Kusuri Products Limited

www.kusuri.co.uk

SAFETY DATA SHEET

FORMALIN & MALACHITE PREMIX

Compilation date: 28/05/2015
Revision No: 1

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: FORMALIN & MALACHITE PREMIX 250ml, 500ml, 1 ltr.

CAS number: See section 3.2

Product code: FMC1/FMC2/FMC3

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

Recommended use: Aquatic fish medication for Koi Carp

Not recommended: For any other species

1.3. Details of the supplier of the safety data sheet

Company name: Kusuri Products Limited
12 Wentworth Road
Heathfield Industrial Estate
Newton Abbot
Devon
TQ12 6TL
United Kingdom

Tel: +44 (0)1626 836600

Fax: +44 (0)1626 836700

Email: kay@kusuri.co.uk QM

1.4. Emergency telephone number

Emergency Tel: +44 (0)1626 836600

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Acute Tox.4: H301, H302; H311, H331; Skin corr.1B: H314, Skin sens.1: H317; STOT SE Cat. 2:H371; STOT SE Cat.H335; Carc.Cat.2:H351; Eye Dam. 1: H318; Repr. 2 H361d; Aquatic Acute 1: H400 Aquatic Chronic 1: H410;

Most important adverse effects: Harmful if swallowed. Causes serious eye damage. Suspected of damage the unborn child. Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard statements:

H301: Toxic if swallowed.

H302: Harmful 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.

H335: May cause respiratory irritation.

H361d: Suspected of damaging the unborn child.

H410: Very toxic to aquatic life with long lasting effects.

H351: Suspected of causing cancer

H371: May cause damage to organs.

Signal words: DANGER

Hazard pictograms:

GHS05: Corrosion
GHS06: Toxic
GHS07: Exclamation mark
GHS08: Health hazard
GHS09: Environmental

Contains Formaldehyde and Methanol

Precautionary statements:

P201: Obtain special instructions before use.

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P271: Use only outdoors or in a well-ventilated area.

P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313: If exposed or concerned – Get medical attention.

P501: Dispose of contents/container to approved disposal plant.

2.3. Other hazards

PBT: This product is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.1. Substances

Chemical identity: MALACHITE GREEN OXALATE 2% AQUEOUS SOLUTION, FORMALDEHYDE and METHANOL 30% mixture.

3.2.Mixtures

Hazardous component(s): Under CLP EC1272/2009

Ingredient	CAS Number/ EC Number	REACH Registration Number	%	CLP Hazard Category	H-Statements
Formaldehyde	50-00-0/200-001-8	01-2119488953-20-0009	30 - 50	Acute Toxicity Category 3 Skin Corrosive Category 1B Skin Sensitizer Category 1A Carcinogen Category 2	H301,H311, H331 H314 H317 H351
Methanol*	67-56-1/200-659-6	01-2119433307-44-0017	3 -<10	Acute Toxicity Category 3 Flammable Liquid Category 2 STOT SE Category 1	H301,H311, H331 H225 H370
Malachite Green Oxalate 2% Aqueous Solution	2437-29-8	**	2	Acute Toxicity Category 4 Eye damage Category 1 Reproductive Category 2 Acute Category 1 Chronic Category 1	H302 H318 H361d H400 H410

*Subject to EU exposure limit – See section 8. ** A registration number is not available for this substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration of the registration is envisaged for a later registration deadline.

For full wording of H- statements see Section 2.

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skim with running water for 10 minutes or longer if substance is on skin. Consult a doctor.

Eye contact: Bathe the eye with running water for 15 minutes. If irritation persists or develops consult a doctor.

Ingestion: Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Consult a doctor

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so in to fresh air, allow to rest and keep warm. If not breathing give artificial respiration. Consult a doctor.

Personal precautions: Ensure that those giving first aid treatment do not get contaminated by product spills, etc. Wear suitable clothing, gloves and eye protection. See also section 8 for details.

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

Skin contact: There may be irritation and redness at the site of contact.

May cause dermatitis reaction. Can cause skin burns.

Eye contact: Can cause severe eye irritation and redness with permanent damage. The eyes may water profusely.

Ingestion: Can cause burns to the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: Can cause burns to the gastrointestinal tract and severe irritation of the respiratory tract.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Chronic Potential Health Effects: Classified as a Category 2 carcinogen under CLP in the EU, mainly on grounds of inhalation experiments in animals.

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

Immediate / special treatment: Obtain medical attention if inhaled, ingested or in case of skin or eye contact.

