

# SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2020/878

## NOVELEC

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

#### 1.1. Product identifier

Product name : NOVELEC  
Registration number REACH : Not applicable (mixture)  
Product type REACH : Mixture

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

##### 1.2.1 Relevant identified uses

Detergent according to Regulation (EC) No 648/2004

##### 1.2.2 Uses advised against

No uses advised against known

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

##### Supplier of the safety data sheet

Novatio\*  
Industrielaan 5B  
B-2250 Olen  
☎ +32 14 25 76 40  
☎ +32 14 22 02 66  
info@novatio.be  
\*NOVATIO is a registered trademark of Novatech International N.V.

##### Manufacturer of the product

Novatech International N.V.  
Industrielaan 5B  
B-2250 Olen  
☎ +32 14 85 97 37  
☎ +32 14 85 97 38  
info@novatech.be

#### 1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) :  
+32 14 58 45 45 (BIG)

### SECTION 2: Hazards identification

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

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

| Class           | Category   | Hazard statements                                      |
|-----------------|------------|--|
| Aerosol         | category 1 | H222: Extremely flammable aerosol.                     |
| Aerosol         | category 1 | H229: Pressurised container: May burst if heated.      |
| Skin Irrit.     | category 2 | H315: Causes skin irritation.                          |
| Eye Irrit.      | category 2 | H319: Causes serious eye irritation.                   |
| STOT SE         | category 3 | H336: May cause drowsiness or dizziness.               |
| Aquatic Chronic | category 2 | H411: Toxic to aquatic life with long lasting effects. |

#### 2.2. Label elements



Contains: hydrocarbons, C7, n-alkanes, isoalkanes, cyclics; propan-2-ol; hydrocarbons, C6, isoalkanes, < 5% n-hexane.

Signal word Danger

##### H-statements

|      |  |
|------|--|
| H222 | Extremely flammable aerosol.                     |
| H229 | Pressurised container: May burst if heated.      |
| H315 | Causes skin irritation.                          |
| H319 | Causes serious eye irritation.                   |
| H336 | May cause drowsiness or dizziness.               |
| H411 | Toxic to aquatic life with long lasting effects. |

##### P-statements

Created by: Brandweerinformatiecentrum voor gevaarlijke stoffen vzw (BIG)

Technische Schoolstraat 43 A, B-2440 Geel

<http://www.big.be>

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|             |  |
|-------------|--|
| P210        | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P211        | Do not spray on an open flame or other ignition source.  |
| P251        | Do not pierce or burn, even after use.   |
| P280        | Wear protective gloves, protective clothing and eye protection/face protection.                |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                     |
| P410 + P412 | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122°F.                   |

## 2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard  
Caution! Substance is absorbed through the skin

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name<br>REACH Registration No  | CAS No<br>EC No<br>List No | Conc. (C) | Classification according to CLP  | Note           | Remark      | M-factors and<br>ATE   |
|--|----------------------------|-----------|--|----------------|-------------|--|
| hydrocarbons, C7, n-alkanes, isoalkanes, cyclics<br>01-2119475515-33 | 927-510-4                  | C≤40%     | Flam. Liq. 2; H225<br>Asp. Tox. 1; H304<br>Skin Irrit. 2; H315<br>STOT SE 3; H336<br>Aquatic Chronic 2; H411   | (1)(2)(10)     | Constituent |  |
| propan-2-ol<br>01-2119457558-25                                      | 67-63-0<br>200-661-7       | C≤30%     | Flam. Liq. 2; H225<br>Eye Irrit. 2; H319<br>STOT SE 3; H336  | (1)(2)(10)     | Constituent |  |
| hydrocarbons, C6, isoalkanes, < 5% n-hexane<br>01-2119484651-34      | 931-254-9                  | C≤30%     | Flam. Liq. 2; H225<br>Asp. Tox. 1; H304<br>Skin Irrit. 2; H315<br>STOT SE 3; H336<br>Aquatic Chronic 2; H411   | (1)(10)        | Constituent |  |
| n-hexane<br>01-2119480412-44   | 110-54-3<br>203-777-6      | C≤2%      | Flam. Liq. 2; H225<br>Repr. 2; H361f<br>Asp. Tox. 1; H304<br>STOT RE 2; H373<br>Skin Irrit. 2; H315<br>STOT SE 3; H336<br>Aquatic Chronic 2; H411<br>STOT RE 2; H373: C≥5%, (CLP Annex VI (ATP 0)) | (1)(2)(10)     | Constituent |  |
| butane<br>01-2119474691-32   | 106-97-8<br>203-448-7      | C≤0.7%    | Flam. Gas 1A; H220<br>Press. Gas - Liquefied gas;<br>H280  | (1)(2)(10)(21) | Propellant  |  |
| propane<br>01-2119486944-21  | 74-98-6<br>200-827-9       | C≤0.4%    | Flam. Gas 1A; H220<br>Press. Gas - Liquefied gas;<br>H280  | (1)(2)(10)     | Propellant  |  |
| cyclohexane<br>01-2119463273-41                                      | 110-82-7<br>203-806-2      | C≤0.4%    | Flam. Liq. 2; H225<br>Asp. Tox. 1; H304<br>Skin Irrit. 2; H315<br>STOT SE 3; H336<br>Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410  | (1)(2)(10)     | Constituent | M: 1 (Acute, ECHA (registration dossier))<br>M: 1 (Chronic, ECHA (registration dossier)) |

(1) For H- and EUH-statements in full: see section 16

(2) Substance with a Community workplace exposure limit

(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

(21) 1,3-butadiene <0.1%

Note: numbers 9xx-xxx-x are provisional list numbers assigned by Echa pending an official EC inventory number

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General:

Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

#### After inhalation:

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Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.

#### After skin contact:

If possible, wipe up/dry remove chemical. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service.

#### After eye contact:

Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult a doctor/medical service.

#### After ingestion:

Rinse mouth with water. If you feel unwell, consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

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

### 4.2.1 Acute symptoms

#### After inhalation:

Headache. Dizziness. Narcosis.

#### After skin contact:

Tingling/irritation of the skin.

#### After eye contact:

Irritation of the eye tissue.

#### After ingestion:

No effects known.

### 4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### 5.1.1 Suitable extinguishing media:

Small fire: Water, Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting CO2 extinguisher.

Major fire: Quantities of water.

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

Upon combustion: CO and CO2 are formed.

### 5.3. Advice for firefighters

#### 5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistent risk of physical explosion. Take account of environmentally hazardous firefighting water.

#### 5.3.2 Special protective equipment for fire-fighters:

Gloves (EN 374). Protective goggles (EN 166). Head/neck protection. Protective clothing (EN 14605 or EN 13034). Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment.

#### 6.1.1 Protective equipment for non-emergency personnel

See section 8.2

#### 6.1.2 Protective equipment for emergency responders

Gloves (EN 374). Protective goggles (EN 166). Head/neck protection. Protective clothing (EN 14605 or EN 13034).

#### Suitable protective clothing

See section 8.2

### 6.2. Environmental precautions

Dam up the liquid spill.

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

Take up liquid spill into absorbent material. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

See section 13.

## SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 7.1. Precautions for safe handling

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe normal hygiene standards. Remove contaminated clothing immediately.

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

### 7.2.1 Safe storage requirements:

Storage temperature: < 50 °C. Meet the legal requirements. Store in a cool area. Protect against frost. Fireproof storeroom. Keep out of direct sunlight. Keep container in a well-ventilated place.

### 7.2.2 Keep away from:

Heat sources, ignition sources.

### 7.2.3 Suitable packaging material:

Aerosol.

### 7.2.4 Non suitable packaging material:

No data available

## 7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 Occupational exposure

##### a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

#### EU

|             |   |                       |
|-------------|---|-----------------------|
| Cyclohexane | Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value) | 200 ppm               |
|             | Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value) | 700 mg/m <sup>3</sup> |
| n-Hexane    | Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value) | 20 ppm                |
|             | Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value) | 72 mg/m <sup>3</sup>  |

#### Belgium

|  |  |                        |
|--|--|------------------------|
| Alcool isopropylique   | Time-weighted average exposure limit 8 h | 200 ppm                |
|  | Time-weighted average exposure limit 8 h | 500 mg/m <sup>3</sup>  |
|  | Short time value                         | 400 ppm                |
|  | Short time value                         | 1000 mg/m <sup>3</sup> |
| Butane, tous isomères: n-butane                                | Short time value                         | 980 ppm                |
|  | Short time value                         | 2370 mg/m <sup>3</sup> |
| Cyclohexane  | Time-weighted average exposure limit 8 h | 100 ppm                |
|  | Time-weighted average exposure limit 8 h | 350 mg/m <sup>3</sup>  |
| Hydrocarbures aliphatiques sous forme gazeuse: (Alcanes C1-C3) | Time-weighted average exposure limit 8 h | 1000 ppm               |
| n-Hexane   | Time-weighted average exposure limit 8 h | 20 ppm                 |
|  | Time-weighted average exposure limit 8 h | 72 mg/m <sup>3</sup>   |

#### The Netherlands

|             |   |                        |
|-------------|---|------------------------|
| Cyclohexaan | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 200 ppm                |
|             | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 700 mg/m <sup>3</sup>  |
|             | Short time value (Public occupational exposure limit value)                         | 400 ppm                |
|             | Short time value (Public occupational exposure limit value)                         | 1400 mg/m <sup>3</sup> |
| n-Hexaan    | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 20 ppm                 |
|             | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 72 mg/m <sup>3</sup>   |
|             | Short time value (Public occupational exposure limit value)                         | 40 ppm                 |
|             | Short time value (Public occupational exposure limit value)                         | 144 mg/m <sup>3</sup>  |

#### France

|  |  |                        |
|--|--|------------------------|
| Alcool isopropylique                           | Short time value (VL: Valeur non réglementaire indicative)                         | 400 ppm                |
|  | Short time value (VL: Valeur non réglementaire indicative)                         | 980 mg/m <sup>3</sup>  |
| Cyclohexane                                    | Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) | 200 ppm                |
|  | Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) | 700 mg/m <sup>3</sup>  |
|  | Short time value (VL: Valeur non réglementaire indicative)                         | 375 ppm                |
|  | Short time value (VL: Valeur non réglementaire indicative)                         | 1300 mg/m <sup>3</sup> |
| Hydrocarbures en C6-C12 (ensemble des vapeurs) | Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) | 1000 mg/m <sup>3</sup> |

