

Liq-io 2500

Code: 073N0

Material Safety Data Sheet compliant with Regulation (EC) 2015/830

Version **6.2.0**

Revision: **15/07/19**

Print Date : 27/07/19

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

1.1. Product identifier

Trade name Liq-io 2500

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

Use of the product

Disinfection of teats of milk producing animals by dipping, foaming or spraying before milking

Disinfection of teats of milk producing animals by dipping, foaming or spraying after milking

Ready to use liquid for professional use only

Manual or automatic application - Indoor

1.3. Details of the supplier of the safety data sheet

Company identification

Distributed by Kilco (International) Ltd
Broomhouses 2 Industrial Estate
Old Glasgow Road - Lockerbie
United Kingdom DG11 2SD

For information regarding this safety data sheet, please contact :
regulatory@kersia-group.com

1.4. Emergency telephone number

Emergency phone number

Emergency direct number (24 hours a day, 7 days a week) :

(+1)1-760-476-3961

Access code : 333021

Call NHS 111 or a doctor

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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The mixture meets the classification criteria provided for under Regulation (EC) No 1272/2008.

Eye irritation - Category 2

H319: Causes serious eye irritation.

Hazardous to the aquatic environment – Chronic - Category 3 H412: Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to 1272/2008/EC Regulation:

Hazard pictograms(s) :



Signal word :

Warning

Contains : Iodine+ Alcohols, C12-C14, ethoxylated

Hazard statement(s) :

H319: Causes serious eye irritation.H412: Harmful to aquatic life with long lasting effects.

Precautionary statement(s) :

P102: Keep out of reach of children. P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection. P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313: If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

No additional information available.

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable as this involves a mixture.

3.2. Mixtures

Chemical nature of the mixture : NEUTRAL pH LIQUID

| Substance(s) | CAS number(s) | EINECS number(s) | No registration REACH | Classification according to Regulation 1272/2008/EC | Type |
|---|---------------|------------------|---|---|---------|
| 1% <= Glycerol < 5% | 56-81-5 | 200-289-5 | 01-2119471987-18 | Not classified | (2) |
| 1% <= Alcohols, C12-C14, ethoxylated < 3% | 68439-50-9 | | | Eye Dam. 1 H318 Acute Tox. 4 (oral) H302 Aquatic Chronic 3 H412 | (1) |
| 0.1% <= Iodine < 1% | 7553-56-2 | 231-442-4 | Biocidal active substance, regarded as already registered | Acute Tox. 4 (oral) H302 Acute Tox. 4 (dermal) H312 Acute Tox. 4 (inhalation) H332 Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335 STOT RE 1 H372 Aquatic Acute 1 H400 M Factor (Acute) 1 | (1) (2) |

Type

(1) : Substance classified as hazardous for health and/or the environment

(2) : Substance with an exposure limit at the work station.

Substance of very high concern candidate for the authorisation procedure:

(3) : Substance considered as PBT (persistent, bioaccumulable, toxic)

(4) : Substance considered as vPvB (very persistent, very bioaccumulable)

(5) : Substance considered as carcinogenic category 1A

(6) : Substance considered as carcinogenic category 1B

(7) : Substance considered as mutagenic category 1A

(8) : Substance considered as mutagenic category 1B

(9) : Substance considered as reprotoxic category 1A

(10) : Substance considered as reprotoxic category 1B

(11) : Substance considered as endocrine disrupter

Full text of H- and EUH- phrases : see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General indications:

Take the contaminated clothes and shoes off immediately. Wash them before wearing them again.

In the event of inhalation :

Bring to fresh air.

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In the event of contact with the skin :

Wash with water.

In the event of contact with the eyes :

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

If eye irritation persists: Get medical advice/attention.

In the event of ingestion :

Rinse mouth.

Do NOT induce vomiting.

Get medical advice.

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

Skin contact : non irritating

Eye contact : Causes serious eye irritation.

Ingestion : May cause digestive troubles.

Inhalation : Not considered as hazardous through inhalation under normal conditions of use.

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

Treatments : Symptomatic treatment

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media :

Water, powder extinguisher, foam, carbon dioxide.

Agents compatible with other products involved into fire.

Unsuitable extinguishing media :

None from our knowledge.

5.2. Special hazards arising from the substance or mixture

Liq-io 2500 is non-flammable.

