

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 Date of issue: 16-5-2018 Revision date: 16-5-2018 Version: 1.0

| SECTION 1. Id | entification of the substa | anco/mixturo and of tho | company/undortaking | |
|--|---|--|---|---|
| 1.1. Product ide | | | company/undertaking | |
| Product form | | : Mixture | | |
| Trade name | | : Clean Tech EM | | |
| Product code | | : VW.30.01 | | |
| | | | | |
| Product group | | : Trade product | | |
| | entified uses of the substan | ice or mixture and uses ad | vised against | |
| 1.2.1. Relevant ide | | | | |
| Intended for genera | al public | | | |
| Main use category | | : Industrial use, Professional u | se,Consumer use | |
| Use of the substand | ce/mixture | : Degreaser | | |
| 1.2.2. Uses advise No additional inform | - | | | |
| | e supplier of the safety dat | a sheet | | |
| VatOil | | | | |
| Dollegoorweg 15 7602 EC Almelo - N | letherlands | | | |
| T 0031 (0)546 81 8 vib@vatoil.com | | | | |
| | telephone number | | | |
| Country | Organisation/Company | Address | Emergency number | Comment |
| United Kingdom | National Poisons Information | Penarth | 0344 892 0111 | |
| g | Service (Cardiff Centre) | CF64 2XX Cardiff | | |
| | Gwenwyn Ward, Llandough | | | |
| | | | | |
| | Hospital | ure | | |
| 2.1. Classification | azards identification on of the substance or mixt ording to Regulation (EC) No. | | stances: SDS EU 2015: Accord | ding to Regulation (EU) |
| 2.1. Classification Classification acc 2015/830 (REA | azards identification on of the substance or mixt ording to Regulation (EC) No. CH Annex II) | | stances: SDS EU 2015: Accord | ding to Regulation (EU) |
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| 2.1. Classification Classification acc 2015/830 (REA Aspiration hazard, G Full text of H staten Adverse physicoc May be fatal if swal 2.2. Label eleme Labelling accordin Hazard pictograms Signal word (CLP) Hazard statements | azards identification on of the substance or mixt ording to Regulation (EC) No. 1 CATE Annex II) Category 1 nents : see section 16 chemical, human health and en lowed and enters airways. Sents Ing to Regulation (EC) No. 1272 (CLP) | 1272/2008 [CLP]Mixtures/Subs H304 vironmental effects /2008 [CLP] : GHS08 : Danger : H304 - May be fatal if swall : P101 - If medical advice is i P102 - Keep out of reach of P260 - Do not breathe vapo P301+P310+P331 - IF SW/ doctor/physician. Do NOT in P405 - Store locked up. P501 - Dispose of contents/ | owed and enters airways. needed, have product container i children. ours, mist. ALLOWED: Immediately call a P nduce vomiting. | or label at hand. OISON CENTER or al waste collection point, in |
| 2.1. Classification Classification acc 2015/830 (REA Aspiration hazard, of Full text of H statem Adverse physicoc May be fatal if swal 2.2. Label eleme Labelling accordin Hazard pictograms Signal word (CLP) Hazard statements Precautionary state | azards identification on of the substance or mixt ording to Regulation (EC) No. 1 CATE Annex II) Category 1 nents : see section 16 chemical, human health and en lowed and enters airways. Sents Ing to Regulation (EC) No. 1272 (CLP) | 1272/2008 [CLP]Mixtures/Subs H304 vironmental effects /2008 [CLP] : GHS08 : Danger : H304 - May be fatal if swall : P101 - If medical advice is 1 P102 - Keep out of reach of P260 - Do not breathe vapo P301+P310+P331 - IF SW/ doctor/physician. Do NOT in P405 - Store locked up. P501 - Dispose of contents, accordance with local, regio | owed and enters airways. needed, have product container i children. nurs, mist. ALLOWED: Immediately call a P nduce vomiting. /container to hazardous or speci nal, national and/or internationa | or label at hand. OISON CENTER or al waste collection point, in al regulation. |
| 2.1. Classification 2015/830 (REA Aspiration hazard, G Full text of H staten Adverse physicoc May be fatal if swal 2.2. Label eleme Labelling accordin Hazard pictograms Signal word (CLP) Hazard statements | azards identification on of the substance or mixt ording to Regulation (EC) No. 1 CATE Annex II) Category 1 nents : see section 16 themical, human health and en lowed and enters airways. In the section (EC) No. 1272 (CLP) (CLP) (CLP) (CLP) | 1272/2008 [CLP]Mixtures/Subs H304 vironmental effects /2008 [CLP] : GHS08 : Danger : H304 - May be fatal if swall : P101 - If medical advice is 1 P102 - Keep out of reach of P260 - Do not breathe vapo P301+P310+P331 - IF SW/ doctor/physician. Do NOT in P405 - Store locked up. P501 - Dispose of contents, accordance with local, regio | owed and enters airways. needed, have product container i children. ours, mist. ALLOWED: Immediately call a P nduce vomiting. | or label at hand. OISON CENTER or al waste collection point, in al regulation. |

