

RESTORE PLUS EUROPE

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

1.1. Product identifier

Product form : Mixture

Trade name : RESTORE PLUS EUROPE

Product code : CC2637 (208L Drum); CC2638EDJ (5L Jar)

Synonyms : C12-14 Pareth-3 / Surfonic L24-7 / C12-14 PARETH-3 / Alcohols, C12-14 (even numbered),

ethoxylated / C12-14 PARETH-12 / Sintanol ALM-7 / Syntanol ALM-7 / Imbentin AG 124S / C12-14 Pareth-9 / C12-14 Pareth-7 / C12-14 Pareth-5 / C12-14 Pareth-12 / Ethoxylated alcohols (C12-14) / C12-14 PARETH-11 / C12-14 PARETH-5 / C12-14 PARETH-7 / C12-14

PARETH-9 / Ethoxylated alcohols(C12-14) / C12-14 Pareth

Product group : Trade product

Document no. : LT16551 EU

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
Use of the substance/mixture : Cleaner

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Fleetguard

Unit 3 / Valley Drive / Valley Park / Rugby CV21 1 TN Warwickshire - The United Kingdom T +44 (0)1788 853600

custserve.uk@fleetguard.com

Fleetguard

Zone Industrielle du Grand Guelen 29556 Quimper Cedex 9 - France

T+33 (0) 2 98 76 49 49

 $\underline{fleet guard.support.emea@cummins.com}$

Fleetguard Catenbergstraat 1 2840 Rumst - Belgium

T +32 3 456 3000

fleetguard.support.emea@cummins.com

1.4. Emergency telephone number

Emergency number : +44 (0) 1235 239670 (Carechem24)
Only available during office hours.

| Country | Official advisory body | Address | Emergency number |
|---------|---|--|--|
| 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) |



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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335

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

2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

Signal word : Warning Contains : citric acid

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

H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.

Precautionary statements (CLP) : P261 - Avoid breathing vapours.

P264 - Wash hands, forearms and face thoroughly after handling.

P280 - Wear protective gloves, protective clothing, eye protection, face protection.

P302+P352 - IF ON SKIN: Wash with plenty of water.

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. P362+P364 - Take off contaminated clothing and wash it before reuse.

Extra phrases : EUH208 - Contains 1,3-dibutyl-2-thiourea (1). May produce an allergic reaction.

2.3. Other hazards

Other hazards : Results of PBT and vPvB assessment : Contains no PBT/vPvB substances ≥ 0.1% assessed

in accordance with REACH Annex XIII.

| Component | |
|-----------------------|--|
| citric acid (77-92-9) | 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 %



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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Substance name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---------|---|
| citric acid | (CAS-No.) 77-92-9 (EC-No.) 201-069-1 (EC Index) 607-750-00-3 (REACH-no) 01-2119457026-42 | 10 – 30 | Eye Irrit. 2, H319 STOT SE 3, H335 |
| Alcohols, C12-C14, ethoxylated | (CAS-No.) 68439-50-9 (EC-No.) 500-213-3 (EC Index) - | 5 – 10 | Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Aquatic Chronic 3, H412 |
| fatty alcohol alkoxylate | (CAS-No.) 111905-53-4 (EC-No.) - (EC Index) - | 1-5 | Eye Irrit. 2, H319 Skin Irrit. 2, H315 |
| trisodium 2-(carboxylatomethyl(2- hydroxyethyl)amino)ethyliminodi(acetate) | (CAS-No.) 139-89-9 (EC-No.) 205-381-9 | 1-5 | Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 |
| 1,3-dibutyl-2-thiourea (1) | (CAS-No.) 109-46-6 (EC-No.) 203-674-6 | < 1 | Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412 |
| Potassium hydroxide | (CAS-No.) 1310-58-3 (EC-No.) 215-181-3 (EC Index) 019-002-00-8 (REACH-no) 01-2119487136-33 | < 1 | Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 |
| sodium hydroxide; caustic soda | (CAS-No.) 1310-73-2 (EC-No.) 215-185-5 (EC Index) 011-002-00-6 (REACH-no) 01-2119457892-27 | <1 | Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 |

