

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

#### 1.1. Product identifier

Product form : Mixture  
Trade name : DNO HIGHLAND  
UFI : QW79-R0D8-A004-UVU2  
Product code : 3342-072-1  
Type of product : Detergent  
Product group : Trade product

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

##### 1.2.1. Relevant identified uses

Intended for general public  
Main use category : Professional use, Consumer use  
Use of the substance/mixture : Floor and surface cleaning

##### 1.2.2. Uses advised against

Restrictions on use : Cleaning of tools and transport / processing / storage surfaces in direct contact with foodstuffs

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

##### Manufacturer

SODEL  
190 rue René Barthélemy  
FR- 14100 LISIEUX  
FRANCE  
T +33(0)2 31 31 10 50 - F +33(0)2 31 31 80 60  
[info@sodel-sa.eu](mailto:info@sodel-sa.eu) - [www.sodel-sa.eu](http://www.sodel-sa.eu)

#### 1.4. Emergency telephone number

| Country        | Organisation/Company                                                                                 | Address                                                             | Emergency number                                                                                       | Comment                              |
|----------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------|
| Ireland        | National Poisons Information Centre<br>Beaumont Hospital                                             | PO Box 1297<br>Beaumont Road<br>9 Dublin                            | +353 1 809 2566<br>(Healthcare professionals-<br>24/7)<br>+353 1 809 2166 (public,<br>8am - 10pm, 7/7) |                                      |
| United Kingdom | Guy's & St Thomas' Poisons Unit<br>Medical Toxicology Unit, Guy's & St<br>Thomas' Hospital Trust     | Avonley Road<br>SE14 5ER London                                     | +44 20 7188 7188                                                                                       |                                      |
| United Kingdom | National Poisons Information Service<br>(Newcastle Centre)<br>Regional Drugs and Therapeutics Centre | 16/17 Framlington Place<br>Newcastle-upon-Tyne<br>NE2 4AB Newcastle | 0344 892 0111                                                                                          | Only for healthcare<br>professionals |

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Serious eye damage/eye irritation, Category 1 H318  
Skin sensitisation, Category 1 H317  
Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412  
Full text of H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

May cause an allergic skin reaction. Causes serious eye damage. Harmful to aquatic life with long lasting effects.

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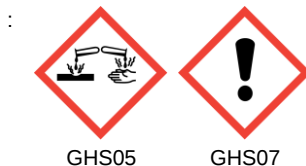
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### 2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

Contains

Hazard statements (CLP)

Precautionary statements (CLP)

: Danger  
: 2-Propylheptyl alcohol, ethoxylated (10 EO), Amines, C12-14-alkyldimethyl, N-oxides, 2-methylisothiazol-3(2H)-one, d-Limonene, 4-TERT-BUTYLCYCLOHEXYL ACETATE  
: H317 - May cause an allergic skin reaction.  
H318 - Causes serious eye damage.  
H412 - Harmful to aquatic life with long lasting effects.  
: P101 - If medical advice is needed, have product container or label at hand.  
P102 - Keep out of reach of children.  
P103 - Read carefully and follow all instructions.  
P280 - Wear protective gloves, eye protection.  
P302+P352 - IF ON SKIN: Wash with plenty of water.  
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER, a doctor.  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards

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

| Component                                            |                                                                                                                                                                                 |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Amines, C12-14-alkyldimethyl, N-oxides (308062-28-4) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII<br>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]          |
|---------------------------------------------|---------------------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------|
| 2-Propylheptyl alcohol, ethoxylated (10 EO) | CAS-No.: 160875-66-1<br>EC-No.: 605-233-7                                                         | $\geq 1 - < 5$ | Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight)<br>Eye Dam. 1, H318 |
| Ethanol                                     | CAS-No.: 64-17-5<br>EC-No.: 200-578-6<br>EC Index-No.: 603-002-00-5<br>REACH-no: 01-2119457610-43 | $\geq 1 - < 5$ | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319                                 |