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|  |  |                        |
|--|--|------------------------|
| Hydrocarbures en C6-C12 (ensemble des vapeurs) | Short time value (VL: Valeur non réglementaire indicative)                         | 1500 mg/m <sup>3</sup> |
| n-Butane                                       | Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) | 800 ppm                |
|  | Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) | 1900 mg/m <sup>3</sup> |
| n-Hexane                                       | Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) | 20 ppm                 |
|  | Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) | 72 mg/m <sup>3</sup>   |

## Germany

|  |   |                        |
|--|---|------------------------|
| Butan  | Time-weighted average exposure limit 8 h (TRGS 900) | 1000 ppm               |
|  | Time-weighted average exposure limit 8 h (TRGS 900) | 2400 mg/m <sup>3</sup> |
| Cyclohexan   | Time-weighted average exposure limit 8 h (TRGS 900) | 200 ppm                |
|  | Time-weighted average exposure limit 8 h (TRGS 900) | 700 mg/m <sup>3</sup>  |
| Kohlenwasserstoffgemische, Verwendung als Lösemittel (Lösemittelkohlenwasserstoffe), additiv-frei: C6-C8 Aliphaten | Time-weighted average exposure limit 8 h (TRGS 900) |                        |
|  | Time-weighted average exposure limit 8 h (TRGS 900) |                        |
| n-Hexan  | Time-weighted average exposure limit 8 h (TRGS 900) | 50 ppm                 |
|  | Time-weighted average exposure limit 8 h (TRGS 900) | 180 mg/m <sup>3</sup>  |
| Propan   | Time-weighted average exposure limit 8 h (TRGS 900) | 1000 ppm               |
|  | Time-weighted average exposure limit 8 h (TRGS 900) | 1800 mg/m <sup>3</sup> |
| Propan-2-ol  | Time-weighted average exposure limit 8 h (TRGS 900) | 200 ppm                |
|  | Time-weighted average exposure limit 8 h (TRGS 900) | 500 mg/m <sup>3</sup>  |

## Austria

|   |                               |                        |
|---|-------------------------------|------------------------|
| 2-Propanol Kurzzeitwert für Großguss                      | Tagesmittelwert (MAK)         | 200 ppm                |
|   | Tagesmittelwert (MAK)         | 500 mg/m <sup>3</sup>  |
|   | Kurzzeitwert 30(Miw) 4x (MAK) | 800 ppm                |
|   | Kurzzeitwert 30(Miw) 4x (MAK) | 2000 mg/m <sup>3</sup> |
| 2-Propanol  | Tagesmittelwert (MAK)         | 200 ppm                |
|   | Tagesmittelwert (MAK)         | 500 mg/m <sup>3</sup>  |
|   | Kurzzeitwert 15(Miw) 4x (MAK) | 800 ppm                |
|   | Kurzzeitwert 15(Miw) 4x (MAK) | 2000 mg/m <sup>3</sup> |
| Butan (beide Isomeren): n-Butan (R 600) Isobutan (R 600a) | Tagesmittelwert (MAK)         | 800 ppm                |
|   | Tagesmittelwert (MAK)         | 1900 mg/m <sup>3</sup> |
|   | Kurzzeitwert 60(Mow) 3x (MAK) | 1600 ppm               |
|   | Kurzzeitwert 60(Mow) 3x (MAK) | 3800 mg/m <sup>3</sup> |
| Cyclohexan  | Tagesmittelwert (MAK)         | 200 ppm                |
|   | Tagesmittelwert (MAK)         | 700 mg/m <sup>3</sup>  |
|   | Kurzzeitwert 15(Miw) 4x (MAK) | 800 ppm                |
|   | Kurzzeitwert 15(Miw) 4x (MAK) | 2800 mg/m <sup>3</sup> |
| n-Hexan   | Tagesmittelwert (MAK)         | 20 ppm                 |
|   | Tagesmittelwert (MAK)         | 72 mg/m <sup>3</sup>   |
|   | Kurzzeitwert 15(Miw) 4x (MAK) | 80 ppm                 |
|   | Kurzzeitwert 15(Miw) 4x (MAK) | 288 mg/m <sup>3</sup>  |
| Propan (R 290)  | Tagesmittelwert (MAK)         | 1000 ppm               |
|   | Tagesmittelwert (MAK)         | 1800 mg/m <sup>3</sup> |
|   | Kurzzeitwert 60(Mow) 3x (MAK) | 2000 ppm               |
|   | Kurzzeitwert 60(Mow) 3x (MAK) | 3600 mg/m <sup>3</sup> |

## UK

|             |   |                        |
|-------------|---|------------------------|
| Butane      | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 600 ppm                |
|             | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 1450 mg/m <sup>3</sup> |
|             | Short time value (Workplace exposure limit (EH40/2005))                         | 750 ppm                |
|             | Short time value (Workplace exposure limit (EH40/2005))                         | 1810 mg/m <sup>3</sup> |
| Cyclohexane | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 100 ppm                |

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|             |   |                        |
|-------------|---|------------------------|
| Cyclohexane | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 350 mg/m <sup>3</sup>  |
|             | Short time value (Workplace exposure limit (EH40/2005))                         | 300 ppm                |
|             | Short time value (Workplace exposure limit (EH40/2005))                         | 1050 mg/m <sup>3</sup> |
| n-Hexane    | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 20 ppm                 |
|             | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 72 mg/m <sup>3</sup>   |
| Propan-2-ol | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 400 ppm                |
|             | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 999 mg/m <sup>3</sup>  |
|             | Short time value (Workplace exposure limit (EH40/2005))                         | 500 ppm                |
|             | Short time value (Workplace exposure limit (EH40/2005))                         | 1250 mg/m <sup>3</sup> |

## USA (TLV-ACGIH)

|                 |  |          |
|-----------------|--|----------|
| 2-propanol      | Time-weighted average exposure limit 8 h (TLV - Adopted Value) | 200 ppm  |
|                 | Short time value (TLV - Adopted Value)                         | 400 ppm  |
| Butane, isomers | Short time value (TLV - Adopted Value)                         | 1000 ppm |
| Cyclohexane     | Time-weighted average exposure limit 8 h (TLV - Adopted Value) | 100 ppm  |
| n-Hexane        | Time-weighted average exposure limit 8 h (TLV - Adopted Value) | 50 ppm   |

## b) National biological limit values

If limit values are applicable and available these will be listed below.

### Germany

|   |  |                    |  |
|---|--|--------------------|--|
| Cyclohexan (1,2-Cyclohexandiol (nach Hydrolyse))                              | Urin: bei langzeitexposition: am schichtende nach mehreren vorangegangenen schichten expositionsende, bzw. schichtende | 150 mg/g Kreatinin |  |
| Hexan (n-Hexan) (2,5-Hexandion plus 4,5-Dihydroxy-2-Hexanon (nach Hydrolyse)) | Urin: expositionsende, bzw. schichtende  | 5 mg/l             |  |
| Propan-2-ol (Aceton)  | Urin: expositionsende, bzw. schichtende  | 25 mg/l            |  |
| Propan-2-ol (Aceton)  | Vollblut: expositionsende, bzw. schichtende  | 25 mg/l            |  |

## USA (BEI-ACGIH)

|                                   |  |                    |                         |
|-----------------------------------|--|--------------------|-------------------------|
| 2-Propanol (Acetone)              | Urine: end of shift at end of workweek | 40 mg/L            | Background, Nonspecific |
| Cyclohexane (1,2-Cyclohexanediol) | : end of shift at end of workweek      | 50 mg/g creatinine | Nonspecific             |
| n-Hexane (2,5-Hexanedione)        | Urine: end of shift                    | 0,5 mg/L           | Without hydrolysis      |

## 8.1.2 Sampling methods

| Product name  | Test  | Number |
|---|-------|--------|
| Cyclohexane (Hydrocarbons, BP36 to 126C)                  | NIOSH | 1500   |
| Cyclohexane   | OSHA  | 1022   |
| Isopropanol (Volatile Organic compounds)                  | NIOSH | 2549   |
| Isopropyl Alcohol (Alcohols I)                            | NIOSH | 1400   |
| Isopropyl Alcohol   | NIOSH | 3900   |
| Isopropyl Alcohol   | OSHA  | 5001   |
| n-Hexane (Hydrocarbons, BP36 to 126C)                     | NIOSH | 1500   |
| n-Hexane (organic and inorganic gases by Extractive FTIR) | NIOSH | 3800   |
| n-Hexane (Volatile Organic compounds)                     | NIOSH | 2549   |
| n-Hexane  | NIOSH | 3900   |

## 8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

## 8.1.4 Threshold values

### DNEL/DMEL - Workers

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

| Effect level (DNEL/DMEL) | Type                                  | Value                  | Remark |
|--------------------------|---------------------------------------|------------------------|--------|
| DNEL                     | Long-term systemic effects inhalation | 2085 mg/m <sup>3</sup> |        |
|                          | Long-term systemic effects dermal     | 300 mg/kg bw/day       |        |

propan-2-ol

| Effect level (DNEL/DMEL) | Type                                  | Value                 | Remark |
|--------------------------|---------------------------------------|-----------------------|--------|
| DNEL                     | Long-term systemic effects inhalation | 500 mg/m <sup>3</sup> |        |
|                          | Long-term systemic effects dermal     | 888 mg/kg bw/day      |        |

hydrocarbons, C6, isoalkanes, < 5% n-hexane

| Effect level (DNEL/DMEL) | Type                                  | Value                  | Remark |
|--------------------------|---------------------------------------|------------------------|--------|
| DNEL                     | Long-term systemic effects inhalation | 5306 mg/m <sup>3</sup> |        |
|                          | Long-term systemic effects dermal     | 13964 mg/kg bw/day     |        |

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## n-hexane

| Effect level (DNEL/DMEL) | Type                                  | Value                | Remark |
|--------------------------|---------------------------------------|----------------------|--------|
| DNEL                     | Long-term systemic effects inhalation | 75 mg/m <sup>3</sup> |        |
|                          | Long-term systemic effects dermal     | 11 mg/kg bw/day      |        |

