

SECTION 1: Identification of the substance/mixture and of the company/undertaking
1.1. Product identifier

Product form : Mixture
 Product name : TRIO 100
 Product code : 201
 Type of product : Biocidal products (e.g. Disinfectants, pest control)
 Product group : Mixture

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

Main use category : Professional use
 Industrial/Professional use spec : Industrial
 For professional use only
 Use of the substance/mixture : Disinfectant
 Sanitizing Agents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet
Manufacturer

Clover Chemicals Ltd
 Clover House Macclesfield Road
 SK23 7DQ Whaley Bridge – Derbyshire
 United Kingdom
 T 01663 733114 - F 01663 733115
info@cloverchemicals.com - www.cloverchemicals.com

Supplier

Christeyns NV
 Afrikalaan 182
 9000 GENT
 Belgium
 T +32 (0)9/ 223 38 71 - F +32 (0)9/ 233 03 44
info@christeyns.be - www.christeyns.com

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification
2.1. Classification of the substance or mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Corr. 1B H314
 Aquatic Acute 1 H400
 Aquatic Chronic 2 H411

Full text of hazard classes, H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS09

CLP Signal word : Danger
 Contains : Fatty alcohol ethoxylate, Isotridecanol, ethoxylated
 Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage.
 H410 - Very toxic to aquatic life with long lasting effects.
 Precautionary statements (CLP) : P102 - Keep out of reach of children.
 P264 - Wash hands thoroughly after handling.

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P280 - Wear protective gloves, eye protection.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
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.
P273 - Avoid release to the environment.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Isotridecanol, ethoxylated (69011-36-5)	PBT: not relevant – no registration required vPvB: not relevant – no registration required
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides (68424-85-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not 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

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Isotridecanol, ethoxylated	CAS-no: 69011-36-5 Einecs nr: 931-138-8 REACH-no: Exempted	1 – 3	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides	CAS-no: 68424-85-1 Einecs nr: 270-325-2	2.964	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410
Didecyldimethylammonium Chloride	CAS-no: 7173-51-5 Einecs nr: 230-525-2 EG annex nr: 612-131-00-6	2.964	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 2, H411
Fatty alcohol ethoxylate	CAS-no: 160875-66-1 Einecs nr: 605-233-7	1 – 3	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
Ethoxylated Alcohol	CAS-no: 160901-19-9 Einecs nr: 500-457-0 REACH-no: Exempted	0.1 – 1	Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 3, H412

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice

: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation

: Remove person to fresh air and keep comfortable for breathing.

Skin contact

: Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.

Eye contact

: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Ingestion

: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects

: Causes severe skin burns and eye damage.

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Acute effects skin : Causes severe burns.
Acute effects eyes : Causes serious eye damage. stinging, redness, itching, tears.
Acute effects oral route : Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon dioxide. Carbon monoxide.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe Mist.

Hygiene measures : Wash hands, forearms and face thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep container tightly closed.

Packaging materials : polyethylene.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

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8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or face shield

8.2.2.2. Skin protection

Protective equipment:

Wear suitable protective clothing

Hand protection:

Wear protective gloves.

8.2.2.3. Respiratory protection

No additional information available

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Yellow.
Physical state/form	: Liquid.
Odour	: odourless.
Odour threshold	: Not available
Melting point/range	: 0 °C
Freezing point	: Not available
Boiling point/Boiling range	: 100 °C
Flammability	: Non flammable.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Autoignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 11 – 11.5
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: 1.012

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Relative vapour density at 20 °C : Not available
Particle characteristics : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC content : 0 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Fatty alcohol ethoxylate (160875-66-1)

LD50 oral rat > 300 (300 – 2000) mg/kg

LD50 dermal rat > 2000 mg/kg

Isotridecanol, ethoxylated (69011-36-5)

LD50 oral rat > 300 (≤ 2000) mg/kg

LD50 dermal rabbit > 2000 mg/kg

Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides (68424-85-1)

LD50 oral rat 795 mg/kg

Skin corrosion/irritation : Causes severe skin burns.
pH: 11 – 11.5

Serious eye damage/irritation : Assumed to cause serious eye damage
pH: 11 – 11.5

Respiratory or skin sensitisation : Not classified

Additional information : Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-single exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

Isotridecanol, ethoxylated (69011-36-5)

NOAEL (oral, rat) > 250 mg/kg bodyweight

STOT-repeated exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

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Aspiration hazard : Not classified
Additional information : Based on available data, the classification criteria are not met

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.

Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

Not rapidly degradable

Ethoxylated Alcohol (160901-19-9)	
LC50 - Fish [1]	0.1 – 1 mg/l (Danio rerio - OESO 203 - ECHA)
EC50 - Crustacea [1]	0.1 – 1 mg/l (Daphnia magna - ECHA)
ErC50 algae	0.1 – 1 mg/l
NOEC chronic fish	> 0.1 mg/l
NOEC chronic algae	0.14 mg/l (CESIO)

Fatty alcohol ethoxylate (160875-66-1)	
EC50 - Crustacea [1]	> 10 mg/l
ErC50 algae	> 10 mg/l
NOEC chronic fish	> 1 mg/l

Isotridecanol, ethoxylated (69011-36-5)	
LC50 - Fish [1]	> 1 mg/l
EC50 - Crustacea [1]	> 1 mg/l
ErC50 algae	1 – 10 mg/l

Didecyldimethylammonium Chloride (7173-51-5)	
EC50 - Crustacea [1]	0.03 mg/l
EC50 96h - Algae [1]	0.06 mg/l

Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides (68424-85-1)	
LC50 - Fish [1]	0.85 mg/l
EC50 - Crustacea [1]	0.016 mg/l
EC50 72h - Algae [1]	0.02 mg/l
NOEC chronic crustacea	0.025 mg/l

12.2. Persistence and degradability

TRIO 100	
Persistence and degradability	Biodegradable. The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.
Ethoxylated Alcohol (160901-19-9)	
Persistence and degradability	Readily biodegradable.

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Fatty alcohol ethoxylate (160875-66-1)	
Persistence and degradability	Biodegradable.
Isotridecanol, ethoxylated (69011-36-5)	
Persistence and degradability	Readily biodegradable, according to appropriate OECD test. Not established.
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides (68424-85-1)	
Persistence and degradability	Biodegradable.
Biodegradation	> 90 %

12.3. Bioaccumulative potential

TRIO 100	
Bioaccumulative potential	No bioaccumulation.
Ethoxylated Alcohol (160901-19-9)	
Partition coefficient n-octanol/water (Log Kow)	< 4 Not applicable
Bioaccumulative potential	No bioaccumulation.
Fatty alcohol ethoxylate (160875-66-1)	
Bioaccumulative potential	No bioaccumulation.
Isotridecanol, ethoxylated (69011-36-5)	
Bioaccumulative potential	No bioaccumulation. Not established.
Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides (68424-85-1)	
Partition coefficient n-octanol/water (Log Kow)	2.88
Bioaccumulative potential	No bioaccumulation.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

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This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Waste / unused products : Avoid release to the environment.

SECTION 14: Transport information




In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
14.1. UN number or ID number		
UN 3082	UN 3082	UN 3082
14.2. UN proper shipping name		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	Environmentally hazardous substance, liquid, n.o.s.

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ADR	IMDG	IATA
Transport document description		
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides ; Didecyldimethylammonium Chloride), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides ; Didecyldimethylammonium Chloride), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Quaternary ammonium compounds, benzyl (C12 - C16) alkyl dimethyl, chlorides ; Didecyldimethylammonium Chloride), 9, III
14.3. Transport hazard class(es)		
9	9	9
		
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available		

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: M6
Special provisions (ADR)	: 274, 335, 375, 601
Limited quantities (ADR)	: 5I
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Special packing provisions (ADR)	: PP1
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBV
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13
Hazard identification number (Kemler No.)	: 90
Orange plates	: 

Tunnel code	: -
EAC code	: •3Z

Transport by sea

Special provisions (IMDG)	: 274, 335, 969
Limited quantities (IMDG)	: 5 L
Packing instructions (IMDG)	: LP01, P001
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03

Air transport

PCA Limited quantities (IATA)	: Y964
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PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Substances subject to 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: Didecyldimethylammonium chloride (7173-51-5)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

VOC content : 0 g/l

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources

: 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information

: None.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H302	Harmful if swallowed.
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.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B

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Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Skin Corr. 1B	H314	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 2	H411	Calculation method

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.