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| Name                                                                  | Product identifier                                                                                  | %                | Classification according to Regulation (EC) No. 1272/2008 [CLP]                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Amines, C12-14-alkyldimethyl, N-oxides                                | CAS-No.: 308062-28-4<br>EC-No.: 931-292-6<br>REACH-no: 01-2119490061-47                             | $\geq 1 - < 5$   | Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight)<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Aquatic Acute 1, H400<br>Aquatic Chronic 2, H411                                                                                                                                               |
| d-Limonene                                                            | CAS-No.: 5989-27-5<br>EC-No.: 227-813-5<br>EC Index-No.: 601-029-00-7<br>REACH-no: 01-2119529223-47 | $\geq 0.1 - < 1$ | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410                                                                                                                                                                               |
| 4-TERT-BUTYLCYCLOHEXYL ACETATE                                        | CAS-No.: 32210-23-4<br>EC-No.: 250-954-9                                                            | $\geq 0.1 - < 1$ | Skin Sens. 1B, H317<br>Aquatic Chronic 2, H411                                                                                                                                                                                                                                                    |
| N,N-dimethyl-C12-14-(even numbered)-alkyl-1-amines                    | CAS-No.: 84649-84-3<br>EC-No.: 283-464-9                                                            | $< 0.1$          | Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight)<br>Skin Corr. 1B, H314<br>Aquatic Acute 1, H400 (M=100)<br>Aquatic Chronic 1, H410                                                                                                                                                           |
| DIPHENYL ETHER<br>substance with a Community workplace exposure limit | CAS-No.: 101-84-8<br>EC-No.: 202-981-2                                                              | $< 0.1$          | Eye Irrit. 2, H319<br>Aquatic Acute 1, H400<br>Aquatic Chronic 3, H412                                                                                                                                                                                                                            |
| 2-methylisothiazol-3(2H)-one                                          | CAS-No.: 2682-20-4<br>EC-No.: 220-239-6<br>EC Index-No.: 613-326-00-9<br>REACH-no: 01-2120764690-50 | $< 0.1$          | Acute Tox. 2 (Inhalation), H330 (ATE=0.05 mg/l/4h)<br>Acute Tox. 3 (Dermal), H311 (ATE=300 mg/kg bodyweight)<br>Acute Tox. 3 (Oral), H301 (ATE=100 mg/kg bodyweight)<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Skin Sens. 1A, H317<br>Aquatic Acute 1, H400 (M=10)<br>Aquatic Chronic 1, H410 |

### Specific concentration limits:

| Name                         | Product identifier                                                                                  | Specific concentration limits                     |
|------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------|
| 2-methylisothiazol-3(2H)-one | CAS-No.: 2682-20-4<br>EC-No.: 220-239-6<br>EC Index-No.: 613-326-00-9<br>REACH-no: 01-2120764690-50 | ( 0.0015 $\leq$ C $\leq$ 100) Skin Sens. 1A, H317 |

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                       |                                                                                                                                                      |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| First-aid measures general            | : As a general rule, in case of doubt or if symptoms persist, always call a doctor. Never give anything by mouth to an unconscious person.           |
| 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. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.                   |
| First-aid measures after eye contact  | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. |

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First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell. Rinse mouth. Do not induce vomiting.

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

Symptoms/effects after skin contact : May cause an allergic skin reaction.  
Symptoms/effects after eye contact : Serious damage to eyes.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.  
Hazardous decomposition products in case of fire : Toxic fumes may be released. Do not breathe in smoke.

### 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. Avoid contact with skin and eyes.

#### 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. Prevent entry into storm water systems or watercourses.

### 6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.  
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.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.  
Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

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|                            |                                                                 |
|----------------------------|-----------------------------------------------------------------|
| Storage temperature        | : 5 – 35 °C                                                     |
| Storage area               | : Store away from heat.                                         |
| Special rules on packaging | : Keep only in original container. Store in a closed container. |