## cyclohexane

| Effect level (DNEL/DMEL) | Type                                  | Value                  | Remark |
|--------------------------|---------------------------------------|------------------------|--------|
| DNEL                     | Long-term systemic effects inhalation | 700 mg/m <sup>3</sup>  |        |
|                          | Acute systemic effects inhalation     | 1400 mg/m <sup>3</sup> |        |
|                          | Long-term local effects inhalation    | 700 mg/m <sup>3</sup>  |        |
|                          | Acute local effects inhalation        | 1400 mg/m <sup>3</sup> |        |
|                          | Long-term systemic effects dermal     | 2016 mg/kg bw/day      |        |

## DNEL/DMEL - General population

### hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

| Effect level (DNEL/DMEL) | Type                                  | Value                 | Remark |
|--------------------------|---------------------------------------|-----------------------|--------|
| DNEL                     | Long-term systemic effects inhalation | 447 mg/m <sup>3</sup> |        |
|                          | Long-term systemic effects dermal     | 149 mg/kg bw/day      |        |
|                          | Long-term systemic effects oral       | 149 mg/kg bw/day      |        |

## propan-2-ol

| Effect level (DNEL/DMEL) | Type                                  | Value                | Remark |
|--------------------------|---------------------------------------|----------------------|--------|
| DNEL                     | Long-term systemic effects inhalation | 89 mg/m <sup>3</sup> |        |
|                          | Long-term systemic effects dermal     | 319 mg/kg bw/day     |        |
|                          | Long-term systemic effects oral       | 26 mg/kg bw/day      |        |

## hydrocarbons, C6, isoalkanes, < 5% n-hexane

| Effect level (DNEL/DMEL) | Type                                  | Value                  | Remark |
|--------------------------|---------------------------------------|------------------------|--------|
| DNEL                     | Long-term systemic effects inhalation | 1131 mg/m <sup>3</sup> |        |
|                          | Long-term systemic effects dermal     | 1377 mg/kg bw/day      |        |
|                          | Long-term systemic effects oral       | 1301 mg/kg bw/day      |        |

## n-hexane

| Effect level (DNEL/DMEL) | Type                                  | Value                | Remark |
|--------------------------|---------------------------------------|----------------------|--------|
| DNEL                     | Long-term systemic effects inhalation | 16 mg/m <sup>3</sup> |        |
|                          | Long-term systemic effects dermal     | 5.3 mg/kg bw/day     |        |
|                          | Long-term systemic effects oral       | 4 mg/kg bw/day       |        |

## cyclohexane

| Effect level (DNEL/DMEL) | Type                                  | Value                 | Remark |
|--------------------------|---------------------------------------|-----------------------|--------|
| DNEL                     | Long-term systemic effects inhalation | 206 mg/m <sup>3</sup> |        |
|                          | Acute systemic effects inhalation     | 412 mg/m <sup>3</sup> |        |
|                          | Long-term local effects inhalation    | 206 mg/m <sup>3</sup> |        |
|                          | Acute local effects inhalation        | 412 mg/m <sup>3</sup> |        |
|                          | Long-term systemic effects dermal     | 1186 mg/kg bw/day     |        |
|                          | Long-term systemic effects oral       | 59.4 mg/kg bw/day     |        |

## PNEC

### cyclohexane

| Compartments                         | Value                  | Remark |
|--------------------------------------|------------------------|--------|
| Fresh water                          | 44.7 µg/l              |        |
| Fresh water (intermittent releases)  | 9 µg/l                 |        |
| Marine water                         | 4.47 µg/l              |        |
| Marine water (intermittent releases) | 0.9 µg/l               |        |
| STP                                  | 3.24 mg/l              |        |
| Fresh water sediment                 | 3.6 mg/kg sediment dw  |        |
| Marine water sediment                | 0.36 mg/kg sediment dw |        |
| Soil                                 | 0.694 mg/kg soil dw    |        |

### 8.1.5 Control banding

If applicable and available it will be listed below.

## 8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 8.2.1 Appropriate engineering controls

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly.

### 8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Do not eat, drink or smoke during work.

#### a) Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit.

#### b) Hand protection:

Protective gloves against chemicals (EN 374).

| Materials | Measured breakthrough time | Thickness | Protection index | Remark |
|-----------|----------------------------|-----------|------------------|--------|
|           |                            |           |                  |        |

# NOVELEC

|                |               |         |         |  |
|----------------|---------------|---------|---------|--|
| nitrile rubber | > 480 minutes | 0.35 mm | Class 6 |  |
|----------------|---------------|---------|---------|--|

**c) Eye protection:**

Protective goggles (EN 166).

**d) Skin protection:**

Head/neck protection. Protective clothing (EN 14605 or EN 13034).

**8.2.3 Environmental exposure controls:**

See sections 6.2, 6.3 and 13

## SECTION 9: Physical and chemical properties

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

|                           |  |
|---------------------------|--|
| Physical form             | Aerosol                                |
| Odour                     | Characteristic odour                   |
| Odour threshold           | No data available in the literature    |
| Colour                    | Colourless                             |
| Particle size             | Not applicable (liquid)                |
| Explosion limits          | 1.1 - 12 vol % ; Propellant            |
| Flammability              | Extremely flammable aerosol.           |
| Log Kow                   | Not applicable (mixture)               |
| Dynamic viscosity         | 1 mPa.s ; 20 °C ; Liquid               |
| Kinematic viscosity       | 1 mm <sup>2</sup> /s ; 20 °C ; Liquid  |
| Melting point             | Not applicable (aerosol)               |
| Boiling point             | -140 °C - 95 °C ; Liquid               |
| Relative vapour density   | No data available in the literature    |
| Vapour pressure           | 8530 hPa ; 20 °C                       |
| Solubility                | Water ; insoluble                      |
| Relative density          | 0.73 ; 20 °C ; Liquid                  |
| Absolute density          | 731 kg/m <sup>3</sup> ; 20 °C ; Liquid |
| Decomposition temperature | No data available in the literature    |
| Auto-ignition temperature | Not applicable (aerosol)               |
| Flash point               | Not applicable (aerosol)               |
| pH                        | Not applicable (non-soluble in water)  |

### 9.2. Other information

|                  |                   |
|------------------|-------------------|
| Evaporation rate | 7 ; Butyl acetate |
|------------------|-------------------|

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No data available.

### 10.4. Conditions to avoid

**Precautionary measures**

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks.

### 10.5. Incompatible materials

No data available.

### 10.6. Hazardous decomposition products

Upon combustion: CO and CO<sub>2</sub> are formed.

## SECTION 11: Toxicological information

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

#### 11.1.1 Test results

**Acute toxicity**

NOVELEC

No (test)data on the mixture available

Judgement is based on the relevant ingredients



# NOVELEC

## hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

| Route of exposure    | Parameter | Method                 | Value                         | Exposure time | Species             | Value determination | Remark |
|----------------------|-----------|------------------------|-------------------------------|---------------|---------------------|---------------------|--------|
| Oral                 | LD50      |                        | > 5840 mg/kg bw               |               | Rat (male / female) | Read-across         |        |
| Dermal               | LD50      |                        | 2800 mg/kg bw - 3100 mg/kg bw | 24 h          | Rat (male / female) | Read-across         |        |
| Inhalation (vapours) | LC50      | Equivalent to OECD 403 | > 23.3 mg/l air               | 4 h           | Rat (male / female) | Read-across         |        |

## propan-2-ol

| Route of exposure    | Parameter | Method                 | Value          | Exposure time | Species             | Value determination | Remark |
|----------------------|-----------|------------------------|----------------|---------------|---------------------|---------------------|--------|
| Oral                 | LD50      | Equivalent to OECD 401 | 5840 mg/kg bw  |               | Rat                 | Experimental value  |        |
| Dermal               | LD50      | Equivalent to OECD 402 | 16400 ml/kg bw | 24 h          | Rabbit              | Experimental value  |        |
| Inhalation (vapours) | LC50      | Equivalent to OECD 403 | > 10000 ppm    | 6 h           | Rat (male / female) | Experimental value  |        |

## hydrocarbons, C6, isoalkanes, < 5% n-hexane

| Route of exposure    | Parameter | Method                 | Value            | Exposure time | Species       | Value determination | Remark |
|----------------------|-----------|------------------------|------------------|---------------|---------------|---------------------|--------|
| Oral                 | LD50      | Equivalent to OECD 401 | > 16750 mg/kg bw |               | Rat (male)    | Read-across         |        |
| Dermal               | LD50      | Equivalent to OECD 402 | > 3350 mg/kg bw  | 4 h           | Rabbit (male) | Read-across         |        |
| Inhalation (vapours) | LC50      | Equivalent to OECD 403 | 259.354 mg/l     | 4 h           | Rat (male)    | Read-across         |        |

## n-hexane

| Route of exposure    | Parameter | Method                 | Value           | Exposure time | Species             | Value determination | Remark |
|----------------------|-----------|------------------------|-----------------|---------------|---------------------|---------------------|--------|
| Oral                 | LD50      | Equivalent to OECD 401 | 16000 mg/kg bw  |               | Rat (male / female) | Experimental value  |        |
| Dermal               | LD50      | Equivalent to OECD 402 | > 3350 mg/kg bw | 4 h           | Rabbit (male)       | Read-across         |        |
| Inhalation (vapours) | LC50      | Equivalent to OECD 403 | > 17.6 mg/l air | 24 h          | Rat (male)          | Experimental value  |        |

## cyclohexane

| Route of exposure    | Parameter | Method                 | Value           | Exposure time | Species                | Value determination | Remark |
|----------------------|-----------|------------------------|-----------------|---------------|------------------------|---------------------|--------|
| Oral                 | LD50      | Equivalent to OECD 401 | > 5000 mg/kg bw |               | Rat (male / female)    | Experimental value  |        |
| Dermal               | LD50      | Equivalent to OECD 402 | > 2000 mg/kg bw |               | Rabbit (male / female) | Experimental value  |        |
| Inhalation (vapours) | LC50      | Equivalent to OECD 403 | > 32.88 mg/l    | 4 h           | Rat (male / female)    | Experimental value  |        |