SECTION 3: Composition/information on ingredients 3.1. Substances

Not applicable

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3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---------|---|
| Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics | (EC-No.) 926-141-6 (REACH-no) 01-2119456620-43 | >= 80 | Asp. Tox. 1, H304 |
| Alcohols, C9-11, ethoxylated | (CAS-No.) 68439-46-3 (EC-No.) 614-482-0 | 1 - 2,5 | Eye Irrit. 2, H319 |
| 2-methylpropan-1-ol, iso-butanol substance with national workplace exposure limit(s) (GB) | (CAS-No.) 78-83-1 (EC-No.) 201-148-0 (EC Index-No.) 603-108-00-1 (REACH-no) 01-2119484609-23 | 0,1 - 1 | Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336 |

Full text of H-statements: see section 16

| SECTION 4: First aid measures | |
|--|--|
| 4.1. Description of first aid measures | |
| First-aid measures general | : Call a physician immediately. If you feel unwell, seek medical advice (show the label where possible). |
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. |
| First-aid measures after skin contact | : Wash skin with plenty of water. |
| First-aid measures after eye contact | : Rinse eyes with water as a precaution. |
| First-aid measures after ingestion | : Do not induce vomiting. Call a physician immediately. Do not induce vomiting. |
| 4.2. Most important symptoms and effects | s, both acute and delayed |
| Symptoms/effects | : No additional information available. Not expected to present a significant hazard under anticipated conditions of normal use. |
| Symptoms/effects after skin contact | : Repeated exposure may cause skin dryness or cracking. |
| Symptoms/effects after ingestion | : Risk of lung oedema. May result in aspiration into the lungs, causing chemical pneumonia. |
| 4.3. Indication of any immediate medical a | ttention and special treatment needed |

Treat symptomatically.

| SECTION 5: Firefighting measures | |
|--|---|
| 5.1. Extinguishing media | |
| Suitable extinguishing media | : Water spray. Dry powder. Foam. Carbon dioxide. |
| Unsuitable extinguishing media | : Do not use a heavy water stream. |
| 5.2. Special hazards arising from the substa | nce or mixture |
| Fire hazard | : Combustible liquid. |
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases. |
| 5.3. Advice for firefighters | |
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |

| SECTION 6: Accidental release measures 6.1. Personal precautions, protective equipment and emergency procedures | | |
|--|---|--|
| 6.1.1. For non-emergency personnel Emergency procedures | : Ventilate spillage area. | |
| 6.1.2. For emergency responders | | |
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". | |
| 6.2. Environmental precautions | | |
| Avoid release to the environment. | | |
| 6.3. Methods and material for containment and cleaning up | | |
| Methods for cleaning up | : Take up liquid spill into absorbent material. | |
| Other information | : Dispose of materials or solid residues at an authorized site. | |
| 6.4. Reference to other sections | | |
| For further information refer to section 13. | | |

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| SECTION 7: Handling and storage | |
|---|--|
| 7.1. Precautions for safe handling | |
| Precautions for safe handling | : Provide good ventilation in process area to prevent formation of vapour. |
| Hygiene measures | : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. |
| 7.2. Conditions for safe storage, including a | ny incompatibilities |
| Storage conditions | : Keep container closed when not in use. Keep in a cool, well-ventilated place away from heat. |
| Storage temperature | : 0 - 40 °C |
| 7.3. Specific end use(s) | |
| No additional information available | |