5.3. Advice for firefighters

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Wear independent respiratory equipment and protective suit.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Keep containers cool by spraying with water if exposed to fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel :

Evacuate non-essential staff and those not equipped with individual protection apparatus.

6.1.2. For emergency responders :

Evacuate the personnel to a safe location.
Keep people upwind and away from the location of the flow/leak.
Use personal protection equipment.

6.2. Environmental precautions

Do not discharge the product directly to sewer or to environment.

6.3. Methods and material for containment and cleaning up

Small spillage :

Pump in a reservoir of help.

Large spillage :

Mark out, soak up with an inert absorbant and pump in an emergency tank.
Keep in suitable, properly labelled and closed containers for disposal.
Never return spills in original containers for re-use.

6.4. Reference to other sections

Respect protective measures presented at heading 8.
Refer to section 13 for the elimination.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not eat, drink or smoke in work area. Avoid projections during use.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1. Storage :

Do not store below the point of freezing.
Keep only in the original container.
Keep container closed.

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7.2.2. Packaging or wrapping materials :

High density polyethylene recommended.

7.3. Specific end use(s)

Liq-io 2500 is for use as a biocide.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit values :

| Substance | Country | Type | Value | Unit | Comments | source |
|-----------|---------|----------------|-------|-------------------|----------|--|
| Glycerol | GBR | OEL 8h | 10 | mg/m ³ | | International limit values for chemical agents |
| Iodine | GBR | OEL Short term | 0,1 | ppm | | International limit values for chemical agents |
| | | | 1,1 | mg/m ³ | | International limit values for chemical agents |

8.2. Exposure controls

According to the requirements of Directive 98/24 /EC, the employer is required to conduct a risk assessment and implement appropriate risks management measures.

* For any situation where the absence of risk is not proven, he must consider the substitution or reduction of risk by improving in priority processes used and collective protection measures. The effectiveness of the solutions implemented will be checked by measurement in comparison to the statutory limit values for substances defined in Section 8.1.

* If the risk remains after these corrective actions, he must always check by routinely measuring compliance with regulatory OEL if they exist in section 8.1 and apply all the individual protective measures given in section 8.2.

* When formalized risk assessment indicates a low risk to workers' health, control of compliance with regulatory OEL may not be considered and all individual protection measures is not always mandatory.

8.2.1. Appropriate engineering controls :

Ensure adequate ventilation.

Apply the necessary technical measures to comply with the professional exposure limit values.

8.2.2. Individual protection measures, such as personal protective equipment :

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Eye/face protection :

For manual dipping/foaming application BEFORE MILKING : Wear eye protection compliant with EN166 standard.

For manual spraying applications BEFORE OR AFTER MILKING : Wear eye protection compliant with EN166 standard.



Hand protection :

For manual dipping/foaming application BEFORE MILKING : Wear protective chemical resistant gloves (nitrile rubber).

For manual spraying applications BEFORE OR AFTER MILKING : Wear protective chemical resistant gloves (nitrile rubber).



Skin protection :

For manual spraying applications BEFORE OR AFTER MILKING : Wear protective clothing.



Respiratory protection :

No special protection measure is required.

Thermal hazards :

Not applicable

Health measures :

After using, wash systematically all personal protective equipment.

8.2.3. Environmental exposure controls :

Do not discharge the product directly to sewer or to environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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| | |
|--|-------------------------------------|
| Appearance | Homogeneous, opaque liquid |
| Colour | brown |
| Odour | Iodine |
| Odour threshold | Not available |
| Pure pH | 5±0.5 |
| pH value at 10g/l | Not available |
| Freezing point : | 0 °C |
| Boiling point | Not applicable |
| Flash point | Not applicable |
| Evaporation rate: | Not available |
| Flammability | Not applicable |
| Vapour pressure | Not available |
| Vapour density | Not available |
| Mass density | 1.02±0.01 g/cm ³ |
| Relative density | 1.02±0.01 |
| Solubility in water | Soluble in water in all proportions |
| Partition coefficient: n-octanol/water | Not applicable |
| Auto-ignition temperature | Not applicable |
| Decomposition temperature | Not available |
| Viscosity (20°C, spindle S00, 60 rpm) | 1.2±1 cPo |
| Explosive properties | Not applicable |
| Oxidising properties | Not applicable |

9.2. Other information

No additional information.