## Conclusion

Not classified for acute toxicity

## Corrosion/irritation

### NOVELEC

No (test) data on the mixture available

Classification is based on the relevant ingredients

### hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

| Route of exposure | Result         | Method                 | Exposure time | Time point       | Species | Value determination | Remark           |
|-------------------|----------------|------------------------|---------------|------------------|---------|---------------------|------------------|
| Eye               | Not irritating |                        |               | 7 days           | Rabbit  | Read-across         | Single treatment |
| Skin              | Irritating     | Equivalent to OECD 404 | 4 h           | 24; 48; 72 hours | Rabbit  | Read-across         |                  |

### propan-2-ol

| Route of exposure | Result         | Method                 | Exposure time | Time point                 | Species | Value determination | Remark                           |
|-------------------|----------------|------------------------|---------------|----------------------------|---------|---------------------|----------------------------------|
| Eye               | Irritating     | Equivalent to OECD 405 |               | 1; 2; 3; 4; 7; 10; 14 days | Rabbit  | Experimental value  | Single treatment without rinsing |
| Skin              | Not irritating |                        | 4 h           | 4; 24; 48; 72 hours        | Rabbit  | Experimental value  |                                  |

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# NOVELEC

## hydrocarbons, C6, isoalkanes, < 5% n-hexane

| Route of exposure | Result                 | Method                 | Exposure time | Time point       | Species | Value determination | Remark |
|-------------------|------------------------|------------------------|---------------|------------------|---------|---------------------|--------|
| Eye               | Not irritating         | Equivalent to OECD 405 | 72 h          | 72 hours         | Rabbit  | Read-across         |        |
| Skin              | Not irritating         | OECD 404               | 4 h           | 24; 48; 72 hours | Rabbit  | Experimental value  |        |
| Skin              | Irritating; category 2 |                        |               |                  |         | Data waiving        |        |

## n-hexane

| Route of exposure | Result         | Method                 | Exposure time | Time point   | Species | Value determination | Remark |
|-------------------|----------------|------------------------|---------------|--------------|---------|---------------------|--------|
| Eye               | Not irritating | Equivalent to OECD 405 |               | 72 hours     | Rabbit  | Read-across         |        |
| Skin              | Irritating     | Equivalent to OECD 404 | 24 h          | 24; 72 hours | Rabbit  | Read-across         |        |

## cyclohexane

| Route of exposure | Result                 | Method                      | Exposure time | Time point       | Species | Value determination | Remark |
|-------------------|------------------------|-----------------------------|---------------|------------------|---------|---------------------|--------|
| Eye               | Slightly irritating    | Equivalent to OECD 405      |               | 1 hour           | Rabbit  | Experimental value  |        |
| Skin              | Not irritating         | Equivalent to EU Method B.4 | 4 h           | 24; 48; 72 hours | Rabbit  | Experimental value  |        |
| Skin              | Irritating; category 2 |                             |               |                  |         | Annex VI            |        |

### Conclusion

Causes skin irritation.  
Causes serious eye irritation.  
Not classified as irritating to the respiratory system

### Respiratory or skin sensitisation

#### NOVELEC

No (test) data on the mixture available  
Judgement is based on the relevant ingredients  
hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

| Route of exposure | Result          | Method                 | Exposure time | Observation time point | Species                    | Value determination | Remark |
|-------------------|-----------------|------------------------|---------------|------------------------|----------------------------|---------------------|--------|
| Skin              | Not sensitizing | Equivalent to OECD 406 |               |                        | Guinea pig (male / female) | Read-across         |        |

## propan-2-ol

| Route of exposure | Result          | Method   | Exposure time | Observation time point | Species                    | Value determination | Remark |
|-------------------|-----------------|----------|---------------|------------------------|----------------------------|---------------------|--------|
| Dermal            | Not sensitizing | OECD 406 |               |                        | Guinea pig (male / female) | Experimental value  |        |

## hydrocarbons, C6, isoalkanes, < 5% n-hexane

| Route of exposure | Result          | Method                 | Exposure time | Observation time point | Species               | Value determination | Remark |
|-------------------|-----------------|------------------------|---------------|------------------------|-----------------------|---------------------|--------|
| Skin              | Not sensitizing | Equivalent to OECD 429 |               |                        | Mouse (male / female) | Read-across         |        |

## n-hexane

| Route of exposure | Result          | Method                 | Exposure time | Observation time point | Species | Value determination | Remark |
|-------------------|-----------------|------------------------|---------------|------------------------|---------|---------------------|--------|
| Skin              | Not sensitizing | Equivalent to OECD 429 |               |                        | Mouse   | Read-across         |        |

## cyclohexane

| Route of exposure | Result          | Method        | Exposure time | Observation time point | Species                    | Value determination | Remark |
|-------------------|-----------------|---------------|---------------|------------------------|----------------------------|---------------------|--------|
| Skin              | Not sensitizing | EU Method B.6 |               |                        | Guinea pig (male / female) | Experimental value  |        |

### Conclusion

Not classified as sensitizing for skin  
Not classified as sensitizing for inhalation

### Specific target organ toxicity

#### NOVELEC

No (test) data on the mixture available  
Classification is based on the relevant ingredients

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# NOVELEC

## hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

| Route of exposure    | Parameter | Method                   | Value                       | Organ                  | Effect                      | Exposure time                      | Species             | Value determination |
|----------------------|-----------|--------------------------|-----------------------------|------------------------|-----------------------------|------------------------------------|---------------------|---------------------|
| Inhalation (vapours) | NOAEC     | Subchronic toxicity test | 12470 mg/m <sup>3</sup> air | Central nervous system | No effect                   | 16 weeks (daily)                   | Rat (male)          | Read-across         |
| Inhalation (vapours) | NOAEL     | Equivalent to OECD 413   | 12350 mg/m <sup>3</sup> air |                        | No adverse systemic effects | 26 weeks (6h / day, 5 days / week) | Rat (male / female) | Read-across         |
| Inhalation (vapours) | LOAEL     | Equivalent to OECD 413   | 1650 mg/m <sup>3</sup> air  | Central nervous system | CNS depression              | 26 weeks (6h / day, 5 days / week) | Rat (male / female) | Read-across         |

## propan-2-ol

| Route of exposure    | Parameter  | Method                 | Value    | Organ                  | Effect                      | Exposure time                       | Species             | Value determination |
|----------------------|------------|------------------------|----------|------------------------|-----------------------------|-------------------------------------|---------------------|---------------------|
| Oral                 |            |                        |          |                        |                             |                                     |                     | Data waiving        |
| Dermal               |            |                        |          |                        |                             |                                     |                     | Data waiving        |
| Inhalation (vapours) | NOAEC      | OECD 451               | 5000 ppm |                        | No adverse systemic effects | 104 weeks (6h / day, 5 days / week) | Rat (male / female) | Experimental value  |
| Inhalation (vapours) | Dose level | Equivalent to OECD 403 | 5000 ppm | Central nervous system | Drowsiness, dizziness       | 6 h                                 | Rat (male / female) | Experimental value  |

## hydrocarbons, C6, isoalkanes, < 5% n-hexane

| Route of exposure    | Parameter | Method                 | Value                       | Organ         | Effect       | Exposure time                      | Species    | Value determination |
|----------------------|-----------|------------------------|-----------------------------|---------------|--------------|------------------------------------|------------|---------------------|
| Dermal               |           |                        |                             |               |              |                                    |            | Data waiving        |
| Inhalation (vapours) | NOAEC     | Equivalent to OECD 413 | 10504 mg/m <sup>3</sup> air |               | No effect    | 13 weeks (6h / day, 5 days / week) | Rat (male) | Read-across         |
| Inhalation (vapours) | LOAEC     | Equivalent to OECD 413 | 31652 mg/m <sup>3</sup> air | Liver; kidney | Organ damage | 13 weeks (6h / day, 5 days / week) | Rat (male) | Read-across         |

## n-hexane

| Route of exposure    | Parameter | Method                   | Value                                | Organ                  | Effect                | Exposure time            | Species    | Value determination |
|----------------------|-----------|--------------------------|--------------------------------------|------------------------|-----------------------|--------------------------|------------|---------------------|
| Oral (stomach tube)  | NOAEL     | Subchronic toxicity test | 567 mg/kg bw/day - 1135 mg/kg bw/day |                        | No effect             | 13 weeks (5 days / week) | Rat (male) | Experimental value  |
| Oral (stomach tube)  | LOAEL     | Subchronic toxicity test | 3956 mg/kg bw/day                    | Central nervous system | neurotoxic effects    | 17 weeks (5 days / week) | Rat (male) | Experimental value  |
| Dermal               |           |                          |                                      |                        |                       |                          |            | Data waiving        |
| Inhalation (vapours) | LOAEC     | Subchronic toxicity test | 3000 ppm                             | Central nervous system | neurotoxic effects    | 16 weeks (daily)         | Rat (male) | Experimental value  |
| Inhalation (vapours) |           |                          | STOT SE cat.3                        |                        | Drowsiness, dizziness |                          |            | Annex VI            |

## cyclohexane

| Route of exposure    | Parameter | Method             | Value    | Organ                  | Effect                      | Exposure time                      | Species             | Value determination |
|----------------------|-----------|--------------------|----------|------------------------|-----------------------------|------------------------------------|---------------------|---------------------|
| Oral                 |           |                    |          |                        |                             |                                    |                     | Data waiving        |
| Dermal               |           |                    |          |                        |                             |                                    |                     | Data waiving        |
| Inhalation (vapours) | NOAEC     | EPA OPPTS 870.3465 | 7000 ppm |                        | No adverse systemic effects | 13 weeks (6h / day, 5 days / week) | Rat (male / female) | Experimental value  |
| Inhalation (vapours) | NOAEC     | EPA OPPTS 870.3465 | 500 ppm  | Central nervous system | No effect                   | 6 h                                | Rat (male / female) | Experimental value  |

### Conclusion

May cause drowsiness or dizziness.  
Not classified for subchronic toxicity

### Mutagenicity (in vitro)

#### NOVELEC

No (test) data on the mixture available  
Judgement is based on the relevant ingredients