| SECTION 8: Exposure controls/personal protection | | | | |
|--|-------------------------------|--|--|--|
| 8.1. Control parameters | | | | |
| Clean Tech EM | | | | |
| EU | | Exposure limits/standards for materials that can be formed when handling this product. When mists/aerosols can occur the following is recommended: 5 mg/m ³ - ACGIH TLV (inhalable fraction). | | |
| 2-methylpropan-1-ol, | iso-butanol (78-83-1) | | | |
| United Kingdom | Local name | 2-Methylpropan-1-ol | | |
| United Kingdom | WEL TWA (mg/m³) | 154 mg/m ³ | | |
| United Kingdom | WEL TWA (ppm) | 50 ppm | | |
| United Kingdom | WEL STEL (mg/m ³) | 231 mg/m ³ | | |
| United Kingdom | WEL STEL (ppm) | 75 ppm | | |
| United Kingdom | Regulatory reference | Regulatory reference EH40/2005 (Third edition, 2018). HSE | | |
| 8.2. Exposure controls | | | | |
| Appropriate engineering controls: | | | | |
| Ensure good ventilation of the work station. | | | | |
| Materials for protective clothing: | | | | |
| Wear suitable protective clothing | | | | |
| Hand protection: | | | | |

| hand protection. | | | | | |
|-------------------|--|---|----------------|-------------|----------|
| Protective gloves | | | | | |
| Туре | Material | Permeation | Thickness (mm) | Penetration | Standard |
| Reusable gloves | Nitrile rubber (NBR), Neoprene rubber (HNBR) | 5 (> 240 minutes), 6 (> 480 minutes) | >=0,35 | | EN 374 |

| Eye protection: | | | | |
|-------------------------------------|-----|-----------------|----------|--|
| Safety glasses | | | | |
| Туре | Use | Characteristics | Standard | |
| Safety glasses Droplet clear EN 166 | | | | |
| Skin and body protection: | | | | |

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



Environmental exposure controls:

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| SECTION 9: Physical and chemical properties 9.1. Information on basic physical and chemical properties | | |
|---|--|--|
| Physical state | : Liquid | |
| Colour | : red. | |
| Odour | : characteristic. | |
| Odour threshold | : No data available | |
| рН | : No data available | |
| Relative evaporation rate (butylacetate=1) | : No data available | |
| Melting point | : Not applicable | |
| Freezing point | : -45 °C - ASTM D5950 (pour point) | |
| Boiling point | : No data available | |
| Flash point | : 72 °C - ASTM D93 (PM) | |
| Auto-ignition temperature | : No data available | |
| Decomposition temperature | : No data available | |
| Flammability (solid, gas) | : Not applicable | |
| Vapour pressure | : No data available | |
| Relative vapour density at 20 °C | : No data available | |
| Relative density | : No data available | |
| Density | : 0,798 kg/l (15 °C) - ASTM D4052 | |
| Solubility | : Emulsifiable in water. | |
| Log Pow | : No data available | |
| Viscosity, kinematic | : 1,6 mm²/s (40 °C) - ASTM D7279 | |
| Viscosity, dynamic | : No data available | |
| Explosive properties | : Presents no particular fire or explosion hazard. | |
| Oxidising properties | : No data available | |
| Explosive limits | : No data available | |
| 9.2. Other information | | |
| VOC content | : 0 % | |

| SECTION 10: Stability and reactivity |
|--|
| 10.1. Reactivity |
| The product is non-reactive under normal conditions of use, storage and transport. |
| 10.2. Chemical stability |
| Stable under normal conditions. |
| 10.3. Possibility of hazardous reactions |
| No dangerous reactions known under normal conditions of use. Reacts violently with (strong) oxidizers. |
| 10.4. Conditions to avoid |
| None under recommended storage and handling conditions (see section 7). |
| 10.5. Incompatible materials |
| No additional information available |
| 10.6. Hazardous decomposition products |
| No decomposition if stored normally. |
| |
| SECTION 11: Toxicological information |

| SECTION 11: Toxicological information | | |
|--|----------------|--|
| 11.1. Information on toxicological effects | | |
| Acute toxicity (oral) : | Not classified | |
| Acute toxicity (dermal) : | Not classified | |
| Acute toxicity (inhalation) : | Not classified | |
| 2-methylpropan-1-ol, iso-butanol (78-83-1) | | |
| LD50 oral | 2830 mg/kg | |
| LD50 dermal rabbit | 2460 mg/kg | |
| LC50 inhalation rat (mg/l) | 24,6 mg/l/4h | |

| Alcohols, C9-11, ethoxylated (68439-46-3) | |
|---|--------------|
| LD50 oral rat | > 5000 mg/kg |
| LD50 dermal | > 2000 mg/kg |
| LC50 inhalation rat (mg/l) | > 20 mg/l |