SECTION 10: Stability and reactivity**10.1. Reactivity**

None under normal conditions of use.

10.2. Chemical stability

Stable in the recommended storage and handling conditions.

10.3. Possibility of hazardous reactions

None to our knowledge.

10.4. Conditions to avoid

Storage below the freezing point.

10.5. Incompatible materials

None to our knowledge.

10.6. Hazardous decomposition products

None to our knowledge in standard conditions of use.

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These data are given for the concentrated mixture. The use of the mixture under its diluted form must be performed in conformity with data given by the technical data sheet and the technical adviser.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Substance-related data:

Acute toxicity

Iodine : LD 50 - oral rat 315 mg/kg. - MSDS supplier

Iodine : LD 50 - dermal rabbit 1,425 mg/kg. - MSDS supplier

Iodine : LC 50 - inhalation - 4h rat (OECD 403): 4.588 mg/L. - Dust - MSDS supplier

Alcohols, C12-C14, ethoxylated : LD 50 - oral rat 300 - 2,000 mg/kg. - MSDS supplier

Skin corrosion/irritation

Iodine : Skin irritation . Irritating - MSDS supplier

Serious damage to eyes/eye irritation

Iodine : Eye irritation . Irritating - MSDS supplier

Alcohols, C12-C14, ethoxylated (90%) : Eye irritation . Risk of serious damage of eyes - MSDS supplier

Sensitisation

Iodine : Skin sensitisation (OECD 429): . Not sensitising - MSDS supplier

Alcohols, C12-C14, ethoxylated (90%) : Sensitisation . Not sensitising - MSDS supplier

Reproductive toxicity

Iodine : NOAEL 10 mg/kg/d. - MSDS supplier

Specific target organ toxicity - single exposure

Iodine : Inhalation : . Irritating to respiratory system. - MSDS supplier

Specific target organ toxicity - repeated exposure

Iodine : NOAEL - oral - 100days rat 0.375 mg/kg bw day. Causes damage to the thyroid following repeated or prolonged exposure (STOT-RE Cat. 1). - MSDS supplier

Mix-related data: :

Acute toxicity

LD 50 - oral rat (Sprague-Dawley) (OECD 423): > 2,000 mg/kg. The product has not been tested. The information comes from structure or analogue composition products.

Skin corrosion/irritation

Skin irritation (OECD 404): . non irritating; The product has not been tested. The information comes from structure or analogue composition products.

Serious damage to eyes/eye irritation

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Eye irritation (OECD 405): . Causes serious eye irritation according to the criteria of the 1272/2008/EC.; The product has not been tested. The information comes from structure or analogue composition products.

Respiratory / skin sensitisation

Skin sensitisation (OECD 429): . Not sensitising; The product has not been tested. The information comes from structure or analogue composition products.

Respiratory sensitisation . The mixture is not considered as a respiratory sensitiser according to 1272/2008/EC Regulation.

Mutagenicity

. The classification criteria are not met given the available data.

Carcinogenicity

. The classification criteria are not met given the available data.

Reproductive toxicity

. The classification criteria are not met given the available data.

Specific target organ toxicity - single exposure

. The classification criteria are not met given the available data.

Specific target organ toxicity - repeated exposure

. The classification criteria are not met given the available data.

Aspiration hazard

. The classification criteria are not met given the available data.

Most important symptoms and effects, both acute and delayed :

Skin contact : non irritating

Eye contact : Causes serious eye irritation.

Ingestion : May cause digestive troubles.

Inhalation : Not considered as hazardous through inhalation under normal conditions of use.

SECTION 12: Ecological information

12.1. à 12.4. Toxicity - Persistence and degradability - Bioaccumulative potential - Mobility in soil

Substance-related data:

Acute toxicity

Iodine : EC 50 - 48h daphnia (*Daphnia magna*) 0.55 mg/L. - MSDS supplier

Iodine : LC 50 - 96h fishes (*Oncorhynchus mykiss*) 1.67 mg/L. - MSDS supplier

Iodine : EC 50 - 72h algae (*Desmodesmus subspicatus*) 0.13 mg/L. - MSDS supplier

Iodine : NOEC - 14days soil 1,000 mg/kg. - MSDS supplier

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Degradability

Alcohols, C12-C14, ethoxylated (90%) : Biodegradability . Surfactant(s) contained in this preparation comply with biodegradability criteria as defined in (EC) regulation n° 648/2004 on detergents. - MSDS supplier

ABIOTIC DEGRADABILITY

Iodine : . Fast hydrolysis - MSDS supplier

Bioaccumulation

Iodine : Log Pow 2.49 . - MSDS supplier

Mix-related data :

Acute toxicity

fishes . Not determined
daphnia . Not determined
algae . Not determined

CHRONIC TOXICITY

. No data available.