### 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

| Inorganic peroxides (7722-84-1)               |                                       |
|-----------------------------------------------|---------------------------------------|
| United Kingdom - Occupational Exposure Limits |                                       |
| Local name                                    | Hydrogen peroxide                     |
| WEL TWA (OEL TWA) [1]                         | 1.4 mg/m <sup>3</sup>                 |
| WEL TWA (OEL TWA) [2]                         | 1 ppm                                 |
| WEL STEL (OEL STEL)                           | 2.8 mg/m <sup>3</sup>                 |
| WEL STEL (OEL STEL) [ppm]                     | 2 ppm                                 |
| Regulatory reference                          | EH40/2005 (Fourth edition, 2020). HSE |
| Ethanol (64-17-5)                             |                                       |
| United Kingdom - Occupational Exposure Limits |                                       |
| Local name                                    | Ethanol                               |
| WEL TWA (OEL TWA) [1]                         | 1920 mg/m <sup>3</sup>                |
| WEL TWA (OEL TWA) [2]                         | 1000 ppm                              |
| Regulatory reference                          | EH40/2005 (Fourth edition, 2020). HSE |
| CAMPHOR (76-22-2)                             |                                       |
| Ireland - Occupational Exposure Limits        |                                       |
| Local name                                    | Bornan-2-one [Camphor, synthetic]     |
| OEL TWA [1]                                   | 12 mg/m <sup>3</sup>                  |
| OEL TWA [2]                                   | 2 ppm                                 |
| OEL STEL                                      | 18 mg/m <sup>3</sup>                  |
| OEL STEL [ppm]                                | 3 ppm                                 |
| Regulatory reference                          | Chemical Agents Code of Practice 2021 |
| United Kingdom - Occupational Exposure Limits |                                       |
| Local name                                    | Bornan-2-one                          |
| WEL TWA (OEL TWA) [1]                         | 13 mg/m <sup>3</sup>                  |
| WEL TWA (OEL TWA) [2]                         | 2 ppm                                 |
| WEL STEL (OEL STEL)                           | 19 mg/m <sup>3</sup>                  |
| WEL STEL (OEL STEL) [ppm]                     | 3 ppm                                 |
| Regulatory reference                          | EH40/2005 (Fourth edition, 2020). HSE |

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### DIPHENYL ETHER (101-84-8)

#### EU - Indicative Occupational Exposure Limit (IOEL)

|                      |                                    |
|----------------------|------------------------------------|
| Local name           | Diphenyl ether                     |
| IOEL TWA             | 7 mg/m <sup>3</sup>                |
| IOEL STEL            | 14 mg/m <sup>3</sup>               |
| IOEL STEL [ppm]      | 2 ppm                              |
| Regulatory reference | COMMISSION DIRECTIVE (EU) 2017/164 |

#### United Kingdom - Occupational Exposure Limits

|                           |                                       |
|---------------------------|---------------------------------------|
| Local name                | Diphenyl ether                        |
| WEL TWA (OEL TWA) [1]     | 7 mg/m <sup>3</sup>                   |
| WEL TWA (OEL TWA) [2]     | 1 ppm                                 |
| WEL STEL (OEL STEL)       | 14 mg/m <sup>3</sup>                  |
| WEL STEL (OEL STEL) [ppm] | 2 ppm                                 |
| Regulatory reference      | EH40/2005 (Fourth edition, 2020). HSE |

#### 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

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

##### Appropriate engineering controls:

Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

#### 8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



##### 8.2.2.1. Eye and face protection

##### Eye protection:

Safety glasses. Use eye protection according to EN 166, designed to protect against liquid splashes. Avoid contact with eyes. In the event of high danger, protect the face with a face shield. Prescription glasses are not considered as protection. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure

#### Eye protection

| Type           | Field of application | Characteristics   | Standard |
|----------------|----------------------|-------------------|----------|
| Safety goggles |                      | With side shields | EN 166   |

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### 8.2.2.2. Skin protection

#### Hand protection:

Protective gloves. Gloves must be selected according to the application and duration of use at the workstation. Chemical resistant gloves (according to European standard EN 374 or equivalent)

| Hand protection                       |          |            |                |             |          |
|---------------------------------------|----------|------------|----------------|-------------|----------|
| Type                                  | Material | Permeation | Thickness (mm) | Penetration | Standard |
| Disposable gloves,<br>Reusable gloves |          |            |                |             | EN 374   |

#### Other skin protection

#### Materials for protective clothing:

Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner. Avoid contact with skin. Work clothing worn by personnel shall be laundered regularly. Protective clothing is not mandatory, but if your protocol requires it, use suitable chemical protective clothing

### 8.2.2.3. Respiratory protection

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Avoid release to the environment.