Specific concentration limits:

| Substance name | Product identifier | Specific concentration limits |
|--------------------------------|---|---|
| Potassium hydroxide | (CAS-No.) 1310-58-3 (EC-No.) 215-181-3 (EC Index) 019-002-00-8 (REACH-no) 01-2119487136-33 | (0,5 ≤C < 2) Skin Irrit. 2, H315 (0,5 ≤C < 2) Eye Irrit. 2, H319 (2 ≤C < 5) Skin Corr. 1B, H314 (5 ≤C < 100) Skin Corr. 1A, H314 |
| sodium hydroxide; caustic soda | (CAS-No.) 1310-73-2 (EC-No.) 215-185-5 (EC Index) 011-002-00-6 (REACH-no) 01-2119457892-27 | (0,5 ≤C < 2) Eye Irrit. 2, H319 (0,5 ≤C < 2) Skin Irrit. 2, H315 (2 ≤C < 5) Skin Corr. 1B, H314 (5 ≤C < 100) Skin Corr. 1A, H314 |

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Additional advice

: First aider: Pay attention to self-protection!. Concerning personal protective equipment to use, see section 8. Never give anything by mouth to an unconscious person. In case of doubt or persistent symptoms, consult always a physician. Show this safety data sheet to the doctor in attendance.

Inhalation

: Remove casualty to fresh air and keep warm and at rest. In case of doubt or persistent symptoms, consult always a physician.



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Skin contact : Remove contaminated clothing and shoes. Gently wash with plenty of soap and water.

Wash contaminated clothing before reuse. In case of doubt or persistent symptoms, consult

always a physician.

Eyes contact : Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses,

if present and easy to do. Continue rinsing. In case of doubt or persistent symptoms, consult

always a physician.

Ingestion : Rinse mouth thoroughly with water. Drink 1 or 2 glasses of water. Do NOT induce vomiting.

Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Inhalation : May cause respiratory irritation. Cough.

Skin contact : Causes skin irritation.

: Causes serious eye irritation. The following symptoms may occur: erythema (redness). Pain. Eyes contact

: May cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Ingestion

Indication of any immediate medical attention and special treatment needed <u>4.3.</u>

Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media : carbon dioxide (CO2), powder, alcohol-resistant foam, water spray.

Unsuitable extinguishing media : Strong water jet.

Special hazards arising from the substance or mixture

Specific hazards : Not flammable. Heating will cause a rise in pressure with a risk of bursting. Contact with

metals liberates hydrogen gas. (Small amounts: H2).

Hazardous decomposition products in case of : Burning produces noxious and toxic fumes. Carbon oxides (CO, CO2). nitrogen oxides (NOx)

and sulphur oxides.

Advice for firefighters <u>5.3.</u>

Firefighting instructions : Evacuate area. Use water spray or fog for cooling exposed containers. Contain the

extinguishing fluids by bunding. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus.

: Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in Other information

accordance with environmental legislation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

For non-emergency personnel : Evacuate unnecessary personnel. Keep upwind. Provide adequate ventilation. Do not

> breathe vapours. Avoid contact with skin, eyes and clothing. Wear recommended personal protective equipment. Concerning personal protective equipment to use, see section 8. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

smoking.

6.1.2. For emergency responders

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place.

Concerning personal protective equipment to use, see section 8.

Environmental precautions

Do not allow to enter into surface water or drains. Notify authorities if product enters sewers or public waters.



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6.3. Methods and material for containment and cleaning up

Methods for cleaning up

: Stop leak if safe to do so. Dam up the liquid spill. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Recover large spills by pumping (use an explosion proof or hand pump). Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8 . Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

: Provide adequate ventilation. Do not breathe vapours. Avoid contact with skin, eyes and clothing. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Take any precaution to avoid mixing with Incompatible materials, Refer to Section 10 on Incompatible Materials. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time). Avoid release to the environment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. After use replace the closing cap immediately.

