NOVODUAL
Code: 07540

Safety Data Sheet compliant with Regulation (EU) 2020/878

Version 7.1.0
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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: NOVODUAL

UFI : AQPE-607C-200C-FRJP

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

Use of the product

ACID LIQUID
UDDER HYGIENE
Disinfection of teats of milk producing animals by spraying, foaming or diping before and/or after milking

1.3. Details of the supplier of the safety data sheet

Company identification

Kilco (International) Ltd
1A Trench Road
Mallusk, Newtownabbey
Belfast BT36 4TY Northerm IRELAND
+44 (0) 1576 205480

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) : +44 1273 289451

CARECHEM 24
Tel. +44 1865 407333

For information or to report a poisoning incident contact The National Poisons Information Centre:
+353 (1) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week).
Healthcare Professionals:
+353 (1) 809 2566 (24 hour service)
NHS: 111

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

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

Serious damage to eyes - Category 1	H318: Causes serious eye damage.
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 :
Danger

Contains : Chlorhexidine gluconate+ L-(+)-lactic acid

Hazard statement(s) :
H318: Causes serious eye damage.
H412: Harmful to aquatic life with long lasting effects.

Precautionary statement(s) :
P273: Avoid release to the environment.
P280: Wear eye protection/face 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.
P310: Immediately call a POISON CENTER or doctor/physician.

2.3. Other hazards

The mixture does not contain substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. in concentration greater than 0.1%.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable as this involves a mixture.

3.2. Mixtures

Chemical nature of the mixture : ACID LIQUID

Substance(s)	CAS number(s)	EINECS number(s)	index	No registration REACH	Classification according to Regulation (EC) 1272/2008	SCL M-factor ATE	Type
1% <= L-(+)-lactic acid < 5%	79-33-4	201-196-2	607-743-00-5	Biocidal active substance, regarded as already registered	Eye Dam. 1 H318 Skin Corr. 1C H314 EUH 071		(1)
0.1% <= Chlorhexidine gluconate < 0.5%	18472-51-0	242-354-0		Biocidal active substance, regarded as already registered	Eye Dam. 1 H318 Aquatic Acute 1 H400 Aquatic Chronic 1 H410	M Factor (Acute) 10 M Factor (Chronic) 1	(1)

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
(12) : Other substance considered hazardous to health or the environment
(N) : Nanomaterial

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 case of faintness , get medical advice/attention. Show this safety data sheet to the doctor.

In the event of inhalation :
Bring to fresh air.

In the event of contact with the skin :

Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/attention.

In the event of contact with the eyes :
Rinse at once with a soft stream of water for at least 15 minutes, eyes wide open.
Remove contact lenses if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.

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 : Prolonged or repeated contact with the skin can cause irritation.

Eye contact : Can cause irreversible ocular lesions.

Ingestion : Can induce mouth and digestive tract irritation .

Inhalation : Inhaling vapours or aerosols can irritate respiratory tracts, including irritation of the nose and throat, a cough and difficulty breathing.

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 :
Sprayed water or water mist.
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

Possible formation of toxic gas in case of fire.
- carbon monoxide (CO)
- carbon dioxide (CO2)

5.3. Advice for firefighters

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

Intervention limited to trained staff.

6.3. Methods and material for containment and cleaning up

Small spillage :
Wash with plenty of water.
Absorb on inert material.

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

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.
Wash the hands and any other zone exposed with a soft soap and water, before eating, drinking, smoking, and before leaving work.
Ensure a sufficient ventilation in case of risk of formation of vapours or aerosols.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1. Storage :

Keep only in the original container.
Keep container closed.

Conceive the installations and take all measure to avoid the pollutions of waters and soil contamination.
Keep at moderate temperature in a clean and dry place,

7.2.2. Packaging or wrapping materials :

High density polyethylene recommended.

7.3. Specific end use(s)

NOVODUAL is for use as a biocide.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values :