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# NOVELEC

## hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

| Result  | Method                 | Test substrate                        | Effect    | Value determination | Remark |
|---|------------------------|---------------------------------------|-----------|---------------------|--------|
| Negative with metabolic activation, negative without metabolic activation | Equivalent to OECD 473 | Rat liver cells                       | No effect | Read-across         |        |
| Negative with metabolic activation, negative without metabolic activation | Equivalent to OECD 471 | Bacteria (S. typhimurium and E. coli) | No effect | Read-across         |        |

## propan-2-ol

| Result  | Method                 | Test substrate              | Effect    | Value determination | Remark |
|---|------------------------|-----------------------------|-----------|---------------------|--------|
| Negative with metabolic activation, negative without metabolic activation | Equivalent to OECD 471 | Bacteria (S. typhimurium)   | No effect | Experimental value  |        |
| Negative with metabolic activation, negative without metabolic activation | Equivalent to OECD 476 | Chinese hamster ovary (CHO) | No effect | Experimental value  |        |

## hydrocarbons, C6, isoalkanes, < 5% n-hexane

| Result  | Method                 | Test substrate            | Effect    | Value determination | Remark |
|---|------------------------|---------------------------|-----------|---------------------|--------|
| Negative with metabolic activation, negative without metabolic activation | Equivalent to OECD 471 | Bacteria (S. typhimurium) | No effect | Read-across         |        |

## n-hexane

| Result   | Method                 | Test substrate                | Effect    | Value determination | Remark |
|----------|------------------------|-------------------------------|-----------|---------------------|--------|
| Negative | OECD 476               | Mouse (lymphoma L5178Y cells) | No effect | Experimental value  |        |
| Negative | Equivalent to OECD 471 | Bacteria (S. typhimurium)     | No effect | Experimental value  |        |

## cyclohexane

| Result  | Method                 | Test substrate                | Effect    | Value determination | Remark |
|---|------------------------|-------------------------------|-----------|---------------------|--------|
| Negative with metabolic activation, negative without metabolic activation | Equivalent to OECD 471 | Bacteria (S. typhimurium)     | No effect | Experimental value  |        |
| Negative with metabolic activation, negative without metabolic activation | Equivalent to OECD 476 | Mouse (lymphoma L5178Y cells) | No effect | Experimental value  |        |

## Mutagenicity (in vivo)

### NOVELEC

No (test) data on the mixture available

Judgement is based on the relevant ingredients

### propan-2-ol

| Result                     | Method                 | Exposure time | Test substrate        | Organ | Value determination |
|----------------------------|------------------------|---------------|-----------------------|-------|---------------------|
| Negative (Intraperitoneal) | Equivalent to OECD 474 |               | Mouse (male / female) |       | Experimental value  |

### hydrocarbons, C6, isoalkanes, < 5% n-hexane

| Result                          | Method                 | Exposure time     | Test substrate      | Organ       | Value determination |
|---------------------------------|------------------------|-------------------|---------------------|-------------|---------------------|
| Negative (Inhalation (vapours)) | Equivalent to OECD 475 | 5 days (6h / day) | Rat (male / female) | Bone marrow | Experimental value  |

### n-hexane

| Result                          | Method | Exposure time                     | Test substrate | Organ | Value determination |
|---------------------------------|--------|-----------------------------------|----------------|-------|---------------------|
| Negative (Inhalation (vapours)) |        | 8 weeks (6h / day, 5 days / week) | Mouse (male)   |       | Experimental value  |

### cyclohexane

| Result                          | Method                 | Exposure time     | Test substrate      | Organ       | Value determination |
|---------------------------------|------------------------|-------------------|---------------------|-------------|---------------------|
| Negative (Inhalation (vapours)) | Equivalent to OECD 475 | 5 days (6h / day) | Rat (male / female) | Bone marrow | Experimental value  |

### Conclusion

Not classified for mutagenic or genotoxic toxicity

## Carcinogenicity

### NOVELEC

No (test) data on the mixture available

Judgement is based on the relevant ingredients

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# NOVELEC

## hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

| Route of exposure | Parameter | Method | Value | Exposure time | Species | Effect                 | Organ | Value determination |
|-------------------|-----------|--------|-------|---------------|---------|------------------------|-------|---------------------|
| Unknown           |           |        |       |               |         | No carcinogenic effect |       | Weight of evidence  |

## propan-2-ol

| Route of exposure    | Parameter | Method   | Value    | Exposure time                       | Species             | Effect                 | Organ | Value determination |
|----------------------|-----------|----------|----------|-------------------------------------|---------------------|------------------------|-------|---------------------|
| Inhalation (vapours) | NOEL      | OECD 451 | 5000 ppm | 104 weeks (6h / day, 5 days / week) | Rat (male / female) | No carcinogenic effect |       | Experimental value  |

## hydrocarbons, C6, isoalkanes, < 5% n-hexane

| Route of exposure    | Parameter | Method                 | Value    | Exposure time                       | Species             | Effect                 | Organ | Value determination |
|----------------------|-----------|------------------------|----------|-------------------------------------|---------------------|------------------------|-------|---------------------|
| Inhalation (vapours) | NOAEC     | Equivalent to OECD 451 | 9016 ppm | 104 weeks (6h / day, 5 days / week) | Rat (male / female) | No carcinogenic effect |       | Experimental value  |

## n-hexane

| Route of exposure    | Parameter | Method                 | Value    | Exposure time                       | Species        | Effect                 | Organ | Value determination |
|----------------------|-----------|------------------------|----------|-------------------------------------|----------------|------------------------|-------|---------------------|
| Inhalation (vapours) | NOAEC     | Equivalent to OECD 451 | 3000 ppm | 104 weeks (6h / day, 5 days / week) | Mouse (female) | No carcinogenic effect |       | Read-across         |
| Inhalation (vapours) | LOAEC     | Equivalent to OECD 451 | 9018 ppm | 104 weeks (6h / day, 5 days / week) | Mouse (female) | Tumor formation        | Liver | Read-across         |
| Inhalation (vapours) | NOAEC     | Equivalent to OECD 451 | 9018 ppm | 104 weeks (6h / day, 5 days / week) | Mouse (male)   | No carcinogenic effect |       | Read-across         |

### Conclusion

Not classified for carcinogenicity

### Reproductive toxicity

#### NOVELEC

No (test) data on the mixture available

Judgement is based on the relevant ingredients

#### hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

|   | Parameter    | Method                 | Value                       | Exposure time      | Species             | Effect                             | Organ | Value determination |
|---|--------------|------------------------|-----------------------------|--------------------|---------------------|------------------------------------|-------|---------------------|
| Developmental toxicity (Inhalation (vapours)) | NOAEL        | Equivalent to OECD 414 | 31680 mg/m <sup>3</sup> air | 10 days (6h / day) | Mouse               | No effect                          |       | Read-across         |
| Maternal toxicity (Inhalation (vapours))      | NOAEL        | Equivalent to OECD 414 | 10560 mg/m <sup>3</sup> air | 10 days (6h / day) | Rat (female)        | No effect                          |       | Read-across         |
|   | LOAEL        | Equivalent to OECD 414 | 31680 mg/m <sup>3</sup> air | 10 days (6h / day) | Rat (female)        | Lung tissue affection/degeneration | Lungs | Read-across         |
| Effects on fertility (Inhalation (vapours))   | NOAEL (P/F1) | Equivalent to OECD 416 | 31680 mg/m <sup>3</sup> air |                    | Rat (male / female) | No effect                          |       | Read-across         |

#### propan-2-ol

|  | Parameter | Method                 | Value            | Exposure time | Species             | Effect    | Organ  | Value determination |
|--|-----------|------------------------|------------------|---------------|---------------------|-----------|--------|---------------------|
| Developmental toxicity (Oral (stomach tube)) | NOAEL     | Equivalent to OECD 414 | 400 mg/kg bw/day | 10 day(s)     | Rat                 | No effect | Foetus | Experimental value  |
| Maternal toxicity (Oral (stomach tube))      | NOAEL     | Equivalent to OECD 414 | 400 mg/kg bw/day | 10 day(s)     | Rat                 | No effect |        | Experimental value  |
| Effects on fertility (Oral (drinking water)) | NOAEL     | Equivalent to OECD 415 | 853 mg/kg bw/day |               | Rat (male / female) | No effect |        | Experimental value  |

#### hydrocarbons, C6, isoalkanes, < 5% n-hexane

|   | Parameter | Method                 | Value      | Exposure time      | Species             | Effect    | Organ | Value determination |
|---|-----------|------------------------|------------|--------------------|---------------------|-----------|-------|---------------------|
| Developmental toxicity (Inhalation (vapours)) | NOAEC     | Equivalent to OECD 414 | > 7000 ppm | 10 days (6h / day) | Rat                 | No effect |       | Read-across         |
| Maternal toxicity (Inhalation (vapours))      | NOAEC     | Equivalent to OECD 414 | 2000 ppm   | 10 days (6h / day) | Rat (female)        | No effect |       | Read-across         |
| Effects on fertility (Inhalation (vapours))   | NOAEC     | Equivalent to OECD 416 | 9000 ppm   |                    | Rat (male / female) | No effect |       | Read-across         |

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# NOVELEC

## n-hexane

|   | Parameter | Method                 | Value    | Exposure time                        | Species             | Effect            | Organ | Value determination |
|---|-----------|------------------------|----------|--------------------------------------|---------------------|-------------------|-------|---------------------|
| Developmental toxicity (Inhalation (vapours)) | NOAEC     | Equivalent to OECD 414 | 900 ppm  | 10 days (gestation, 6h / day)        | Rat                 | No effect         |       | Experimental value  |
| Maternal toxicity (Inhalation (vapours))      | NOAEC     | Equivalent to OECD 414 | 3000 ppm | 10 days (gestation, 6h / day)        | Rat                 | No effect         |       | Experimental value  |
|   | LOAEC     | Equivalent to OECD 414 | 9000 ppm | 10 days (gestation, 6h / day)        | Rat                 | Maternal toxicity |       | Experimental value  |
| Effects on fertility (Inhalation (vapours))   | NOAEC     | Equivalent to OECD 416 | 9000 ppm | ≥ 13 weeks (6h / day, 5 days / week) | Rat (male / female) | No effect         |       | Experimental value  |

