

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Date first issue: 19/12/2012 Review date: 22/02/2023 Supersedes version of: 23/06/2020 Version: 4.2

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

1.1. Product identifier

Product form : Mixture

Product name : CLOVER ECO 490

Product code : 490

Type of product : Detergent

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 : Industrial use, Professional use

Industrial/Professional use spec : Industrial

For professional use only

Use of the substance/mixture : Cleaning/washing agents and additives

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

ManufacturerSupplierClover Chemicals LtdChristeyns NVClover House Macclesfield RoadAfrikalaan 182SK23 7DQ Whaley Bridge – Derbyshire9000 GENTUnited KingdomBelgium

1.4. Emergency telephone number

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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	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 corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 1 H318

Full text of 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

CLP Signal word : Danger

Contains : Alcohols, C12-14, ethoxylated, sulfates, sodium salts

Hazard statements (CLP) : H315 - Causes skin irritation.

H318 - Causes serious eye damage.

Precautionary statements (CLP) : P102 - Keep out of reach of children.

P264 - Wash hands thoroughly after handling. P280 - Wear eye protection, protective gloves. P302+P352 - IF ON SKIN: Wash with plenty of water.

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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.

: EUH208 - Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-

2H-isothiazol-3-one (3:1). May produce an allergic reaction.

2.3. Other hazards

EUH-statements

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 ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
Alcohols, C12-14, ethoxylated, sulfates, sodium salts (68891-38-3)	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 at a concentration equal to or greater than 0,1 %

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]
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	CAS-no: 68891-38-3 Einecs nr: 500-234-8 REACH-no: 01-2119488639- 16	10 – 30	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 acyl derivs., hydroxides, inner salts	CAS-no: 97862-59-4 Einecs nr: 931-296-8 REACH-no: 01-2119488533- 30	1-3	Eye Dam. 1, H318 Aquatic Chronic 3, H412
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) substance with national workplace exposure limit(s) (AT, CH)	CAS-no: 55965-84-9 EG annex nr: 613-167-00-5 REACH-no: 01-2120764691- 48	< 1	Acute Tox. 2 (Inhalation), H330 Acute Tox. 2 (Dermal), H310 Acute Tox. 3 (Oral), H301 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100) EUH071

Specific concentration limits:		
Name	Product identifier	Specific concentration limits
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	CAS-no: 68891-38-3 Einecs nr: 500-234-8 REACH-no: 01-2119488639- 16	(5 ≤C < 10) Eye Irrit. 2, H319 (10 ≤C < 100) Eye Dam. 1, H318
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	CAS-no: 55965-84-9 EG annex nr: 613-167-00-5 REACH-no: 01-2120764691- 48	(0.0015 ≤C ≤ 100) Skin Sens. 1A, H317 (0.06 ≤C < 0.6) Eye Irrit. 2, H319 (0.06 ≤C < 0.6) Skin Irrit. 2, H315 (0.6 ≤C ≤ 100) Eye Dam. 1, H318 (0.6 ≤C ≤ 100) Skin Corr. 1C, H314

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).

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Inhalation : Allow affected person to breathe fresh air. Allow the victim to rest.

Skin contact : Wash off with plenty of water. Wash contaminated clothing before reuse.

Eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.

Ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Acute effects skin : Irritation.

Acute effects eyes : May cause eye irritation. Redness.

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. Use extinguishing media appropriate for surrounding fire.

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.

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.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use.

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

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8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. Safety glasses. Avoid all unnecessary exposure.

Personal protective equipment symbol(s):





8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses

8.2.2.2. Skin protection

Hand protection:

rubber or plastic gloves. Wear protective gloves.

8.2.2.3. Respiratory protection

Respiratory protection:

Not required

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 : Colourless.
Physical state/form : Liquid.

Odour : almost 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

: Ho

Viscosity, kinematic : Not available

Viscosity, dynamic : ≈ 300 cP at 20 °C

Solubility : Not available

Partition coefficient n-octanol/water (Log Kow) : Not available

Vapour pressure : Not available

Vapour pressure at 50°C : Not available

Density : Not available

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Relative density : 1.038
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

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

ATE CLP (oral)

Stable under normal conditions.

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

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

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

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)		
LD50 oral rat	64 mg/kg	
LD50 dermal rat	87.12 mg/kg	
LD50 dermal rabbit	78 mg/kg	
LC50 Inhalation - Rat	0.33 mg/l/4h	
LC50 Inhalation - Rat (Dust/Mist)	0.33 mg/l/4h	
ATE CLP (oral)	64 mg/kg bodyweight	
ATE CLP (dermal)	78 mg/kg bodyweight	
ATE CLP (gases)	100 ppmv/4h	
ATE CLP (vapours)	0.33 mg/l/4h	
ATE CLP (dust,mist)	0.33 mg/l/4h	

Alcohols, C12-14, ethoxylated, sulfates, sodium salts (68891-38-3)	
LD50 oral rat	> 4100 mg/kg OCDE 401
LD50 dermal rat	> 2000 mg/kg OCDE 402
ATE CLP (oral)	4100 mg/kg
ATE CLP (dermal)	2000 mg/kg

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 acyl derivs., hydroxides, inner salts (97862-59-4)		
LD50 oral rat	2335 mg/kg	
LD50 dermal rat	> 2000 mg/kg	

2000 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.