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Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Observe warning labels on the container.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. In case of a large spill, inform local police, local authority, water company, National Rivers Authority and/or fire brigade as appropriate.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Contain any spilled material immediately with a dry agent (e.g. sand, earth, vermiculite, etc.), Transfer to a closable, labelled salvage container for disposal by an appropriate method. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS for protective clothing details.
See Section 13 for details of disposal.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Do not ingest or breathe vapours. Use personal protective equipment (See Section 8). Take precautionary measures against static discharges. Vapours may form explosive mixture with air. Keep away from sources of ignition – NO smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area between 2°C and 30°C. Keep container and tightly closed. The floor of the storage room must be impermeable to prevent the escape of liquids. Avoid naked flames and other sources of ignition.

7.3. Specific end use(s)

Specific end use(s): Aquatic fish medication for Koi Carp.

Caution: Do not exceed the recommended dosage on label. Overdosing will cause fish fatalities.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure levels in mg/m³: N/A

Formaldehyde:	8h – TWA	Short-term	Reference
	2.5	2.5 (15 min)	UK (MEL), Ireland

Methanol:	8h – TWA	Short-term	Reference
	266	333 (15 min)	UK (WEL), Ireland, EU (IOELV)

Monitoring procedures: None specified.

DNEL/PNEC Values: Not currently available.

8.2. Exposure controls

Engineering measures: Good ventilation. Arrange for eye wash possibility.

Respiratory protection: Full face respirator EN 141 (EU)

Hand protection: Protective Nitrile or Latex gloves. EN 374 (EU)

Eye protection: Safety glasses. Ensure eye bath is to hand. EN 166 (EU)

Skin protection: Protective clothing. EN 14605 (EU)

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Green

Melting point/range°C: -15 approx.

Boiling point range °C:	96 – 101
Flash point °C:	63 - 75
Evaporation rate:	Not determined
Flammability:	Combustible liquid and vapour
Explosive properties/limits:	Upper limit in air = 73% for formaldehyde gas Lower limit in air = 7% for formaldehyde gas Upper limit in air = 37% for methanol Lower limit in air = 6% for methanol
Vapour pressure (mm Hg at 35°C:	4.2 (Formaldehyde Partial Pressure)
Vapour density:	Not determined
Density at 20°C:	1080 - 1160
Solubility in water (% by weight):	Miscible in all proportions
Solubility in solvents:	Soluble in ethanol, low in fatty type solvents
Partition coefficient (log K_{ow}):	0.35 for formaldehyde gas -0.77 for methanol
Auto-ignition temperature (°C):	300
Decomposition temperature (°C):	400
Viscosity (mPa.s at 20(°C):	1.0
Oxidising properties:	None

9.2. Other information

Other information:	These are typical values and do not constitute a specification.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity:	Stable under normal conditions of use and storage, but may polymerise at temperatures above 60°C.

10.2. Chemical stability

Chemical stability:	Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions:	Decomposition may occur on exposure to conditions or materials listed below. Reacts with strong oxidising agents. Vapour may react with hydrochloric acid to form bis-chloromethyl ether, a potent human carcinogen.

10.4. Conditions to avoid

Conditions to avoid:	Heat and Frost. Store in cool, well ventilated area between 2°C and 30°C. Avoid naked flames and other sources of ignition. (Evolves flammable gas at elevated temperatures).

10.5. Incompatible materials

Materials to avoid:	Strong oxidising agents. The solution may become discoloured on contact with metals and alloys containing zinc, iron, copper and nickel, which may become corroded.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes. Formaldehyde (forms explosive mixture with air) may be evolved on heating, and carbon dioxides may be released on burning or heating to decomposition.

Section 11: Toxicological information

11.1. Information on toxicological effects

Relevant hazards for substance:

Hazard	Route	Basis
Acute toxicity (ac. Tox. 4) Formaldehyde	 LD_{50} (oral, rat) LD_{50} (dermal, rabbit) LD_{50} (inhalation, rat) Toxic if swallowed, in contact with skin or if inhaled. Can cause burns to throat, nose and gastrointestinal tract and severe irritation of the respiratory tract.	Based on test data 100mg/kg 270mg/kg 203 mg/m^3
Hazard	**Route**	**Basis**
Acute toxicity (ac. Tox. 4) Malachite Green Oxalate 2% Aqueous Solution	ING	Based on test data
Hazard	**Route**	**Basis**
Acute toxicity (ac. Tox. 4) Methanol	 LD_{50} (oral, rat) LDLo (oral, human) Readily absorbed by the gastrointestinal tract. LD_{50} (dermal, rabbit) Readily absorbed through the skin. LD_{50} (inhalation, rat) TCLo (inhalation, human) Readily absorbed by inhalation.	Based on test data >1187 – 2769 mg/kg 143 mg/kg Approx. 17100 mg/kg 128.2 mg/l/4 hour 300 ppm
Skin corrosion/irritation	Product can cause skin burns.	Based on test data
Serious eye damage/irritation	Product can cause severe eye irritation with permanent damage.	Based on test data
Respiratory or skin sensitisation	Products may cause allergic contact dermatitis reaction by skin contact (type IV immune reaction, acute and chronic skin sensitisation). Persons sensitised to formaldehyde should not handle this product.	Based on test data