Classification of this substance according to Annex VI is debatable as it does not correspond to the conclusion from the test

## cyclohexane

|   | Parameter | Method                 | Value              | Exposure time                        | Species             | Effect    | Organ | Value determination |
|---|-----------|------------------------|--------------------|--------------------------------------|---------------------|-----------|-------|---------------------|
| Developmental toxicity (Inhalation (vapours)) | NOAEC     | Equivalent to OECD 414 | 7000 ppm           | 10 days (6h / day)                   | Rat                 | No effect |       | Experimental value  |
| Maternal toxicity (Inhalation (vapours))      | NOAEC     | Equivalent to OECD 414 | 500 ppm - 2000 ppm | 10 days (6h / day)                   | Rat                 | No effect |       | Experimental value  |
| Effects on fertility (Inhalation (vapours))   | NOAEC     | Equivalent to OECD 416 | 500 ppm - 2000 ppm | > 11 weeks (6h / day, 5 days / week) | Rat (male / female) | No effect |       | Experimental value  |

### **Conclusion**

Not classified for reprotoxic or developmental toxicity

### **Aspiration hazard**

Judgement is based on the relevant ingredients  
Not classified for aspiration toxicity

### **Toxicity other effects**

#### NOVELEC

hydrocarbons, C6, isoalkanes, < 5% n-hexane

| Route of exposure | Parameter | Method                 | Value    | Organ                  | Effect          | Exposure time                      | Species             | Value determination |
|-------------------|-----------|------------------------|----------|------------------------|-----------------|------------------------------------|---------------------|---------------------|
| Inhalation        | NOAEC     | Equivalent to OECD 424 | 9000 ppm | Central nervous system | Overall effects | 13 weeks (6h / day, 5 days / week) | Rat (male / female) | Experimental value  |

### **Chronic effects from short and long-term exposure**

#### NOVELEC

No effects known.

### **11.2. Information on other hazards**

No evidence of endocrine disrupting properties

## SECTION 12: Ecological information

### **12.1. Toxicity**

#### NOVELEC

No (test) data on the mixture available  
Classification is based on the relevant ingredients

# NOVELEC

## hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

|   | Parameter | Method   | Value                     | Duration | Species                         | Test design        | Fresh/salt water | Value determination                       |
|---|-----------|----------|---------------------------|----------|---------------------------------|--------------------|------------------|---|
| Acute toxicity fishes                   | LL50      | OECD 203 | > 13.4 mg/l WAF           | 96 h     | Oncorhynchus mykiss             | Semi-static system | Fresh water      | Experimental value; Nominal concentration |
| Acute toxicity crustacea                | EL50      | OECD 202 | 3.0 mg/l WAF              | 48 h     | Daphnia magna                   | Static system      | Fresh water      | Experimental value; GLP                   |
| Toxicity algae and other aquatic plants | EL50      | OECD 201 | 10 mg/l WAF - 30 mg/l WAF | 72 h     | Pseudokirchneriella subcapitata | Static system      | Fresh water      | Read-across; Nominal concentration        |
|   | NOELR     | OECD 201 | 10 mg/l                   | 72 h     | Pseudokirchneriella subcapitata | Static system      | Fresh water      | Read-across; Nominal concentration        |
| Long-term toxicity fish                 | NOELR     |          | 1.534 mg/l                | 28       | Oncorhynchus mykiss             |                    | Fresh water      | QSAR; Nominal concentration               |
| Toxicity aquatic micro-organisms        | EL50      |          | 26.81 mg/l                | 48 h     | Tetrahymena pyriformis          |                    | Fresh water      | QSAR; Growth rate                         |

## propan-2-ol

|   | Parameter          | Method                    | Value                  | Duration   | Species                 | Test design         | Fresh/salt water | Value determination                  |
|---|--------------------|---------------------------|------------------------|------------|-------------------------|---------------------|------------------|--------------------------------------|
| Acute toxicity fishes                   | LC50               | Equivalent to OECD 203    | 9640 mg/l - 10000 mg/l | 96 h       | Pimephales promelas     | Flow-through system | Fresh water      | Experimental value; Lethal           |
| Acute toxicity crustacea                | LC50               | Equivalent to OECD 202    | > 10000 mg/l           | 24 h       | Daphnia magna           | Static system       | Fresh water      | Experimental value; Locomotor effect |
| Toxicity algae and other aquatic plants | Toxicity threshold |                           | 1800 mg/l              | 7 day(s)   | Scenedesmus quadricauda | Static system       | Fresh water      | Experimental value; Toxicity test    |
| Long-term toxicity fish                 | NOELR              | Petrotox computer model   | > 1000 mg/l            | 28 day(s)  | Brachydanio rerio       |                     |                  | Estimated value                      |
| Long-term toxicity aquatic crustacea    | NOEC               |                           | 141 mg/l               | 16 day(s)  | Daphnia magna           |                     | Fresh water      | Experimental value; Growth           |
| Toxicity aquatic micro-organisms        | Toxicity threshold | Equivalent to DIN 38412/8 | 1050 mg/l              | 16 h       | Pseudomonas putida      | Static system       | Fresh water      | Experimental value; Toxicity test    |
|   | EC50               | ISO 8192                  | 41676 mg/l             | 30 minutes | Activated sludge        |                     |                  | Experimental value                   |

## hydrocarbons, C6, isoalkanes, < 5% n-hexane

|   | Parameter | Method | Value      | Duration  | Species                         | Test design | Fresh/salt water | Value determination         |
|---|-----------|--------|------------|-----------|---------------------------------|-------------|------------------|-----------------------------|
| Acute toxicity fishes                   | LL50      |        | 18.27 mg/l | 96 h      | Oncorhynchus mykiss             |             | Fresh water      | QSAR; Nominal concentration |
| Acute toxicity crustacea                | EL50      |        | 31.9 mg/l  | 48 h      | Daphnia magna                   |             | Fresh water      | QSAR; Nominal concentration |
| Toxicity algae and other aquatic plants | EL50      |        | 13.56 mg/l | 72 h      | Pseudokirchneriella subcapitata |             | Fresh water      | QSAR; Growth rate           |
|   | NOELR     |        | 3.034 mg/l | 72 h      | Pseudokirchneriella subcapitata |             | Fresh water      | QSAR; Growth rate           |
| Long-term toxicity fish                 | NOELR     |        | 4.089 mg/l | 28 day(s) | Oncorhynchus mykiss             |             | Fresh water      | QSAR; Nominal concentration |
| Long-term toxicity aquatic crustacea    | NOELR     |        | 7.138 mg/l | 21 day(s) | Daphnia magna                   |             | Fresh water      | QSAR; Reproduction          |
| Toxicity aquatic micro-organisms        | EL50      |        | 70.68 mg/l | 48 h      | Tetrahymena pyriformis          |             | Fresh water      | QSAR; Nominal concentration |

Classification of this substance is debatable as it does not correspond to the conclusion from the test

# NOVELEC

## n-hexane

|   | Parameter | Method | Value      | Duration  | Species                         | Test design | Fresh/salt water | Value determination               |
|---|-----------|--------|------------|-----------|---------------------------------|-------------|------------------|-----------------------------------|
| Acute toxicity fishes                   | LL50      |        | 12.51 mg/l | 96 h      | Oncorhynchus mykiss             |             | Fresh water      | Estimated value; Lethal           |
| Acute toxicity crustacea                | EL50      |        | 21.85 mg/l | 48 h      | Daphnia magna                   |             | Fresh water      | Estimated value; Locomotor effect |
| Toxicity algae and other aquatic plants | EL50      |        | 9.285 mg/l | 72 h      | Pseudokirchneriella subcapitata |             | Fresh water      | Estimated value; Growth rate      |
|   | NOELR     |        | 2.077 mg/l | 72 h      | Pseudokirchneriella subcapitata |             | Fresh water      | Estimated value; Growth rate      |
| Long-term toxicity fish                 | NOELR     |        | 2.8 mg/l   | 28 day(s) | Oncorhynchus mykiss             |             | Fresh water      | Estimated value; Growth rate      |
| Long-term toxicity aquatic crustacea    | NOELR     |        | 4.888 mg/l | 21 day(s) | Daphnia magna                   |             | Fresh water      | Estimated value; Reproduction     |
| Toxicity aquatic micro-organisms        | EL50      |        | 48.39 mg/l | 48 h      | Tetrahymena pyriformis          |             | Fresh water      | QSAR; Growth                      |

## cyclohexane

|   | Parameter | Method                 | Value    | Duration | Species                         | Test design         | Fresh/salt water | Value determination                        |
|---|-----------|------------------------|----------|----------|---------------------------------|---------------------|------------------|--|
| Acute toxicity fishes                   | LC50      | Equivalent to OECD 203 | 4.5 mg/l | 96 h     | Pimephales promelas             | Flow-through system | Fresh water      | Experimental value; Measured concentration |
| Acute toxicity crustacea                | EC50      | Equivalent to OECD 202 | 0.9 mg/l | 48 h     | Daphnia magna                   | Static system       | Fresh water      | Experimental value; Locomotor effect       |
| Toxicity algae and other aquatic plants | EC50      | Equivalent to OECD 201 | 9.3 mg/l | 72 h     | Pseudokirchneriella subcapitata |                     |                  | Experimental value; Growth rate            |
| Toxicity aquatic micro-organisms        | IC50      |                        | 29 mg/l  | 15 h     | Aerobic micro-organisms         |                     |                  | Experimental value; Oxygen consumption     |

## **Conclusion**

Toxic to aquatic life with long lasting effects.