Hygiene measures

: Keep good industrial hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feedingstuffs. Remove contaminated clothes. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures

: Keep locked up or in an area accessible only to qualified or authorised persons.

Storage conditions

: Store in a dry, cool and well-ventilated place. Do not store near or with any of the

incompatible materials listed in section 10. Bund storage facilities to prevent soil and water

pollution in the event of spillage.

Incompatible materials

: Keep away from strong acids, strong bases and oxidizing agents.

Heat and ignition sources

 $: \ \, {\sf Keep \, away \, from \, open \, flames, \, hot \, surfaces \, and \, sources \, of \, ignition. \, Keep \, out \, of \, direct}$

sunlight.

Special rules on packaging

: Containers which are opened should be properly resealed and kept upright to prevent

leakage. After use replace the closing cap immediately.

Packaging materials

: Keep only in the original container.

7.3. Specific end use(s)

Cleaner.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Potassium hydroxide (1310-58-3) | | |
|---------------------------------|-----------------|------------------------------|
| Austria | MAK (OEL TWA) | 2 mg/m³ (inhalable fraction) |
| Bulgaria | OEL TWA | 2 mg/m³ |
| Croatia | KGVI (OEL STEL) | 2 mg/m³ |
| Czech Republic | PEL (OEL TWA) | 1 mg/m³ |
| Denmark | OEL C | 2 mg/m³ |
| Estonia | OEL TWA | 2 mg/m³ |



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| Potassium hydroxide (1 | 310-36-3) | |
|------------------------|----------------------|--|
| Finland | HTP (OEL C) | 2 mg/m³ |
| France | VLE (OEL C/STEL) | 2 mg/m³ |
| Greece | OEL TWA | 2 mg/m³ |
| Greece | OEL STEL | 2 mg/m³ |
| Hungary | AK (OEL TWA) | 2 mg/m³ |
| Hungary | CK (OEL STEL) | 2 mg/m³ |
| Ireland | OEL STEL | 2 mg/m³ |
| Poland | NDS (OEL TWA) | 0,5 mg/m³ |
| Poland | NDSCh (OEL STEL) | 1 mg/m³ |
| Portugal | OEL C | 2 mg/m³ |
| Spain | VLA-EC (OEL STEL) | 2 mg/m³ |
| Sweden | NGV (OEL TWA) | 1 mg/m³ (inhalable fraction) |
| Sweden | KTV (OEL STEL) | 2 mg/m³ (inhalable fraction) |
| United Kingdom | WEL STEL (OEL STEL) | 2 mg/m³ |
| Norway | Takverdi (OEL C) [1] | 2 mg/m³ |
| Switzerland | MAK (OEL TWA) [1] | 2 mg/m³ (inhalable dust) |
| Canada (Quebec) | Plafond (OEL C) | 2 mg/m³ |
| USA - ACGIH | ACGIH OEL C | 2 mg/m³ |
| USA - NIOSH | NIOSH REL C | 2 mg/m³ |
| sodium hydroxide; caus | tic soda (1310-73-2) | · |
| Belgium | Local name | Sodium (hydroxyde de) # Natriumhydroxide |
| Belgium | OEL TWA | 2 mg/m³ |
| Belgium | Remark | M: La mention M indique que lors d'une exposition supérieure à la valeur limite, des irritations apparaissent ou un danger d'intoxication aiguë existe. Le procédé de travail doit être conçu de telle façon que l'exposition ne dépasse jamais la valeur limite. Lors des mesurages, la période d'échantillonnage doit être aussi courte que possib afin de pouvoir effectuer des mesurages fiables. Le résultat des mesurages est calculé en fonction de la période d'échantillonnage.# De vermelding M duidi aan dat bij de blootstelling boven de grenswaarde irritatie optreedt of er gevaar bestaat voor acute vergiftiging. Het werkprocédé moet zo zijn ontworpen dat de blootstelling de grenswaarde nooit overschrijdt. Bij een controle geldt dat de bemonsterde periodezo kort mogelijk moet zijn om een betrouwbare meting te kunnen verrichten. het meetresultaat wordt dan gerelateerd aan de |
| citric acid (77-92-9) | | beschouwde periode |
| Czech Republic | PEL (OEL TWA) | 4 mg/m³ (dust) |