#### Other information:

Use personal protective equipment that is clean and has been properly maintained. Store personal protective equipment in a clean place, away from the work area. You must check the condition of the protections before each use. Used at the recommended dosage dose on the label, the product is not classified and does not require the use of PPE. The solution remains a chemical to be handled with care.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|                                                 |                    |
|-------------------------------------------------|--------------------|
| Physical state                                  | : Liquid           |
| Colour                                          | : Colourless.      |
| Appearance                                      | : Clear.           |
| Odour                                           | : Synthetic scent. |
| Odour threshold                                 | : Not available    |
| Melting point                                   | : Not applicable   |
| Freezing point                                  | : Not available    |
| Boiling point                                   | : Not available    |
| Flammability                                    | : Non flammable.   |
| Explosive limits                                | : Not available    |
| Lower explosion limit                           | : Not available    |
| Upper explosion limit                           | : Not available    |
| Flash point                                     | : > 93 °C          |
| Auto-ignition temperature                       | : Not available    |
| Decomposition temperature                       | : Not available    |
| pH                                              | : 7 – 8            |
| Viscosity, kinematic                            | : Not available    |
| Solubility                                      | : Not available    |
| Partition coefficient n-octanol/water (Log Kow) | : Not available    |
| Vapour pressure                                 | : Not available    |
| Vapour pressure at 50°C                         | : Not available    |
| Density                                         | : 0.99 – 1 g/ml    |
| Relative density                                | : Not available    |
| Relative vapour density at 20°C                 | : Not available    |

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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 : 3.88 % (EU Directive 2010/75)

## 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.

### 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

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 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

#### 2-Propylheptyl alcohol, ethoxylated (10 EO) (160875-66-1)

|           |                        |
|-----------|------------------------|
| LD50 oral | > 300 mg/kg bodyweight |
|-----------|------------------------|

#### Amines, C12-14-alkyldimethyl, N-oxides (308062-28-4)

|               |            |
|---------------|------------|
| LD50 oral rat | 1064 mg/kg |
|---------------|------------|

#### Ethanol (64-17-5)

|                                   |                                                                                                                                    |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| LD50 oral rat                     | 15010 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 14450 - 15560 |
| LD50 oral                         | 10470 mg/kg bodyweight                                                                                                             |
| LD50 dermal                       | 15800 mg/kg bodyweight                                                                                                             |
| LC50 Inhalation - Rat (Dust/Mist) | > 99999 mg/l                                                                                                                       |

#### 2-methylisothiazol-3(2H)-one (2682-20-4)

|                    |                |
|--------------------|----------------|
| LD50 oral rat      | 66 – 105 mg/kg |
| LD50 dermal rabbit | 200 mg/kg      |