## **12.2. Persistence and degradability**

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

### **Biodegradation water**

| Method    | Value     | Duration  | Value determination |
|-----------|-----------|-----------|---------------------|
| OECD 301F | 98 %; GLP | 28 day(s) | Experimental value  |

### propan-2-ol

### **Biodegradation water**

| Method        | Value                    | Duration | Value determination |
|---------------|--------------------------|----------|---------------------|
| EU Method C.5 | 53 %; Oxygen consumption | 5 day(s) | Experimental value  |

### **Phototransformation air (DT50 air)**

| Method       | Value    | Conc. OH-radicals      | Value determination |
|--------------|----------|------------------------|---------------------|
| AOPWIN v1.92 | 17.668 h | 1.5E6 /cm <sup>3</sup> | Calculated value    |

### hydrocarbons, C6, isoalkanes, < 5% n-hexane

### **Biodegradation water**

| Method    | Value     | Duration  | Value determination |
|-----------|-----------|-----------|---------------------|
| OECD 301F | 98 %; GLP | 28 day(s) | Read-across         |

### n-hexane

### **Biodegradation water**

| Method    | Value                    | Duration  | Value determination |
|-----------|--------------------------|-----------|---------------------|
| OECD 301F | 98 %; Oxygen consumption | 28 day(s) | Read-across         |

### **Phototransformation air (DT50 air)**

| Method       | Value    | Conc. OH-radicals      | Value determination |
|--------------|----------|------------------------|---------------------|
| AOPWIN v1.92 | 23.515 h | 1.5E6 /cm <sup>3</sup> | Calculated value    |

### cyclohexane

### **Biodegradation water**

| Method    | Value                    | Duration  | Value determination |
|-----------|--------------------------|-----------|---------------------|
| OECD 301F | 77 %; Oxygen consumption | 28 day(s) | Experimental value  |

### **Phototransformation air (DT50 air)**

| Method       | Value | Conc. OH-radicals      | Value determination |
|--------------|-------|------------------------|---------------------|
| AOPWIN v1.92 | 15 h  | 1.5E6 /cm <sup>3</sup> | QSAR                |

## **Conclusion**

### **Water**

Does not contain any not readily biodegradable component(s)



# NOVELEC

## 12.3. Bioaccumulative potential

### NOVELEC

#### Log Kow

| Method | Remark                   | Value | Temperature | Value determination |
|--------|--------------------------|-------|-------------|---------------------|
|        | Not applicable (mixture) |       |             |                     |

hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

#### Log Kow

| Method | Remark                              | Value | Temperature | Value determination |
|--------|-------------------------------------|-------|-------------|---------------------|
|        | No data available in the literature |       |             |                     |

propan-2-ol

#### BCF fishes

| Parameter | Method       | Value | Duration | Species | Value determination |
|-----------|--------------|-------|----------|---------|---------------------|
| BCF       | BCFBAF v3.01 | 1015  |          |         | Estimated value     |

#### Log Kow

| Method | Remark | Value | Temperature | Value determination         |
|--------|--------|-------|-------------|-----------------------------|
|        |        | 0.05  | 25 °C       | Weight of evidence approach |

hydrocarbons, C6, isoalkanes, < 5% n-hexane

#### BCF fishes

| Parameter | Method | Value   | Duration | Species             | Value determination |
|-----------|--------|---------|----------|---------------------|---------------------|
| BCF       |        | 501.187 |          | Pimephales promelas | Calculated value    |

#### Log Kow

| Method                 | Remark | Value | Temperature | Value determination |
|------------------------|--------|-------|-------------|---------------------|
| Equivalent to OECD 107 |        | 3.6   | 20 °C       | Read-across         |

n-hexane

#### BCF fishes

| Parameter | Method | Value   | Duration | Species             | Value determination |
|-----------|--------|---------|----------|---------------------|---------------------|
| BCF       |        | 501.187 |          | Pimephales promelas | Calculated value    |

#### Log Kow

| Method                 | Remark | Value | Temperature | Value determination |
|------------------------|--------|-------|-------------|---------------------|
| Equivalent to OECD 107 |        | 4     | 20 °C       | Experimental value  |

cyclohexane

#### BCF fishes

| Parameter | Method | Value                  | Duration | Species             | Value determination |
|-----------|--------|------------------------|----------|---------------------|---------------------|
| BCF       |        | 167 l/kg; Fresh weight |          | Pimephales promelas | QSAR                |

#### Log Kow

| Method | Remark | Value | Temperature | Value determination |
|--------|--------|-------|-------------|---------------------|
|        |        | 3.4   | 25 °C       | Experimental value  |

#### Conclusion

Contains bioaccumulative component(s)

## 12.4. Mobility in soil

propan-2-ol

#### (log) Koc

| Parameter | Method           | Value         | Value determination |
|-----------|------------------|---------------|---------------------|
| log Koc   | SRC PKOCWIN v2.0 | 0.185 - 0.541 | Calculated value    |

hydrocarbons, C6, isoalkanes, < 5% n-hexane

#### (log) Koc

| Parameter | Method | Value | Value determination |
|-----------|--------|-------|---------------------|
| log Koc   |        | 3.34  | Calculated value    |

#### Percent distribution

| Method           | Fraction air | Fraction biota | Fraction sediment | Fraction soil | Fraction water | Value determination |
|------------------|--------------|----------------|-------------------|---------------|----------------|---------------------|
| Mackay level III | 93.6 %       | 0 %            | 2.1 %             | 0.5 %         | 3.8 %          | Calculated value    |

n-hexane

#### (log) Koc

| Parameter | Method | Value | Value determination |
|-----------|--------|-------|---------------------|
| log Koc   |        | 3.34  | QSAR                |

cyclohexane

#### (log) Koc

| Parameter | Method | Value | Value determination |
|-----------|--------|-------|---------------------|
| log Koc   |        | 2.9   | QSAR                |

#### Conclusion

Contains component(s) with potential for mobility in the soil  
Contains component(s) that adsorb(s) into the soil

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## 12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

## 12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

## 12.7. Other adverse effects

### NOVELEC

#### Greenhouse gases

Contains component(s) included in the list of substances which may contribute to the greenhouse effect (IPCC)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

#### Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

#### propan-2-ol

##### Groundwater

Groundwater pollutant

#### cyclohexane

##### Groundwater

Groundwater pollutant

## SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 13.1. Waste treatment methods

#### 13.1.1 Provisions relating to waste

##### European Union

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

20 01 29\* (separately collected fractions (except 15 01): detergents containing hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

#### 13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste.

Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

#### 13.1.3 Packaging/Container

##### European Union

Waste material code packaging (Directive 2008/98/EC).

15 01 10\* (packaging containing residues of or contaminated by dangerous substances).

## SECTION 14: Transport information

### Road (ADR)

#### 14.1. UN number

|           |      |
|-----------|------|
| UN number | 1950 |
|-----------|------|

#### 14.2. UN proper shipping name

|                      |          |
|----------------------|----------|
| Proper shipping name | aerosols |
|----------------------|----------|

#### 14.3. Transport hazard class(es)

|                              |  |
|------------------------------|--|
| Hazard identification number |  |
|------------------------------|--|

|       |   |
|-------|---|
| Class | 2 |
|-------|---|

|                     |    |
|---------------------|----|
| Classification code | 5F |
|---------------------|----|

#### 14.4. Packing group

|               |  |
|---------------|--|
| Packing group |  |
|---------------|--|

|        |     |
|--------|-----|
| Labels | 2.1 |
|--------|-----|

#### 14.5. Environmental hazards

|  |     |
|--|-----|
| Environmentally hazardous substance mark | yes |
|--|-----|

#### 14.6. Special precautions for user

|                    |     |
|--------------------|-----|
| Special provisions | 190 |
|--------------------|-----|

|                    |     |
|--------------------|-----|
| Special provisions | 327 |
|--------------------|-----|

|                    |     |
|--------------------|-----|
| Special provisions | 344 |
|--------------------|-----|

|                    |     |
|--------------------|-----|
| Special provisions | 625 |
|--------------------|-----|

|                    |  |
|--------------------|--|
| Limited quantities | Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass) |
|--------------------|--|

### Rail (RID)

#### 14.1. UN number

|           |      |
|-----------|------|
| UN number | 1950 |
|-----------|------|

#### 14.2. UN proper shipping name

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|   |  |
|---|--|
| Proper shipping name                      | aerosols   |
| <b>14.3. Transport hazard class(es)</b>   |  |
| Hazard identification number              | 23   |
| Class                                     | 2  |
| Classification code                       | 5F   |
| <b>14.4. Packing group</b>                |  |
| Packing group                             |  |
| Labels                                    | 2.1  |
| <b>14.5. Environmental hazards</b>        |  |
| Environmentally hazardous substance mark  | yes  |
| <b>14.6. Special precautions for user</b> |  |
| Special provisions                        | 190  |
| Special provisions                        | 327  |
| Special provisions                        | 344  |
| Special provisions                        | 625  |
| Limited quantities                        | Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass) |

## Inland waterways (ADN)

|   |  |
|---|--|
| <b>14.1. UN number/ID number</b>          |  |
| UN number/ID number                       | 1950   |
| <b>14.2. UN proper shipping name</b>      |  |
| Proper shipping name                      | aerosols   |
| <b>14.3. Transport hazard class(es)</b>   |  |
| Class                                     | 2  |
| Classification code                       | 5F   |
| <b>14.4. Packing group</b>                |  |
| Packing group                             |  |
| Labels                                    | 2.1  |
| <b>14.5. Environmental hazards</b>        |  |
| Environmentally hazardous substance mark  | yes  |
| <b>14.6. Special precautions for user</b> |  |
| Special provisions                        | 190  |
| Special provisions                        | 327  |
| Special provisions                        | 344  |
| Special provisions                        | 625  |
| Limited quantities                        | Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass) |

## Sea (IMDG/IMSBC)

|  |  |
|--|--|
| <b>14.1. UN number</b>   |  |
| UN number  | 1950   |
| <b>14.2. UN proper shipping name</b>                                 |  |
| Proper shipping name   | aerosols   |
| <b>14.3. Transport hazard class(es)</b>                              |  |
| Class  | 2.1  |
| <b>14.4. Packing group</b>   |  |
| Packing group  |  |
| Labels   | 2.1  |
| <b>14.5. Environmental hazards</b>                                   |  |
| Marine pollutant   | P  |
| Environmentally hazardous substance mark                             | yes  |
| <b>14.6. Special precautions for user</b>                            |  |
| Special provisions   | 190  |
| Special provisions   | 277  |
| Special provisions   | 327  |
| Special provisions   | 344  |
| Special provisions   | 381  |
| Special provisions   | 63   |
| Special provisions   | 959  |
| Limited quantities   | Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass) |
| <b>14.7. Maritime transport in bulk according to IMO instruments</b> |  |
| Annex II of MARPOL 73/78   | Not applicable   |