Degradability

. No data available.

Bioaccumulation

. No data available.

Mobility

. No data available.

Conclusion :

The mixture is considered to be dangerous for the environment according to 1272/2008/EC Regulation.

12.5. Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB

12.6. Other adverse effects

No additional information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Treatment of the mixture :

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Do not discharge the product directly to sewer or to environment.

Comply with Directive 2008/98/EC of 19/11/2008 amended, relating to waste and to Decision 2000/532/EC (amended ultimately by Decision 2014/955/EC) that establishes a list of hazardous waste that must be taken to an approved centre.

Packaging treatment :

Rinse thoroughly the packaging with water and treat the effluent like wastes.

Comply with Directive 2008/98/EC of 19/11/2008 amended, relating to waste and to Decision 2000/532/EC (amended ultimately by Decision 2014/955/EC) that establishes a list of hazardous waste that must be taken to an approved centre.

SECTION 14: Transport information

ROAD TRANSPORT:

Rail/Route (RID/ADR)

UN no :

UN proper shipping name :Not concerned

Transport hazard class(es) :

Packing group :

Hazard code :

Label :

Tunnel code :

Environmental hazard : No

Special precautions for user : No information.

Limited Quantity (QL):

MARITIME TRANSPORT :

IMDG

UN no :

UN proper shipping name : Not concerned

Transport hazard class(es) :

Packing group :

Marine pollutant : No

Special precautions for user : No information.

EmS number :

Comply with the provisions of the IMDG on the physical separation of materials.

Limited Quantity (QL):

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

Not concerned

SECTION 15: Regulatory information

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

Regulations relating to the hazards from major accidents :

SEVESO 3 Directive (2012/18/EC) : Not concerned

Regulations relating to the classification, packing and labelling of substances and mixes :

Regulation 1272/2008/EC amended.

Waste regulations :

2008/98/EC Directive amended by 2015/1127/EC Directive - Regulation 1357/2014/EC

Decision 2014/955/EC which establishes the list of hazardous waste.

Protection of workers :

Directive 98/24/EC of 07/04/1998 on the protection of the health and safety of workers from the risks related to chemical agents at work.

Regulation 850/2004/EC on persistent organic pollutants and modifying Directive 79/117/EC : Not applicable

Regulation 1005/2009/EC amended on substances that deplete the ozone layer : Not applicable

Regulation (EC) 648/2004 :

Not concerned

Comply with national and local legislation.

15.2. Chemical safety assessment

No

SECTION 16: Other information

The safety data sheet is additional to the technical data sheet but does not replace it. The information given here in is to the best of our knowledge correct and is given in good faith. We must also draw the user's attention on potential risks of the product is used for other purposes for which the product is known.

In no way does it exempt users from being aware of and complying with regulations applicable to their activity. It is their sole responsibility to take all necessary precautions in accordance to the usage of the product they are aware of.

Regulations are only stated in order to help users fulfill the duties involved in the use of the product.

This description should not be considered as exhaustive. It does not exempt users from ensuring if other demands need to be complied with-according to other laws than the ones hereby stated and applicable to holding and usage of the product-demands for which they will remain sole responsibility.

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Section(s) modified compared with the previous version :

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

List of H phrases referred to in sections 2 and 3 :

H302 : Harmful if swallowed.

H312 : Harmful in contact with skin.

H315 : Causes skin irritation.

H318 : Causes serious eye damage.

H319 : Causes serious eye irritation.

H332 : Harmful if inhaled.

H335 : May cause respiratory irritation.

H372 : Causes damage to organs through prolonged or repeated exposure.

H400 : Very toxic to aquatic life.

H412 : Harmful to aquatic life with long lasting effects.

Sources of key data used to compile the data sheet :

MSDS supplier

International limit values for chemical agents

Historical :

Version 6.2.0

Cancels and replaces previous version 6.1.