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|                                                                        |                                                                                                                                                                                                                    |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2-methylisothiazol-3(2H)-one (2682-20-4)</b>                        |                                                                                                                                                                                                                    |
| LC50 Inhalation - Rat (Dust/Mist)                                      | 0.33 mg/l                                                                                                                                                                                                          |
| <b>d-Limonene (5989-27-5)</b>                                          |                                                                                                                                                                                                                    |
| LD50 oral rat                                                          | > 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)                                                                            |
| LD50 oral                                                              | 4400 mg/kg bodyweight                                                                                                                                                                                              |
| LD50 dermal                                                            | > 2000 mg/kg bodyweight                                                                                                                                                                                            |
| <b>DIPHENYL ETHER (101-84-8)</b>                                       |                                                                                                                                                                                                                    |
| LD50 oral rat                                                          | 2830 mg/kg bodyweight Animal: rat, Animal sex: female, 95% CL: 2,49 - 3,21                                                                                                                                         |
| Skin corrosion/irritation                                              | : Not classified<br>pH: 7 – 8                                                                                                                                                                                      |
| <b>N,N-dimethyl-C12-14-(even numbered)-alkyl-1-amines (84649-84-3)</b> |                                                                                                                                                                                                                    |
| pH                                                                     | 10.5 Temp.: 20 °C Concentration: 5 other:% (m/m)                                                                                                                                                                   |
| Serious eye damage/irritation                                          | : Causes serious eye damage.<br>pH: 7 – 8                                                                                                                                                                          |
| <b>N,N-dimethyl-C12-14-(even numbered)-alkyl-1-amines (84649-84-3)</b> |                                                                                                                                                                                                                    |
| pH                                                                     | 10.5 Temp.: 20 °C Concentration: 5 other:% (m/m)                                                                                                                                                                   |
| Respiratory or skin sensitisation                                      | : May cause an allergic skin reaction.                                                                                                                                                                             |
| Germ cell mutagenicity                                                 | : Not classified                                                                                                                                                                                                   |
| Carcinogenicity                                                        | : Not classified                                                                                                                                                                                                   |
| <b>Amines, C12-14-alkyldimethyl, N-oxides (308062-28-4)</b>            |                                                                                                                                                                                                                    |
| NOAEL (chronic, oral, animal/male, 2 years)                            | 88 mg/kg bodyweight Rat                                                                                                                                                                                            |
| NOAEL (chronic, oral, animal/female, 2 years)                          | 88 mg/kg bodyweight Rat                                                                                                                                                                                            |
| <b>N,N-dimethyl-C12-14-(even numbered)-alkyl-1-amines (84649-84-3)</b> |                                                                                                                                                                                                                    |
| NOAEL (chronic, oral, animal/male, 2 years)                            | 42.3 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Remarks on results: other:Effect type: toxicity (migrated information)   |
| NOAEL (chronic, oral, animal/female, 2 years)                          | 52.6 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Remarks on results: other:Effect type: toxicity (migrated information) |
| Reproductive toxicity                                                  | : Not classified                                                                                                                                                                                                   |
| STOT-single exposure                                                   | : Not classified                                                                                                                                                                                                   |
| STOT-repeated exposure                                                 | : Not classified                                                                                                                                                                                                   |
| <b>Ethanol (64-17-5)</b>                                               |                                                                                                                                                                                                                    |
| NOAEL (subchronic, oral, animal/male, 90 days)                         | < 9700 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)                                                                                           |
| NOAEL (subchronic, oral, animal/female, 90 days)                       | > 9400 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)                                                                                         |
| <b>DIPHENYL ETHER (101-84-8)</b>                                       |                                                                                                                                                                                                                    |
| LOAEL (dermal, rat/rabbit, 90 days)                                    | 100 mg/kg bodyweight Animal: rat                                                                                                                                                                                   |
| NOAEL (dermal, rat/rabbit, 90 days)                                    | 1000 mg/kg bodyweight Animal: rat                                                                                                                                                                                  |
| Aspiration hazard                                                      | : Not classified                                                                                                                                                                                                   |
| <b>DIPHENYL ETHER (101-84-8)</b>                                       |                                                                                                                                                                                                                    |
| Viscosity, kinematic                                                   | 2.419 mm²/s                                                                                                                                                                                                        |

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### 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.  
Hazardous to the aquatic environment, short-term (acute) : Not classified  
Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.  
Not rapidly degradable

#### Amines, C12-14-alkyldimethyl, N-oxides (308062-28-4)

|                      |            |
|----------------------|------------|
| LC50 - Fish [1]      | 2.67 mg/l  |
| EC50 - Crustacea [1] | 3.1 mg/l   |
| EC50 72h - Algae [1] | 0.143 mg/l |
| NOEC chronic algae   | 0.067 mg/l |

#### N,N-dimethyl-C12-14-(even numbered)-alkyl-1-amines (84649-84-3)

|                |                                                                     |
|----------------|---------------------------------------------------------------------|
| LOEC (chronic) | 0.108 mg/l Test organisms (species): Daphnia magna Duration: '21 d' |
|----------------|---------------------------------------------------------------------|

#### Ethanol (64-17-5)

|                                    |                                                                  |
|------------------------------------|------------------------------------------------------------------|
| LC50 - Fish [1]                    | 14200 mg/l                                                       |
| EC50 - Other aquatic organisms [1] | 5012 mg/l waterflea                                              |
| EC50 - Other aquatic organisms [2] | 275 mg/l                                                         |
| NOEC (chronic)                     | 9.6 mg/l Test organisms (species): Daphnia magna Duration: '9 d' |