## Air (ICAO-TI/IATA-DGR)

|   |                     |
|---|---------------------|
| <b>14.1. UN number/ID number</b>        |                     |
| UN number/ID number                     | 1950                |
| <b>14.2. UN proper shipping name</b>    |                     |
| Proper shipping name                    | aerosols, flammable |
| <b>14.3. Transport hazard class(es)</b> |                     |

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|  |         |
|--|---------|
| Class  | 2.1     |
| 14.4. Packing group                                    |         |
| Packing group  |         |
| Labels   | 2.1     |
| 14.5. Environmental hazards                            |         |
| Environmentally hazardous substance mark               | yes     |
| 14.6. Special precautions for user                     |         |
| Special provisions                                     | A145    |
| Special provisions                                     | A167    |
| Special provisions                                     | A802    |
| Passenger and cargo transport                          |         |
| Limited quantities: maximum net quantity per packaging | 30 kg G |

## SECTION 15: Regulatory information

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

#### European legislation:

VOC content Directive 2010/75/EU

| VOC content | Remark |
|-------------|--------|
| 100 %       |        |
| 729 g/l     |        |

Directive 2012/18/EU (Seveso III)

Threshold values under normal circumstances

| Substance or category   | Low tier (tonnes) | Top tier (tonnes) | Group | For this substance or mixture the summation rule has to be applied for: |
|---|-------------------|-------------------|-------|---|
| E2 Hazardous to the Aquatic Environment in Category Chronic 2 | 200               | 500               | None  | Eco-toxicity  |
| P3b FLAMMABLE AEROSOLS  | 5000 (net)        | 50000 (net)       | None  | Flammability  |

Ingredients according to Regulation (EC) No 648/2004 and amendments

≥30% aliphatic hydrocarbons

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

|  | Designation of the substance, of the group of substances or of the mixture   | Conditions of restriction   |
|--|--|---|
| <ul style="list-style-type: none"> <li>· hydrocarbons, C7, n-alkanes, isoalkanes, cyclics</li> <li>· propan-2-ol</li> <li>· hydrocarbons, C6, isoalkanes, &lt; 5% n-hexane</li> <li>· n-hexane</li> <li>· cyclohexane</li> </ul> | Liquid 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:<br>(a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;<br>(b) 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;<br>(c) hazard class 4.1;<br>(d) hazard class 5.1. | 1. Shall not be used in:<br>— ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,<br>— tricks and jokes,<br>— games for one or more participants, or any article intended to be used as such, even with ornamental aspects,<br>2. Articles not complying with paragraph 1 shall not be placed on the market.<br>3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:<br>— can be used as fuel in decorative oil lamps for supply to the general public, and,<br>— present an aspiration hazard and are labelled with H304,<br>4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).<br>5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:<br>a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life-threatening lung damage";<br>b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage";<br>c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010. |
| <ul style="list-style-type: none"> <li>· hydrocarbons, C7, n-alkanes, isoalkanes, cyclics</li> <li>· propan-2-ol</li> <li>· hydrocarbons, C6, isoalkanes, &lt; 5% n-hexane</li> <li>· n-hexane</li> <li>· cyclohexane</li> </ul> | Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.  | 1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:<br>— metallic glitter intended mainly for decoration,<br>— artificial snow and frost,<br>— "whoopie" cushions,<br>— silly string aerosols,<br>— imitation excrement,<br>— horns for parties,<br>— decorative flakes and foams,<br>— artificial cobwebs,   |

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|  |   |   |
|--|---|---|
|  |   | <p>— stink bombs.</p> <p>2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:<br/>“For professional users only”.</p> <p>3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC.</p> <p>4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.</p>   |
| · cyclohexane                                | Cyclohexane   | <p>1. Shall not be placed on the market for the first time after 27 June 2010, for supply to the general public, as a constituent of neoprene-based contact adhesives in concentrations equal to or greater than 0,1 % by weight in package sizes greater than 350 g.</p> <p>2. Neoprene-based contact adhesives containing cyclohexane and not conforming to paragraph 1 shall not be placed on the market for supply to the general public after 27 December 2010.</p> <p>3. Without prejudice to other Community legislation concerning the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that neoprene-based contact adhesives containing cyclohexane in concentrations equal to or greater than 0,1 % by weight that are placed on the market for supply to the general public after 27 December 2010 are visibly, legibly and indelibly marked as follows:<br/>“— This product is not to be used under conditions of poor ventilation.<br/>— This product is not to be used for carpet laying.”</p> |
| · propan-2-ol<br>· n-hexane<br>· cyclohexane | <p>Substances falling within one or more of the following points:</p> <p>(a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008:</p> <ul style="list-style-type: none"> <li>— carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation</li> <li>— reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation</li> <li>— skin sensitiser category 1, 1A or 1B</li> <li>— skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2</li> <li>— serious eye damage category 1 or eye irritant category 2</li> </ul> <p>(b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council</p> <p>(c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex.</p> <p>The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry.</p> | Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/2081  |

## National legislation Belgium

### NOVELEC

No data available

### propan-2-ol

|   |   |
|---|---|
| Agents cancérigènes, mutagènes et reprotoxiques (Code du bien-être au travail, Livre VI, titre 2) | alcool isopropylique; VI.2.2.; Liste des procédés au cours desquels une substance ou un mélange se dégage; Procédé à l'acide fort dans la fabrication d'alcool isopropylique. |
|---|---|

## National legislation The Netherlands

### NOVELEC

|  |  |
|--|--|
| Waterbezwaarlijkheid   | Z (2); Algemene Beoordelingsmethodiek (ABM)  |
| n-hexane   |  |
| SZW - Lijst van voor de voortplanting giftige stoffen (vruchtbaarheid) | n-hexaan; Opgenomen in SZW-lijst van voor de voortplanting giftige stoffen (vruchtbaarheid); 2 |

## National legislation France

### NOVELEC

No data available

### hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

|                       |  |
|-----------------------|--|
| Catégorie cancérogène | Hydrocarbures en C6-C12 (ensemble des,vapeurs) |
| Catégorie mutagène    | Hydrocarbures en C6-C12 (ensemble des,vapeurs) |

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## n-hexane

|  |              |
|--|--------------|
| Catégorie toxique pour la reproduction | n-Hexane; R2 |
|--|--------------|

## **National legislation Germany**

### NOVELEC

|                       |  |
|-----------------------|--|
| Lagerklasse (TRGS510) | 2B: Aerosolpackungen und Feuerzeuge  |
| WGK                   | 2; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017 |

### hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

|         |         |
|---------|---------|
| TA-Luft | 5.2.5/I |
|---------|---------|

### propan-2-ol

|                                       |  |
|---------------------------------------|--|
| TA-Luft                               | 5.2.5  |
| TRGS900 - Risiko der Fruchtschädigung | Propan-2-ol; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden |

### hydrocarbons, C6, isoalkanes, < 5% n-hexane

|         |         |
|---------|---------|
| TA-Luft | 5.2.5/I |
|---------|---------|

## n-hexane

|                                       |  |
|---------------------------------------|--|
| TA-Luft                               | 5.2.5/I  |
| TRGS900 - Risiko der Fruchtschädigung | n-Hexan; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden |

## cyclohexane

|         |       |
|---------|-------|
| TA-Luft | 5.2.5 |
|---------|-------|

## **National legislation Austria**

### NOVELEC

No data available

## n-hexane

|   |            |
|---|------------|
| Fortpflanzungsgefährdend [Beeinträchtigung der Fortpflanzungsfähigkeit (Fruchtbarkeit)] | n-Hexan; f |
|---|------------|

## **National legislation United Kingdom**

### NOVELEC

No data available

## **Other relevant data**

### NOVELEC

No data available

### propan-2-ol

|                       |                |
|-----------------------|----------------|
| IARC - classification | 3; Isopropanol |
| TLV - Carcinogen      | 2-propanol; A4 |

## n-hexane

|                       |  |
|-----------------------|--|
| TLV - Skin absorption | n-Hexane; Skin; Danger of cutaneous absorption |
|-----------------------|--|

## **15.2. Chemical safety assessment**

No chemical safety assessment has been conducted for the mixture.

## SECTION 16: Other information

### **Full text of any H- and EUH-statements referred to under section 3:**

- H220 Extremely flammable gas.
- H222 Extremely flammable aerosol.
- H225 Highly flammable liquid and vapour.
- H229 Pressurised container: May burst if heated.
- H280 Contains gas under pressure; may explode if heated.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H361f Suspected of damaging fertility.
- H373 May cause damage to organs (nervous system) through prolonged or repeated exposure 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.

|              |  |
|--------------|--|
| (*)          | INTERNAL CLASSIFICATION BY BIG   |
| ADI          | Acceptable daily intake  |
| AOEL         | Acceptable operator exposure level   |
| ATE          | Acute Toxicity Estimate  |
| BCF          | Bioconcentration Factor  |
| BEI          | Biological Exposure Indices  |
| CLP (EU-GHS) | Classification, labelling and packaging (Globally Harmonised System in Europe) |
| DMEL         | Derived Minimal Effect Level   |
| DNEL         | Derived No Effect Level  |

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|             |   |
|-------------|---|
| EC10        | Effect Concentration 10 %   |
| EC50        | Effect Concentration 50 %   |
| ErC50       | EC50 in terms of reduction of growth rate   |
| GLP         | Good Laboratory Practice  |
| LC0         | Lethal Concentration 0 %  |
| LC50        | Lethal Concentration 50 %   |
| LD50        | Lethal Dose 50 %  |
| LOAEC/LOAEL | Lowest Observed Adverse Effect Concentration/Lowest Observed Adverse Effect Level |
| NOAEC/NOAEL | No Observed Adverse Effect Concentration/No Observed Adverse Effect Level         |
| NOEC/NOEL   | No Observed Effect Concentration/No Observed Effect Level                         |
| OECD        | Organisation for Economic Co-operation and Development                            |
| PBT         | Persistent, Bioaccumulative & Toxic   |
| PNEC        | Predicted No Effect Concentration   |
| STP         | Sludge Treatment Process  |
| vPvB        | very Persistent & very Bioaccumulative  |

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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