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| citric acid (77-92-9) | | |
|-----------------------|---|---|
| Germany | Occupational exposure limit value (mg/m³) (TRGS900) | 2 mg/m³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-inhalable fraction) |
| Switzerland | MAK (OEL TWA) [1] | 2 mg/m³ (inhalable dust) |
| Switzerland | KZGW (OEL STEL) | 4 mg/m³ (inhalable dust) |

Additional information

: Recommended monitoring procedures :. Personal air monitoring. Room air monitoring

8.2. Exposure controls

Engineering measure(s)

: Provide adequate ventilation. Use only outdoors or in a well-ventilated area. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Organisational measures to prevent/limit releases, dispersion and exposure. See Section 7 for information on safe handling.

Personal protective equipment

: The type of protective equipment must be selected according to the concentration and

amount of the dangerous substance at the specific workplace.

Materials for protective clothing

: Wear suitable protective clothing

Hand protection

: Wear chemically resistant gloves (tested to EN374) . Suitable material: Not determined. Breakthrough time: Not determined. Thickness: Not determined. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Eye protection

: Use suitable eye protection (EN166): goggles

Body protection

: Wear suitable protective clothing

Respiratory protection

: In case of insufficient ventilation, wear suitable respiratory equipment. Half-face mask (DIN EN 140). full face mask (DIN EN 136). Filter type: A (EN 14387). The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained

breathing apparatus must be used. (EN 137)

Thermal hazard protection

: Not required for normal conditions of use. Use dedicated equipment.

Environmental exposure controls

 $: \ \, \text{Avoid release to the environment. Comply with applicable Community environmental} \\$

protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : liquid. (clear).
Colour : Not available
Odour threshold : No data available

pH : 2,5

Relative evaporation rate (butylacetate=1) : No data available Melting / freezing point : No data available Freezing point : No data available Initial boiling point and boiling range : No data available Flash point : Not applicable Auto-ignition temperature : No data available



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Decomposition temperature : No data available
Flammability : Not applicable, liquid
Vapour pressure : No data available
Vapour density : No data available

Relative density : 1,113

Solubility : soluble in water.

Water: 100 %

Partition coefficient n-octanol/water : No data available
Kinematic viscosity : No data available
Dynamic viscosity : No data available

Explosive properties : Not applicable. The study does not need to be conducted because there are no chemical

groups associated with explosive properties present in the molecule.

Oxidising properties : Not applicable. The classification procedure needs not to be applied because there are

no chemical groups present in the molecule which are associated with oxidising

properties.

Explosive limits : No data available Particle size : Not applicable Particle size distribution : Not applicable Particle shape : Not applicable Particle aspect ratio : Not applicable Particle aggregation state : Not applicable Particle agglomeration state : Not applicable Particle specific surface area : Not applicable Particle dustiness : 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 : No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

None under normal conditions. Reference to other sections: 10.4 & 10.5.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur. Gives off hydrogen by reaction with metals. (Small amounts: H2).

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Direct sunlight. See Section 7 for information on safe handling.



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10.5. Incompatible materials

Other information

Strong oxidizing agents. Strong reducing agents. Strong acids and strong bases. See Section 7 for information on safe handling.

10.6. Hazardous decomposition products

Burning produces noxious and toxic fumes. Hazardous decomposition products. Carbon oxides. Nitrogen oxides (NOx). Sulphur oxides . Reference to other sections 5.2.