#### 2-methylisothiazol-3(2H)-one (2682-20-4)

|                      |                                 |
|----------------------|---------------------------------|
| LC50 - Fish [1]      | 0.07 – 0.19 mg/l Source: ECOTOX |
| EC50 - Crustacea [1] | 0.18 mg/l                       |

#### d-Limonene (5989-27-5)

|                                    |                                                                                                                                                      |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| LC50 - Fish [1]                    | 0.72 mg/l                                                                                                                                            |
| EC50 - Crustacea [1]               | 0.36 mg/l Test organisms (species): Daphnia magna                                                                                                    |
| EC50 - Other aquatic organisms [1] | 0.36 mg/l waterflea                                                                                                                                  |
| EC50 72h - Algae [1]               | ≈ 8 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)                                                  |
| NOEC (chronic)                     | 0.115 mg/l Test organisms (species): other:For freshwater invertebrates, species frequently include Daphnia magna or Daphnia pulex. Duration: '16 d' |

#### 4-TERT-BUTYLCYCLOHEXYL ACETATE (32210-23-4)

|                      |                                                                                                    |
|----------------------|----------------------------------------------------------------------------------------------------|
| LC50 - Fish [1]      | 8.6 mg/l Test organisms (species): Cyprinus carpio                                                 |
| EC50 - Crustacea [1] | 5.3 mg/l Test organisms (species): Daphnia magna                                                   |
| EC50 72h - Algae [1] | 22 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |

#### DIPHENYL ETHER (101-84-8)

|                 |                                                                                         |
|-----------------|-----------------------------------------------------------------------------------------|
| LC50 - Fish [1] | 4.2 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) |
|-----------------|-----------------------------------------------------------------------------------------|

# DNO HIGHLAND

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### DIPHENYL ETHER (101-84-8)

EC50 - Crustacea [1]

1.96 mg/l Test organisms (species): Daphnia magna

### 12.2. Persistence and degradability

#### DNO HIGHLAND

Persistence and degradability

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.

### Amines, C12-14-alkyldimethyl, N-oxides (308062-28-4)

Persistence and degradability

Readily biodegradable (OECD).

### 12.3. Bioaccumulative potential

#### Ethanol (64-17-5)

Partition coefficient n-octanol/water (Log Pow)

-0.32

#### 2-methylisothiazol-3(2H)-one (2682-20-4)

Partition coefficient n-octanol/water (Log Pow)

-0.49

#### d-Limonene (5989-27-5)

Partition coefficient n-octanol/water (Log Pow)

4.38

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods

Sewage disposal recommendations

Product/Packaging disposal recommendations

- : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- : Disposal must be done according to official regulations.
- : Empty container completely. Keep label(s) on container. Disposal must be done according to official regulations. Prevent entry into storm water systems or watercourses. Avoid release to the environment. Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

## SECTION 14: Transport information

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

# DNO HIGHLAND

## Safety Data Sheet

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

| ADR                                     | IMDG           | IATA           | ADN            | RID            |
|-----------------------------------------|----------------|----------------|----------------|----------------|
| <b>14.1. UN number or ID number</b>     |                |                |                |                |
| Not applicable                          | Not applicable | Not applicable | Not applicable | Not applicable |
| <b>14.2. UN proper shipping name</b>    |                |                |                |                |
| Not applicable                          | Not applicable | Not applicable | Not applicable | Not applicable |
| <b>14.3. Transport hazard class(es)</b> |                |                |                |                |
| Not applicable                          | Not applicable | Not applicable | Not applicable | Not applicable |
| <b>14.4. Packing group</b>              |                |                |                |                |
| Not applicable                          | Not applicable | Not applicable | Not applicable | Not applicable |
| <b>14.5. Environmental hazards</b>      |                |                |                |                |
| Not applicable                          | Not applicable | Not applicable | Not applicable | Not applicable |
| No supplementary information available  |                |                |                |                |

### 14.6. Special precautions for user

#### Overland transport

Not applicable

#### Transport by sea

Not applicable

#### Air transport

Not applicable

#### Inland waterway transport

Not applicable

#### Rail transport

Not applicable

### 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)

# DNO HIGHLAND

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### 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)

### VOC Directive (2004/42)

VOC content : 3.88 % (EU Directive 2010/75)