Germ cell mutagenicity	Reason for no classification: conclusive evidence but not sufficient for classification.	Based on test data
Carcinogenicity	Product classified as a Category 2 carcinogen under CLP in the EU, mainly on the grounds of inhalation experiments in animals that led to nasal cancer. However, this is not proven in humans and there appears to be no definitive excess of lung cancer. Based on epidemiological evidence, no chronic adverse effects will be produced when working at below the UK WEL, although irritant effects may be experienced.	Based on test data
Reproductive toxicity	Reason for no classification: Conclusive but not sufficient for classification.	Based on test data
STOT single exposure	May cause respiratory irritation. Methanol causes damage to organs, can cause blindness.	Based on test data
STOT repeated exposure	Reason for no classification: Conclusive but not sufficient for classification.	Based on test data
Aspiration	Reason for no classification: Conclusive but not sufficient for classification.	Based on test data

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact. May cause allergic contact dermatitis and burns.

Eye contact: There may be irritation and redness. The eyes may water profusely. Can cause permanent damage.

Ingestion: There may be burns, soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting. Can cause burns and permanent damage to gastrointestinal tract.

Inhalation: There may be severe irritation and burns to the throat, nose and respiratory tract with a feeling of tightness in the chest.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure and long-term exposure. Product classified as a Category 2 carcinogen under CLP in the EU, mainly on the grounds of inhalation experiments in animals.

Other information: None

Section 12: Ecological information

12.1. Toxicity

Data for active ingredients formaldehyde:

LC_{50}, Pimephales promelas, 96hr (mg/l)	24
LC_{50}, Brachydanio rerio, 96hr (mg/l)	41
EC_{50}, Daphnia magna, 48hr (mg/l)	Approx. 2
EC_{50}, Daphnia magna, 24hr (mg/l)	42
Bacterial toxicity: EC_{50} Photobacterium phosphoreum, 30min (mg/l)	8.5
Activated sludge: EC_{20} Pseudomonas putida, 5hr (mg/l)	>1,995

NB: Formaldehyde exhibits a toxic effect on aquatic organisms, but is not officially classified as such. Not acutely toxic to vertebrate animals, but exerts activity against invertebrates, e.g. bacteria. Sludge decomposition can be impaired, but the inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. DO NOT OVERDOSE.

12.2. Persistence and degradability

Persistence and degradability: Readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: Bioaccumulation potential.

Partition coefficient (log K_{ow}): 0.35, for formaldehyde gas

-0.77, for methanol

12.4. Mobility in soil

. Adsorption to solid soil phase is not expected. Formaldehyde will not evaporate into the atmosphere from water surfaces.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT substance or vPvB substance.

12.6. Other adverse effects

Other adverse effects: Toxic to aquatic organisms. Toxic to soil organisms.

Formaldehyde: Classified as WGK = 2, water polluting, (Kenn Nr. 112) by the German Water Pollution Commission.

Methanol: Classified as WGK = 1, water polluting, (Kenn Nr. 145) by the German Water Pollution Commission

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and contact your local waste disposal authority for advice. Users should acquaint themselves with the local waste disposal regulations. This product comes under European Waste Codes H6, H8 and H11, therefore, waste is considered 'Hazardous waste' if it contains ≥ 1% product; European Waste Catalogue Index No. 07 01 99, if not mixed with other waste.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Disposal of packaging: Contaminated packing should be disposed of as Hazardous Waste, as above, according to local authority guidelines.

Section 14: Transport information

14.1. UN number

UN number: UN2209

14.2. UN proper shipping name

Shipping name: FORMALIN/MALACHITE SOLUTION

14.3. Transport hazard class(es)

Transport class: 8

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: Yes **Marine pollutant:** No

14.6. Special precautions for user

Special precautions: See P statements in section 2

Tunnel code: E

Transport category: 2

Section 15: Regulatory information

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

Manufacturers licence No: SAM0002 under VMD regulations.

COSHH: Control of Substances Hazardous to Health (COSHH) Regulations 2002

HSE: Health and Safety at Work Act 1974

H.S.E. Guidance Note EH40 (Occupational Exposure Limits)

Manual Handling Operations Regulations 1992

EU legislation: 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 Decision 2000/532/EC as amended by Decision 2001/118/EC establishing a list of wastes and hazardous waste pursuant to Council Directive 75/442/EEC on waste and Directive 91/689/EEC on hazardous waste with amendments.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has been carried out.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

Abbreviations and acronyms: *LC_{50}: Lethal concentration, 50 percent*

EC_{50}: Effective concentration, 50 percent

EC_{20}: Effective concentration, 20 percent