Substance	CAS number	Country	Type	Value	Unit	Comments	source
polyoxyethylene	25322-68-3	AUT	OEL Short term	4000 inhalable aeros	mg/m³		International limit values for chemical agents
			OEL 8h	1000 inhalable aeros	mg/m³		International limit values for chemical agents
		CHE	OEL 8h	500	mg/m³		International limit values for chemical agents
		DEU	OEL Short term	500 (2) (3) (4)	mg/m³	Average molecular weight 200 – 600 (2) Inhalable fraction (3) Because formation of a mist is possible, exposure should be minimized for reasons of occupational safety and hygiene. (4) 15 minutes average value	International limit values for chemical agents (German Research Foundation)
			OEL 8h	250 (2) (3)	mg/m³	Average molecular weight 200 – 600 (2) Inhalable fraction (3) Because formation of a mist is possible, exposure should be minimized for reasons of occupational safety and hygiene. (4) 15 minutes average value	International limit values for chemical agents (German Research Foundation)
		DNK	OEL Short term	2000	mg/m³		International limit values for chemical agents
			OEL 8h	1000	mg/m³		International limit values for chemical agents
Glycerol	56-81-5	BEL	OEL 8h	10	mg/m³		International limit values for chemical agents
		CHE	OEL Short term	100 inhalable aeroso	mg/m³		International limit values for chemical agents
			OEL 8h	50 inhalable aerosol	mg/m³		International limit values for chemical agents
		DEU	MAK	50	mg/m³		
			OEL Short term	100 inhalable aeroso	mg/m³	STV 15 minuten Durchschnittswert	International limit values for chemical agents (German Research Foundation)
			OEL 8h	50 inhalable aerosol	mg/m³		International limit values for chemical agents (German Research Foundation)
		ESP	OEL 8h	10	mg/m³		International limit values for chemical agents
		FRA	EMV (Exposure medium value) : 8h	10	mg/m³		INRS
		GBR	OEL 8h	10	mg/m³		International limit values for chemical agents
		POL	NDS 8h	10	mg/m³		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 :

Eye/face protection :
Wear safety goggles compliant with standard EN ISO 16321-1.

Hand protection :
Wear chemical resistant protective gloves (for example in vinyl alcohol, nitrile rubber, polychloropropene)

Skin protection :
To choose the means of body protection according to the activity and the type of exposure, for example: apron, boots, combination of protection against the chemicals conform to the standards EN 465, EN 466, EN 468.

Respiratory protection :
No special protection measure is required.
If the ventilation is insufficient, wear an approved mask fitted with a particle filter and adhere to the manufacturer's instructions.

Thermal hazards :
Not applicable

Health measures :
The user must determine the Individual protection equipments adequate according to his analysis of the risks and in collaboration with the suppliers of E.P.I. Taking into account the diversity of the types, it

is necessary to respect the instructions of the manufacturers.Procedures of work must be established to minimize the contact of the operator with the product: shower, ocular fountain near the places of work and systematic washing of the individual protection equipments after each use.
To handle in well ventilated zones.
Prohibit contact with skin and eyes and inhalation of vapours.
After using, wash systematically all personal protective equipment.
After contact with skin, wash immediately and abundantly with water and soap, use neither abrasive product, nor solvent, nor fuel.
Handle in accordance with good industrial hygiene practices and the safety instructions.

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

Appearance	Liquid
Colour	Blue - green
Odour	Mentholated
Odour threshold	Not available
Freezing point	-2 °C
Melting point	Not applicable
Boiling point	Not available
Flammability	Not applicable
Lower explosive limit	Not applicable
upper explosive limit	Not applicable
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Pure pH	3.25±0.5
kinematic viscosity	Not available
Solubility in water	soluble in all proportions
Solubility	Not applicable
Partition coefficient: n-octanol/water	Not available
Vapour pressure	Not available
Mass density	1.03 g/cm³
Relative density	1.03±0.5
Vapour density	Not available
Particle characteristics	Not applicable

9.2. Other information

Explosive properties	Not applicable
Oxidising properties	Not applicable

Viscosity	Not available
Evaporation rate:	Not available

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.
Excessive heat (>50°C)

10.5. Incompatible materials
Alkalines.

10.6. Hazardous decomposition products
The thermal decomposition products can include carbon monoxide and carbon dioxide.

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 hazard classes as defined in Regulation (EC) N°1272/2008

Substance-related data:

Acute toxicity
Chlorhexidine gluconate (18,87%) : LD 50 - oral rat > 2,000 mg/kg. - MSDS supplier
L-(+)-lactic acid : LC 50 - inhalation - 4h rat 7.94 mg/L. - MSDS supplier
L-(+)-lactic acid : LD 50 - dermal rabbit > 2,000 mg/kg. - MSDS supplier
L-(+)-lactic acid : LD 50 - oral guinea-pig 1,810 mg/kg. - MSDS supplier

Serious damage to eyes/eye irritation
Chlorhexidine gluconate (18,87 %) : Eye contact : . Risk of serious damage of eyes - MSDS supplier

Mix-related data: :

Acute toxicity
. Not determined

Skin corrosion/irritation
Skin corrosion/irritation . The mix is not considered to be corrosive or irritating for the skin under the criteria of Regulation

1272/2008/EC.

Serious damage to eyes/eye irritation
Ocular corrosivity . Causes serious eye damage according to the criteria of Regulation 1272/2008/EC.

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

Mutagenicity
. The mixture does not contain substances considered mutagenic.

Carcinogenicity
. The mixture does not contain any substances considered to be carcinogenic.

Reproductive toxicity
. The mix contains no substances considered toxic to reproduction.