SECTION 11: Toxicological information

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

Acute toxicity : Not classified (Based on available data, the classification criteria are not met)

| fatty alcohol alkoxylate (111905-53-4) | | |
|--|---|--|
| LD50/oral/rat | > 2000 mg/kg | |
| Potassium hydroxide (1310-58-3) | | |
| LD50/oral/rat | 333 – 388 mg/kg (OECD 425) | |
| citric acid (77-92-9) | | |
| LD50/oral/rat | 5400 mg/kg (OECD 401) | |
| LD50/dermal/rat | > 2000 mg/kg (OECD 402) | |
| LD50, mouse, oral | 5400 mg/kg | |
| LD50, mouse, Dermal | 2700 mg/kg | |
| Skin corrosion/irritation | : Causes skin irritation. | |
| | pH: 2,5 | |
| Serious eye damage/irritation | : Causes serious eye irritation. | |
| | pH: 2,5 | |
| Respiratory or skin sensitisation | : Not classified (Based on available data, the classification criteria are not met) | |
| Germ cell mutagenicity | : Not classified (Based on available data, the classification criteria are not met) | |
| Carcinogenicity | : Not classified (Based on available data, the classification criteria are not met) | |
| Reproductive toxicity | : Not classified (Based on available data, the classification criteria are not met) | |
| STOT-single exposure | : May cause respiratory irritation. | |
| STOT-repeated exposure | : Not classified (Based on available data, the classification criteria are not met) | |
| citric acid (77-92-9) | | |
| NOAEL, Rat | 4000 mg/kg bw/day (10 days) | |
| NOAEL, Rat, Chronic | 1200 mg/Kg (2 years) | |
| Aspiration hazard | : Not classified (Based on available data, the classification criteria are not met) | |
| RESTORE PLUS EUROPE | | |
| Kinematic viscosity | No data available | |

information see section 4.

: Symptoms related to the physical, chemical and toxicological characteristics. For further



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11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

: 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 %

11.2.2 Other information

Other information

: Symptoms related to the physical, chemical and toxicological characteristics, For further information see section 4

SECTION 12: Ecological information

12.1. Toxicity

Environmental properties

: According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment".

Hazardous to the aquatic environment, short-

term (acute)

: Not classified

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

(chronic)

| fatty alcohol alkoxylate (111905-53-4) | | |
|--|--|--|
| LC50 - Fish [1] | 1 - 10 mg/l | |
| sodium hydroxide; caustic soda (1310-73-2) | | |
| LC50 - Fish [1] | > 35 mg/l | |
| EC50 - Crustacea [1] | 40 – 240 mg/l daphnia magna | |
| EC50 - Other aquatic organisms [1] | > 33 mg/l waterflea | |
| citric acid (77-92-9) | | |
| LC50 - Fish [1] | 1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus) | |
| LC50 - Fish [2] | 440 – 460 mg/l (96h, Leuciscus idus) | |
| EC50 - Crustacea [1] | 120 mg/l Daphnia magna (72h) | |
| EC50 - Other aquatic organisms [1] | > 10000 mg/l Pseudomonas putida (16h) | |

12.2. Persistence and degradability

| RESTORE PLUS EUROPE | | |
|--|---|--|
| Persistence and degradability | The product itself has not been tested. | |
| Potassium hydroxide (1310-58-3) | | |
| Persistence and degradability | Not applicable. | |
| citric acid (77-92-9) | | |
| Persistence and degradability Readily biodegradable. | | |
| Biodegradation | 98 % (2 days), 600mg/l) (98%, 7 days) - Inherently biodegradable) | |



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12.3. Bioaccumulative potential

| RESTORE PLUS EUROPE | |
|---|--------------------------------------|
| Partition coefficient n-octanol/water No data available | |
| Bioaccumulative potential | No additional information available. |

| Potassium hydroxide (1310-58-3) | | |
|---------------------------------------|---|--|
| Partition coefficient n-octanol/water | 0,65 | |
| Bioaccumulative potential | Not applicable. Product/Substance is inorganic. | |

| sodium hydroxide; caustic soda (1310-73-2) | |
|--|-------|
| Partition coefficient n-octanol/water | -3,88 |

| citric acid (77-92-9) | |
|---------------------------------------|------------------|
| Bioconcentration factor (BCF) | 0,01 |
| Partition coefficient n-octanol/water | -1,72 (at 20 °C) |
| Bioaccumulative potential | Low potential. |