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| Skin corrosion/irritation : | Not classified |
|-------------------------------------|---|
| Serious eye damage/irritation : | Not classified |
| Respiratory or skin sensitisation : | Not classified |
| Germ cell mutagenicity : | Not classified |
| Carcinogenicity : | Not classified |
| Reproductive toxicity : | Not classified |
| STOT-single exposure : | Not classified |
| STOT-repeated exposure | Not classified |
| Aspiration hazard : | May be fatal if swallowed and enters airways. |
| Clean Tech EM | |
| Viscosity, kinematic | 1,6 mm²/s (40 °C) - ASTM D7279 |

| SECTION 12: Ecological information 12.1. Toxicity | |
|---|--|
| Ecology - general | : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. |
| Acute aquatic toxicity | : Not classified |
| Chronic aquatic toxicity | : Not classified |
| 2-methylpropan-1-ol, iso-butanol (78-83-1) | |
| LC50 fish 1 | 1430 mg/l (Pimephales promelas, 96h) |
| EC50 Daphnia 1 | 1030 mg/l (Daphnia magna, 48h) |

| Alcohols, C9-11, ethoxylated (68439-46-3) | | |
|--|--|--|
| LC50 fish 1 | 1 - 10 mg/l 96h | |
| EC50 Daphnia 1 | 1 - 10 mg/l 48h | |
| ErC50 (algae) 1 - 10 mg/l 72h | | |
| 12.2. Persistence and degradability | | |
| Alcohols, C9-11, ethoxylated (68439-46-3) | | |
| Persistence and degradability | Readily biodegradable. | |
| BOD (% of ThOD) | > 60 % ThOD 28 d, Closed Bottle Test (OECD 301D) | |
| 12.3. Bioaccumulative potential | | |
| 2-methylpropan-1-ol, iso-butanol (78-83-1) | | |
| Log Pow | 0,79 | |

| Alcohols, C9-11, ethoxylated (68439-46-3) | |
|---|--|
| Log Pow | 2,4 |
| Bioaccumulative potential | Bioaccumulation unlikely. |
| 12.4. Mobility in soil | |
| No additional information available | |
| 12.5. Results of PBT and vPvB assessment | |
| Component | |
| Alcohols, C9-11, ethoxylated (68439-46-3) | 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 |
| 12.6. Other adverse effects | |
| No additional information available | |

| SECTION 13: Disposal considerations | |
|--|---|
| 13.1. Waste treatment methods | |
| Waste treatment methods | : Do not allow into drains or water courses. Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| Product/Packaging disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. |
| European List of Waste (LoW) code | : 11 01 99 - wastes not otherwise specified |
| | |

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

| | | ndment Regulation (EU) 2015/830 | | |
|--|---------------------------|---------------------------------|--------------------------|----------------|
| ECTION 14: Transpo accordance with ADR / RID | | | | |
| | IMDG | ΙΑΤΑ | ADN | RID |
| 4.1. UN number | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 4.2. UN proper shippin | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 4.3. Transport hazard o | class(es) | ` | · · · | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 4.4. Packing group | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| 4.5. Environmental haz | ards | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| lo supplementary information | n available | | 1 | |
| ot applicable | ccording to Annex II of M | arpol and the IBC Code | | |
| ECTION 15: Regulate 5.1. Safety, health and e | | s/legislation specific for | the substance or mixture | • |
| 5.1.1. EU-Regulations | | | | |
| ontains no REACH substant ontains no substance on the ontains no REACH Annex X | | IS | | |
| OC content | | | | |

15.2. Chemical safety assessment No chemical safety assessment has been carried out

| SECTION 16: Other information | | |
|-------------------------------|---|--|
| Abbreviations and acronyms: | | |
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways | |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road | |
| ATE | Acute Toxicity Estimate | |
| BCF | Bioconcentration factor | |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 | |
| DMEL | Derived Minimal Effect level | |

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

| DNEL | Derived-No Effect Level |
|-----------------------------|---|
| EC50 | Median effective concentration |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| vPvB | Very Persistent and Very Bioaccumulative |
| Full text of H- and EUH-sta | atements: |
| Asp. Tox. 1 | Aspiration hazard, Category 1 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Narcosis |
| H226 | Flammable liquid and vapour. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |

SDS EU (REACH Annex II)

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