Specific target organ toxicity - single exposure
. based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure
. based on available data, the classification criteria are not met.

Aspiration hazard
. based on available data, the classification criteria are not met.

Most important symptoms and effects, both acute and delayed :

Skin contact : Prolonged or repeated contact with the skin can cause irritation.

Eye contact : Can cause irreversible ocular lesions.

Ingestion : Can induce mouth and digestive tract irritation .

Inhalation : Inhaling vapours or aerosols can irritate respiratory tracts, including irritation of the nose and throat, a cough and difficulty breathing.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties
Not concerned

SECTION 12: ECOLOGICAL INFORMATION

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

Substance-related data:

Acute toxicity
L-(+)-lactic acid : LC 50 - 96h fishes (Lepomis macrochirus) 130 mg/L. - MSDS supplier
L-(+)-lactic acid : EC 50 - 48h daphnia 240 mg/L. - MSDS supplier
L-(+)-lactic acid : LC 50 - 48h fishes 320 mg/L. - MSDS supplier
L-(+)-lactic acid : EC 50 algae 3,500 mg/L. - MSDS supplier

Chlorhexidine gluconate : LC 50 fishes 2.08 mg/L. - MSDS supplier
Chlorhexidine gluconate : EC 50 daphnia (Daphnia magna) 0.087 mg/L. - MSDS supplier
Chlorhexidine gluconate : EC 50 algae 0.081 mg/L. - MSDS supplier
L-(+)-lactic acid : EC 50 - 48h daphnia (Daphnia magna) 130 mg/L. - MSDS supplier
L-(+)-lactic acid (80%) : EC 50 - 72h algae (Pseudokirschnereilla subcaptiata) 2,800 mg/L. - MSDS supplier

Chronic toxicity
Chlorhexidine gluconate : NOEC daphnia 0.02 mg/L. - MSDS supplier

Degradability
L-(+)-lactic acid : Biodegradability . Easily biodegradable. - MSDS supplier
Chlorhexidine gluconate (18,87%) : . Difficult to biodegrade - MSDS supplier

Bioaccumulation
L-(+)-lactic acid : Log Pow - 0.72 . Not bioaccumulative - MSDS supplier
Chlorhexidine gluconate : Log Koc > 3.9 . - MSDS supplier

Mix-related data: :

Acute toxicity
fishes . Not determined
daphnia . Not determined
algae . Not determined

Chronic toxicity
. No data available.

Degradability
. Not determined for the mixture.

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.
Harmful to aquatic organisms.

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 Endocrine disrupting properties

Not concerned

12.7. Other adverse effects

No additional information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Treatment of the mixture :
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)

14.1 UN number or ID number :

14.2 UN proper shipping name :
Not concerned

14.3 Transport hazard class(es) :

14.4 Packing group :
Hazard identification number :
Label :

Tunnel code : (-)

14.5 Environmental hazards : No

14.6 Special precautions for user : No information.

Limited Quantity (QL):

MARITIME TRANSPORT : IMDG

14.1 UN number or ID number :

14.2 UN proper shipping name : Not concerned

14.3 Transport hazard class(es) :

14.4 Packing group :

14.5 Environmental hazards
Marine pollutant : No

14.6 Special precautions for user : No information.
EmS number :
Comply with the provisions of the IMDG on the physical separation of materials.
Limited Quantity (QL):

14.7 Maritime transport in bulk according to IMO instruments : Not concerned

SECTION 15: REGULATORY INFORMATION

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

Regulation (EU) n°528/2012 concerning the making available on the market and use of biocidal products :
Active ingredient: D-gluconic acid compound with N,N"bis (4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediamidine (2:1), L-(+)-lactic acid

Regulations relating to the hazards from major accidents :
SEVESO 3 Directive (2012/18/EC) : Not concerned

Regulations relating to the classification, packaging and labelling of substances and mixtures :
Regulation (EC) 1272/2008 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.

Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals : Not concerned

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 (EU) 2019/1021 of 20 June 2019 on persistent organic pollutants : Not applicable

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

Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors:
Not concerned

Regulation (EC) 648/2004 :
Not concerned

Comply with national and local legislation.

UN Globally Harmonised System (GHS) on Classification and Labelling of Chemical (GB CLP - SI 2020 No. 1567) and UK REACH (SI 2020 No. 1577)

15.2. Chemical safety assessment

This safety data sheet has been drafted taking into account the information from exposure scenarios for the substances making up the mixture.

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.

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 section 3 :
EUH 071 : Corrosive to the respiratory tract.
H314 : Causes severe skin burns and eye damage.
H318 : Causes serious eye damage.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.

Sources of key data used to compile the data sheet :
INRS
MSDS supplier
International limit values for chemical agents

Historical :

Version 7.1.0
Cancels and replaces previous version 7.0.