12.4. Mobility in soil

| RESTORE PLUS EUROPE | |
|------------------------------------|---|
| Mobility in soil No data available | |
| Ecology - soil | The product itself has not been tested. |

12.5. Results of PBT and vPvB assessment

| RESTORE PLUS EUROPE | |
|---------------------------|---|
| Results of PBT assessment | Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII |

| Component | |
|-----------------------|--|
| citric acid (77-92-9) | 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

Adverse effects on the environment caused by endocrine disrupting properties

: 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 %

12.7. Other adverse effects

Other adverse effects : No data available



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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Avoid release to the environment. Dispose of empty containers and wastes safely. See Section 7 for information on safe handling. Refer to manufacturer/supplier for information on recovery/recycling. Recycling is preferred to disposal or incineration. If recycling is not possible, eliminate in accordance with local valid waste disposal regulations. Handle contaminated packages in the same way as the substance itself. Dispose of contaminated materials in accordance with current regulations.

European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC)

: This material and its container must be disposed of as hazardous waste

Waste codes should be assigned by the user, preferably in discussion with the waste

disposal authorities

The following Waste Codes are only suggestions:

07 02 04* - other organic solvents, washing liquids and mother liquors

150110 - packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR IMDG | | IATA | ADN | RID |
|----------------------|-----------------------|-------------------|-------------------|-------------------|
| 14.1. UN number or | ID number | | 1 | • |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.2. UN proper ship | ping name | - | 1 | • |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.3. Transport haza | rd class(es) | | | <u>.</u> |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.4. Packing group | | - | 1 | • |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 14.5. Environmental | hazards | 1 | | - |
| Dangerous for the | Dangerous for the | Dangerous for the | Dangerous for the | Dangerous for the |
| environment : No | environment : No | environment : No | environment : No | environment : No |
| | Marine pollutant : No | | | |

Special precautions for user

Special precautions for user : No data available

- Overland transport

No data available

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available



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14.7. Maritime transport in bulk according to IMO instruments

Code: IBC : No data available.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Listed on REACH Annex XVII (Restriction Conditions). The following restrictions are applicable:

3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10

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

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

VOC content : No data available

15.1.2. National regulations

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Listed on the Canadian DSL (Domestic Substances List)

Listed on the EU NLP (No Longer Polymers) inventory

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the Japanese ENCS (Existing New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Japanese Pollutant Release and Transfer Register Law (PRTR Law)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Listed on the NCI (Vietnam - National Chemical Inventory)

France

| No ICPE | Installations classées Désignation de la rubrique | Code Régime | Rayon |
|---------|--|-------------|-------|
| na | Not Applicable | na | na |

Germany

Regulatory reference : WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1)

German storage class (LGK) : LGK 12 - Non-combustible liquids

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

Waterbezwaarlijkheid : B (4) - Weinig schadelijk voor in het water levende organismen

SZW-lijst van kankerverwekkende stoffen : None of the components are listed SZW-lijst van mutagene stoffen : None of the components are listed



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SZW-lijst van reprotoxische stoffen –

Borstvoeding

SZW-lijst van reprotoxische stoffen –

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen –

Ontwikkeling

: None of the components are listed

: None of the components are listed

: None of the components are listed

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

Not applicable

For the following substances of this mixture a chemical safety assessment has been carried out sodium hydroxide; caustic soda

SECTION 16: Other information

Indication of changes:

| 2.1 | Classification according to Regulation (EC) No. 1272/2008 [CLP] | Modified |
|------|---|----------|
| 2.2 | Hazard statements (CLP) | Modified |
| 2.2 | Precautionary statements (CLP) | Modified |
| 2.3 | ED text | Added |
| 4.2 | Chronic symptoms | Added |
| 4.3 | Indication of any immediate medical attention and special treatment needed | Added |
| 5.2 | Special hazards arising from the substance or mixture | Modified |
| 5.3 | Advice for firefighters | Modified |
| 7.2 | Special rules on packaging | Added |
| 7.3 | Specific end use(s) | Added |
| 9.2 | Information with regard to physical hazard classes | Added |
| 9.2 | Other safety characteristics | Added |
| 11.1 | Reproductive toxicity | Added |
| 11.1 | STOT-single exposure | Modified |
| 11.2 | Adverse health effects caused by endocrine disrupting properties | Added |
| 12.6 | Adverse effects on the environment caused by endocrine disrupting properties | Added |
| 14.7 | Maritime transport in bulk according to IMO instruments | Added |



