

FuelClear M68 - Fuel Biocide

Safety Data Sheet according to Reg. (EC) N. 453/2010.

1. Identification Of The Substance/Preparation And Of The Company/Undertaking

Product Information

Trade name	FuelClear M68
Producer/Supplier	Fuelcare Limited Mercury House Shrewsbury Business Park Shrewsbury SY2 6LG UNITED KINGDOM
Emergency telephone	+44 (0)1743 360784
Website address	www.fuelcare.com
E-mail address	info@fuelcare.com
Application	Fuel Preservative

2. Hazards Identification

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Irritant - Xi - R38 - R41

Irritant - R43

Dangerous for the environment - N - R51/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

Labelling according to EC Directives:

Hazard pictograms



Hazard symbols

Xi Irritant

N Dangerous for the environment

Risk Phrases

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

R43 May cause sensitization by skin contact.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S57 Use appropriate container to avoid environmental contamination.

S60 This material and its container must be disposed of as hazardous waste.

For professional users only.

Contains Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Other hazards

No data available

3. Composition/Information On Ingredients

The full text of each R & H phrase is listed in section 16.

CAS-No. / EINECS- No. / Index-No.	REACH Registration Number	Concentration	Component	Classification
CAS-No. 10377-60- 3 EINECS- No. 233-826-7 Index-No. -	Substance subject to later registration	1.0 - < 2.5 %	Magnesium nitrate	
CAS-No. 55965-84- 9 EINECS- No. - Index-No. 613-167- 00-5	Substance subject to later registration	1.0 - < 2.5 %	Mixture of: 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2Hisothiazol- 3-one (3:1)	Acute Tox. - 3 - H301 Acute Tox. - 3 - H331 Acute Tox. - 3 - H311 Skin Corr. - 1B - H314 Skin Sens. - 1 - H317 Aquatic Acute - 1 - H400 Aquatic Chronic -1- H410
CAS-No. 10377-60- 3 EINECS- No. 233-826-7 Index-No. -	Substance subject to later registration	1.0 - < 2.5 %	Magnesium nitrate	Xi - R36/38 O - R 8
CAS-No. 55965-84- 9 EINECS- No.	Substance subject to later registration	1.0 - < 2.5 %	Mixture of: 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2Hisothiazol- 3-one (3:1)	T - R23/24/25 C - R34 R43 N - R50 - R53

No.				
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Index-No.				
613-167-				
00-5				

For the full text of the R-phrases mentioned in this section, see Section 16.

4. 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 reuse. 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.

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

No information available.

5. Fire-Fighting Measures

Suitable extinguishing media

Use extinguishing media appropriate for surrounding fire.

Specific hazards during fire fighting

Combustion generates toxic fumes of the following: hydrogen chloride nitrogen oxides (NOx) sulfur oxides

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit.

Further information

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

6. Accidental Release Measures**Personal precautions, protective equipment and emergency procedures**

Wear a CEN approved (or equivalent) respirator (with organic vapour/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.

Methods for 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.

7. Handling And Storage**Handling**

This material is a severe irritant. For personal protection see section 8. Do not handle material near food, feed or drinking water. Shower or bathe at the end of working.

Conditions for safe storage, including any incompatibilities

Storage conditions: Keep in a well-ventilated place. The product as supplied may evolve gas (largely carbon dioxide) slowly. To prevent the build-up 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.

Further information on storage conditions

CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all MSDS 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 temperature: ≥ 1 °C

Storage temperature: ≤ 55 °C

8. Exposure Controls / Personal Protection

Exposure limit(s)

Exposure limits are listed below, if they exist.

Component	Regulation	Type of Listing	Value
Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one (3:1)	Internal	TWA	0.076 mg/m ³ , CMI
	Internal	STEL	0.23mg/m ³ , CMI
	Internal	TWA	1.5mg/m ³ , MI
	Internal	STEL	4.5 mg/m ³ , MI

Exposure controls

Eye 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.

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.

Skin and body 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 vapour 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.

Protective measures

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Engineering measures

Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75m/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.

9.0 Physical And Chemical Properties

Appearance	Liquid
Colour	colourless to pale yellow clear
Odour	aromatic
Odour	Threshold no data available
pH	4.4
Melting point	no data available
Boiling point/boiling range	229 °C Solvent
Flash point	138 °C PENSKEY MARTENS CLOSED CUP
Evaporation rate	<1.00 Water
Flammability (solid. gas)	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	0.08 hPa solvent-like
Relative vapour density	0.6

Relative density	1.04 at 25.00 °C
Water solubility	completely soluble
Partition coefficient: noctanol/water	log Pow: 0,401 Measured 5-Chloro-2-methyl-4-isothiazolin-3-one (CMIT): log Pow: -0,486 Measured 2 Methyl-4-isothiazolin-3-one(MIT):
Auto ignition temperature	no data available
Decomposition temperature	no data available
Viscosity. dynamic	97.800 mPa.s at 25.00 °C
Explosive properties	no data available
Oxidizing properties	no data available
Other information	
Percent volatility	< 97 %
Solubility in other solvents	no data available

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

10. Stability And Reactivity

Reactivity

no data available

Chemical stability

no data available

Possibility of hazardous reactions

Stable under recommended storage conditions.