рH: 7

Serious eye damage/irritation : Causes serious eye damage.

pH: 7

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Respiratory or skin sensitisation : Not classified

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

Germ cell mutagenicity

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

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

STOT-repeated exposure : Not classified

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

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

Hazardous to the aquatic environment, short-term

(acute)

(chronic)

: Not classified

Hazardous to the aquatic environment, long-term : Not classified

Not rapidly degradable

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)		
LC50 - Fish [1]	0.22 mg/l (Onchorhyncus mykiss) (OECD 203)	
EC50 - Crustacea [1]	0.16 mg/l	
EC50 - Other aquatic organisms [1]	0.126 mg/l waterflea	
EC50 - Other aquatic organisms [2]	0.052 mg/l (Skeletonema costatum) (DIN EN ISO 10253)	
EC50 72h - Algae [1]	0.027 mg/l	
ErC50 algae	0.003 mg/l Skeletonema costatum	
ErC50 other aquatic plants	0.018 mg/l selenastrum capricornutum	
NOEC chronic fish	0.05 mg/l	
NOEC chronic crustacea	0.1 mg/l	
NOEC chronic algae	0.0012 mg/l (Pseudokirchneriella subcapitata) (OECD 201)	

Alcohols, C12-14, ethoxylated, sulfates, sodium salts (68891-38-3)		
LC50 - Fish [1]	7.1 mg/I OCDE 203	
EC50 - Crustacea [1]	7.2 mg/l	
EC50 72h - Algae [1]	27.7 mg/l	
EC50 96h - Algae [1]	7.5 mg/l	
NOEC chronic crustacea	0.27 mg/l	
NOEC chronic algae	0.95 mg/l	

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 acyl derivs., hydroxides, inner salts (97862-59-4)		
LC50 - Fish [1]	1.11 mg/l Test organisms (species): Pimephales promelas	
EC50 - Crustacea [1]	6.5 mg/l Test organisms (species): Daphnia magna	
EC50 - Other aquatic organisms [1]	6.5 mg/l waterflea	

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1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 acyl derivs., hydroxides, inner salts (97862-59-4)	
EC50 - Other aquatic organisms [2]	1.5 mg/l
ErC50 algae	2.4 mg/l
NOEC chronic fish	0.135 mg/l Oncorhynchus mykiss, 100 days

12.2. Persistence and degradability		
CLOVER ECO 490		
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. Not established.	
reaction mass of 5-chloro-2-methyl	-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)	
Persistence and degradability t1/2 anaerobic = 0.2d. t 1/2 aerobic = 0.38 - 1.3d. 2-methyl-2H-isothiazole-3-one: t1/aerobic = 0.38 - 1.4d.		
Alcohols, C12-14, ethoxylated, sulf	ates, sodium salts (68891-38-3)	
Persistence and degradability Readily biodegradable, according to appropriate OECD test.		
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 acyl derivs., hydroxides, inner salts (97862-59-4)		
Biodegradation 91.6 % OECD 301B, 28 days		

12.3. Bioaccumulative potential		
CLOVER ECO 490		
Bioaccumulative potential	No bioaccumulation.	
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9)		
Log Pow	0.4	
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 acyl derivs., hydroxides, inner salts (97862-59-4)		
Partition coefficient n-octanol/water (Log Kow)	4.232	

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

CLOVER ECO 490

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

Component

Alcohols, C12-14, ethoxylated, sulfates, sodium salts This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII (68891-38-3) 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

: Avoid release to the environment.

Waste / unused products

HP Code

: HP4 - "Irritant - skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.

: Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
14.1. UN number or ID number		
Not regulated	Not regulated	Not regulated

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ADR	IMDG	IATA
14.2. UN proper shipping name		
Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)		
Not regulated	Not regulated	Not regulated
14.4. Packing group		
Not regulated	Not regulated	Not regulated
14.5. Environmental hazards		
Not regulated	Not regulated	Not regulated
No supplementary information available		

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

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

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Detergent Regulation (648/2004)

Labelling of contents	
Component	%
anionic surfactants	15-30%
amphoteric surfactants	<5%
METHYLCHLOROISOTHIAZOLINONE (AND) METHYLISOTHIAZOLINONE	

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

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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. 2 (Dermal)	Acute toxicity (dermal), Category 2		
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2		
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3		
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 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3		
EUH071	Corrosive to the respiratory tract.		
EUH208	Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.		
Eye Dam. 1	Serious eye damage/eye irritation, Category 1		
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2		
H301	Toxic if swallowed.		
H310	Fatal in contact with skin.		
H314	Causes severe skin burns and eye damage.		
H315	Causes skin irritation.		
H317	May cause an allergic skin reaction.		
H318	Causes serious eye damage.		
H319	Causes serious eye irritation.		
H330	Fatal if inhaled.		
H400	Very toxic to aquatic life.		
H410	Very toxic to aquatic life with long lasting effects.		
H412	Harmful to aquatic life with long lasting effects.		
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C		
Skin Irrit. 2	Skin corrosion/irritation, Category 2		
Skin Sens. 1A	Skin sensitisation, category 1A		

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Skin Irrit. 2	H315	Calculation method
Eye Dam. 1	H318	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.