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| 15.1 | German storage class (LGK) | Added | |
|------|-------------------------------|----------|--|
| 15.1 | Waterbezwaarlijkheid | Modified | |

Added

Added

Installations classées

Other information

Abbreviations and acronyms:

15.1

16

| Abbreviations a | na acronyms: |
|-----------------|--|
| | ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin |
| | ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route |
| | CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association |
| | IMDG = International Maritime Dangerous Goods Code |
| | LEL = Lower Explosive Limit/Lower Explosion Limit |
| | UEL = Upper Explosion Limit/Upper Explosive Limit |
| | REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals |
| | CSR = CSR = Chemical Safety Report |
| | EC50 = Median Effective Concentration |
| | LD50 = Median lethal dose |
| | LC50 = Median lethal concentration |
| | N.O.S. = Not Otherwise Specified |
| | DNEL = DNEL = Derived No Effect Level |
| | PNEC = Predicted No Effect Concentration |
| | TLV = Threshold limits |
| | TWA = time weighted average |
| | STEL = Short term exposure limit |
| | persistent, bioaccumulating and toxic (PBT). |
| | vPvB = very persistent and very bioaccumulating |
| | WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act) |
| | ABM = Algemene beoordelingsmethodiek |
| | BTT = Breakthrough time (maximum wearing time) |
| | DMEL = Derived Minimal Effect level |
| | EL50 = Median effective level |
| | ErC50 = EC50 in terms of reduction of growth rate |
| | ErL50 = EL50 in terms of reduction of growth rate |
| | EWC = European waste catalogue |
| | LL50 = Median lethal level |
| | NA = Not applicable |
| | NOEC = No observed effect concentration |
| | NOEL: no-observed-effect level |
| | NOELR = No observed effect loading rate |
| | NOAEC = No observed adverse effect concentration |
| | NOAEL = No observed adverse effect level |
| | OEL = Occupational Exposure Limits - Short Term Exposure Limits (STELs) |
| | Quantitative structure-activity relationship (QSAR) |
| | STOT = Specific Target Organ Toxicity |
| | VOC = Volatile organic compounds |

Sources of key data used to compile the datasheet

 $: \ \ \, \mathsf{ECHA} \ (\mathsf{European} \ \mathsf{Chemicals} \ \mathsf{Agency}). \ \mathsf{Supplier} \ \mathsf{sds}. \ \mathsf{LOLI}.$

Training advice

: Manipulations are to be done only by qualified and authorised persons. Training staff on good practice.

Other information

: Assessment/classification CLP. Article 9. Calculation method.



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Full text of H- and EUH-statements:

| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
|---------------------|--|
| Aquatic Chronic 3 | Hazardous to the aquatic environment – Chronic Hazard, Category 3 |
| EUH208 | Contains 1,3-dibutyl-2-thiourea (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 |
| H290 | May be corrosive to metals. |
| H302 | Harmful if swallowed. |
| 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. |
| H335 | May cause respiratory irritation. |
| H412 | Harmful to aquatic life with long lasting effects. |
| Met. Corr. 1 | Corrosive to metals, Category 1 |
| Skin Corr. 1A | Skin corrosion/irritation, Category 1, Sub-Category 1A |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1, Sub-Category 1B |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Skin sensitisation, Category 1 |
| STOT SE 3 | Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation |
| | |

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Classification according to Regulation (EC) No. 1272/2008 [CLP] Labelling according to Regulation (EC) No. 1272/2008 [CLP]

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