Polymerisation: Product will not undergo polymerization.

Conditions to avoid

no data available

Incompatible materials

Avoid contact with the following: Oxidizing agents, Amines, Reducing agents, mercaptans.

Hazardous decomposition products

nitrogen oxides (NO_x), Sulphur oxides, hydrogen chloride

11. Toxicological Information

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

Component: Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

LC50 rat 4 Hour 0,33 mg/l

Mist may cause irritation of upper respiratory tract (nose and throat) and lungs.

Skin corrosion/irritation

Rabbit Severe skin irritation

Serious eye damage/eye irritation

Rabbit Corrosive

Sensitisation

Guinea pig Causes sensitization.

Carcinogenicity

Component: Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). Animal testing did not show any carcinogenic effects.

Mutagenicity

Component: Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects

Reproductive toxicity

Component: Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). In animal studies, did not interfere with reproduction.

Specific Target Organ Systemic Toxicity (Single Exposure)

No data available

Specific Target Organ Systemic Toxicity (Repeated Exposure)

No data available

Aspiration Hazard

No data available

Component: Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Teratogenicity

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

12. Ecological Information**Acute toxicity to fish**

Component: Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) flow-through test LC50 Rainbow trout (*Oncorhynchus mykiss*) 96 Hour
0,19 mg/l

Acute toxicity to aquatic invertebrates

Component: Magnesium nitrate

EC50 *Daphnia magna* 48 Hour Method Not Specified
100 mg/l

Component: Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
flow-through test EC50 *Daphnia magna* (Water flea) 48 Hour OECD Test Guideline
202 or Equivalent
0,16 mg/l#

Acute toxicity to algae

Component: Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

ErC50 Algae (*Selenastrum capricornutum*) 72 Hour
0,027 mg/l

Toxicity to bacteria

No data available

Chronic aquatic toxicity**Chronic toxicity to fish**

No data available

Chronic toxicity to aquatic invertebrates

No data available

Toxicity to soil-dwelling organisms

No data available

Toxicity to terrestrial plants

No data available

Toxicity to other non-mammalian terrestrial species

No data available

Persistence and degradability**Biodegradability**

Component: Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Biodegradation (aquatic metabolism): 5-Chloro-2-methyl-4-isothiazolin-3-one (CMIT): t

$\frac{1}{2}$ anaerobic = 0.2 day. t $\frac{1}{2}$ aerobic = 0.38 – 1.3 day. 2-Methyl-4-isothiazolin-3-one (MIT): t $\frac{1}{2}$ aerobic = 0.38 – 1.4 day

Physico-chemical removability

No data available

Bioaccumulative potential**Bioaccumulation**

Component: Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Mobility in soil

Partition coefficient: n-octanol/water log Pow: 0,401 Measured 5-Chloro-2-methyl-4-isothiazolin-3-one (CMIT):log Pow: -0,486 Measured 2-Methyl-4-isothiazolin-3-one(MIT):

Distribution among environmental compartments

No data available

Fate and behaviour in the environment

No data available

Results of PBT and vPvB assessment

Component: Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2Hisothiazol-3-one (3:1)

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

This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Other adverse effects

Hazardous to the ozone layer

No data available

13. Disposal Considerations**Disposal**

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

European Waste

The definitive assignment of this material to the appropriate EWC Catalogue (94/3 EC) group and thus its proper EWC code will depend on the use that is made of this material. If the material as delivered must be disposed of, or you require assistance with assigning the proper EWC code, please contact your local Fuelcare Ltd office.

14. Transport Information

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

NOT REGULATED

Classification for SEA transport (IMO-IMDG):

NOT REGULATED

Classification for AIR transport (IATA/ICAO):

NOT REGULATED

Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Note: Fuelclear M68 in 250ml containers is considered limited quantity within the EU and does not attract special transport conditions.

15. Regulatory Information

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)

EU. EINECS (EINECS) This product satisfies all the requirements of the European Inventory of Existing Chemical Substances (EINECS).

US. Toxic Substances Control Act (TSCA) This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from U.S. Toxic Substances Control Act (TSCA) Inventory listing requirements.

16. Other Information

Full text of the R-phrases given in Section 2

H-statement(s)

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.
H331	Toxic if inhaled.
H400	Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

R-phrases(s)

R 8 Contact with combustible material may cause fire.
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R34 Causes burns.
R36/38 Irritating to eyes and skin.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R43 May cause sensitization by skin contact.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases(s)

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S60 This material and its container must be disposed of as hazardous waste.

Emergency telephone number +44 (0)1743 360784

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

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