 **Class** Not applicable
- 14.4 **Packing group** Not applicable
- 14.5 **Environmental hazards** Not applicable
- 14.6 **Special precautions for user** No data available.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15. REGULATORY INFORMATION

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

REACH Regulation (EC) No 1907/2006

This product contains only components that have been either pre-registered, registered, are exempt from registration, are regarded as registered or are not subject to registration according to Regulation (EC) No. 1907/2006 (REACH). The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Listed in Regulation: Not applicable

European Union

The European classification of the product is based on the results of toxicity and/or ecotoxicity tests and not the calculation method (Directive 99/45/EEC)

15.2 Chemical safety assessment

Not applicable

SECTION 16. OTHER INFORMATION

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

H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008

Skin Irrit. - 2 - H315 - On basis of test data.
Eye Dam. - 1 - H318 - On basis of test data.
Skin Sens. - 1 - H317 - Calculation method
Aquatic Chronic - 3 - H412 - Calculation method

Revision

Identification Number: 101083244 / A279 / Issue Date: 14.06.2016 / Version: 5.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW CHEMICAL COMPANY LIMITED urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.