### Biocide Regulation (528/2012)

Child-resistant fastening : Not applicable

Tactile warning : Not applicable

### Detergent Regulation (648/2004)

#### Allergenic fragrances > 0.01 %:

LIMONENE

BENZYL SALICYLATE

HEXYL CINNAMAL

CITRAL

LINALOOL

COUMARIN

| Labelling of contents |       |
|-----------------------|-------|
| Component             | %     |
| non-ionic surfactants | 5-15% |
| disinfectants         |       |
| METHYLISOTHIAZOLINONE |       |
| BENZISOTHIAZOLINONE   |       |
| perfumes              |       |
| LIMONENE              |       |
| BENZYL SALICYLATE     |       |
| HEXYL CINNAMAL        |       |
| CITRAL                |       |
| COUMARIN              |       |
| LINALOOL              |       |

### Explosives Precursors Regulation (2019/1148)

Contains substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Please see [https://ec.europa.eu/home-affairs/system/files/2021-11/list\\_of\\_competent\\_authorities\\_and\\_national\\_contact\\_points\\_en.pdf](https://ec.europa.eu/home-affairs/system/files/2021-11/list_of_competent_authorities_and_national_contact_points_en.pdf)

### 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)

#### 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

| 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             |

# DNO HIGHLAND

## Safety Data Sheet

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

| Abbreviations and acronyms: |                                                                              |
|-----------------------------|------------------------------------------------------------------------------|
| ATE                         | Acute Toxicity Estimate                                                      |
| BCF                         | Bioconcentration factor                                                      |
| BLV                         | Biological limit value                                                       |
| BOD                         | Biochemical oxygen demand (BOD)                                              |
| COD                         | Chemical oxygen demand (COD)                                                 |
| DMEL                        | Derived Minimal Effect level                                                 |
| DNEL                        | Derived-No Effect Level                                                      |
| EC-No.                      | European Community number                                                    |
| EC50                        | Median effective concentration                                               |
| EN                          | European Standard                                                            |
| 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                       |
| OEL                         | Occupational Exposure Limit                                                  |
| PBT                         | Persistent Bioaccumulative Toxic                                             |
| PNEC                        | Predicted No-Effect Concentration                                            |
| RID                         | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS                         | Safety Data Sheet                                                            |
| STP                         | Sewage treatment plant                                                       |
| ThOD                        | Theoretical oxygen demand (ThOD)                                             |
| TLM                         | Median Tolerance Limit                                                       |
| VOC                         | Volatile Organic Compounds                                                   |
| CAS-No.                     | Chemical Abstract Service number                                             |
| N.O.S.                      | Not Otherwise Specified                                                      |
| vPvB                        | Very Persistent and Very Bioaccumulative                                     |
| ED                          | Endocrine disrupting properties                                              |

Other information

: Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations. The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions. It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

# DNO HIGHLAND

## Safety Data Sheet

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

| Full text of H- and EUH-statements: |                                                                   |
|-------------------------------------|-------------------------------------------------------------------|
| Acute Tox. 2 (Inhalation)           | Acute toxicity (inhal.), Category 2                               |
| Acute Tox. 3 (Dermal)               | Acute toxicity (dermal), Category 3                               |
| Acute Tox. 3 (Oral)                 | Acute toxicity (oral), Category 3                                 |
| 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                     |
| Eye Irrit. 2                        | Serious eye damage/eye irritation, Category 2                     |
| Flam. Liq. 2                        | Flammable liquids, Category 2                                     |
| Flam. Liq. 3                        | Flammable liquids, Category 3                                     |
| H225                                | Highly flammable liquid and vapour.                               |
| H226                                | Flammable liquid and vapour.                                      |
| H301                                | Toxic if swallowed.                                               |
| H302                                | Harmful if swallowed.                                             |
| H311                                | Toxic 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.             |
| 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            |
| Skin Irrit. 2                       | Skin corrosion/irritation, Category 2                             |
| Skin Sens. 1                        | Skin sensitisation, Category 1                                    |
| Skin Sens. 1A                       | Skin sensitisation, category 1A                                   |
| Skin Sens. 1B                       | Skin sensitisation, category 1B                                   |

The classification complies with : ATP 12

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.