

SAFETY DATA SHEET

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

NOVAFLUSH DPF TWO

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

1.1. Product identifier

Product name : NOVAFLUSH DPF TWO
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

Professional use
Cleansing product

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 |
|------------|------------|--------------------------------------|
| Eye Irrit. | category 2 | H319: Causes serious eye irritation. |

2.2. Label elements



| | |
|---------------------|--|
| Signal word | Warning |
| H-statements | |
| H319 | Causes serious eye irritation. |
| P-statements | |
| P280 | Wear eye protection. |
| P264 | Wash hands thoroughly after handling. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337 + P313 | If eye irritation persists: Get medical advice/attention. |

2.3. Other hazards

Caution! Substance is absorbed through the skin

NOVAFLUSH DPF TWO

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name REACH Registration No | CAS No EC No | Conc. (C) | Classification according to CLP | Note | Remark | M-factors and ATE |
|---|------------------------|---------------|--|---------------|-------------|--|
| propan-2-ol 01-2119457558-25 | 67-63-0 200-661-7 | 15% ≤C<20% | Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 | (1)(2)(10) | Constituent | |
| ethanol 01-2119457610-43 | 64-17-5 200-578-6 | 2.5%≤C<5% | Flam. Liq. 2; H225 Eye Irrit. 2; H319 Eye Irrit. 2; H319: C≥50%, (ECHA) | (1)(2)(6)(10) | Constituent | |
| amines, C12-14 (even numbered) alkyldimethyl, N-oxides 01-2119490061-47 | 308062-28-4 | 1%≤C<2.5% | Acute Tox. 4; H302 Eye Dam. 1; H318 Skin Irrit. 2; H315 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 | (1) | Constituent | M: 1 (Acute, ECHA (registration dossier)) |
| ammonia | 1336-21-6 215-647-6 | 0.5%≤C<1% | Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 STOT SE 3; H335: C≥5%, (CLP Annex VI (ATP 0)) | (1)(2)(10)(6) | Constituent | |

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

(2) Substance with a Community workplace exposure limit

(6) Enumerated in Annex VI of Regulation (EC) No. 1272/2008 but the classification has been adapted after evaluation of available test data

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

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:

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:

No effects known.

After skin contact:

No effects known.

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.

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

2 / 19

NOVAFLUSH DPF TWO

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting class B foam extinguisher, Quick-acting CO2 extinguisher.

Major fire: Class B foam (alcohol-resistant), Water spray if puddle cannot expand.

5.1.2 Unsuitable extinguishing media:

Small fire: Water (quick-acting extinguisher, reel); risk of puddle expansion.

Major fire: Water; risk of puddle expansion.

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:

No specific fire-fighting instructions required.

5.3.2 Special protective equipment for fire-fighters:

Gloves (EN 374). Safety glasses (EN 166). 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

No naked flames. Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.

6.1.1 Protective equipment for non-emergency personnel

See section 8.2

6.1.2 Protective equipment for emergency responders

Gloves (EN 374). Safety glasses (EN 166). Protective clothing (EN 14605 or EN 13034).

Suitable protective clothing

See section 8.2

6.2. Environmental precautions

Contain released product.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into inert absorbent material. Scoop absorbed substance into closing containers. Clean contaminated surfaces with an excess of water. 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

Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed.

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 dry area. Store in a cool area. Keep container in a well-ventilated place. Protect against frost. Keep out of direct sunlight.

7.2.2 Keep away from:

Heat sources, oxidizing agents, (strong) acids.

7.2.3 Suitable packaging material:

No data available

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.

NOVAFLUSH DPF TWO

EU

| | | |
|--------------------|---|----------------------|
| Ammonia, anhydrous | 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) | 14 mg/m ³ |
| | Short time value (Indicative occupational exposure limit value) | 50 ppm |
| | Short time value (Indicative occupational exposure limit value) | 36 mg/m ³ |

Belgium

| | | |
|----------------------|--|------------------------|
| Alcool éthylique | Time-weighted average exposure limit 8 h | 1000 ppm |
| | Time-weighted average exposure limit 8 h | 1907 mg/m ³ |
| Alcool isopropylique | Time-weighted average exposure limit 8 h | 200 ppm |
| | Time-weighted average exposure limit 8 h | 500 mg/m ³ |
| | Short time value | 400 ppm |
| | Short time value | 1000 mg/m ³ |
| Ammoniac | Time-weighted average exposure limit 8 h | 20 ppm |
| | Time-weighted average exposure limit 8 h | 14 mg/m ³ |
| | Short time value | 50 ppm |
| | Short time value | 36 mg/m ³ |

The Netherlands

| | | |
|----------|---|------------------------|
| Ammoniak | 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) | 14 mg/m ³ |
| | Short time value (Public occupational exposure limit value) | 50 ppm |
| | Short time value (Public occupational exposure limit value) | 36 mg/m ³ |
| Ethanol | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 137 ppm |
| | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 260 mg/m ³ |
| | Short time value (Public occupational exposure limit value) | 1000 ppm |
| | Short time value (Public occupational exposure limit value) | 1900 mg/m ³ |

France

| | | |
|----------------------|--|------------------------|
| Alcool éthylique | Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) | 1000 ppm |
| | Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) | 1900 mg/m ³ |
| | Short time value (VL: Valeur non réglementaire indicative) | 5000 ppm |
| | Short time value (VL: Valeur non réglementaire indicative) | 9500 mg/m ³ |
| Alcool isopropylique | Short time value (VL: Valeur non réglementaire indicative) | 400 ppm |
| | Short time value (VL: Valeur non réglementaire indicative) | 980 mg/m ³ |
| Ammoniac anhydre | Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) | 10 ppm |
| | Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) | 7 mg/m ³ |
| | Short time value (VRC: Valeur réglementaire contraignante) | 20 ppm |
| | Short time value (VRC: Valeur réglementaire contraignante) | 14 mg/m ³ |

Germany

| | | |
|-------------|---|---------------------------|
| Ethanol | Time-weighted average exposure limit 8 h (TRGS 900) | 200 ppm (1) |
| | Time-weighted average exposure limit 8 h (TRGS 900) | 380 mg/m ³ (1) |
| Propan-2-ol | Time-weighted average exposure limit 8 h (TRGS 900) | 200 ppm (2) |
| | Time-weighted average exposure limit 8 h (TRGS 900) | 500 mg/m ³ (2) |

(1) UF: 4 (II)

(2) UF: 2 (II)

NOVAFLUSH DPF TWO

Austria

| | | |
|--------------------------------------|--|------------------------|
| 2-Propanol Kurzzeitwert für Großguss | *) Kurzzeitwert für Großguss gilt bis 31.12.2013 | |
| | Tagesmittelwert (MAK) | 200 ppm |
| | Tagesmittelwert (MAK) | 500 mg/m ³ |
| | Kurzzeitwert 30(Miw) 4x (MAK) | 800 ppm |
| 2-Propanol | Kurzzeitwert 30(Miw) 4x (MAK) | 2000 mg/m ³ |
| | Tagesmittelwert (MAK) | 200 ppm |
| | Tagesmittelwert (MAK) | 500 mg/m ³ |
| | Kurzzeitwert 15(Miw) 4x (MAK) | 800 ppm |
| Ammoniak | Kurzzeitwert 15(Miw) 4x (MAK) | 2000 mg/m ³ |
| | Tagesmittelwert (MAK) | 20 ppm |
| | Tagesmittelwert (MAK) | 14 mg/m ³ |
| | Kurzzeitwert 15(Miw) 4x (MAK) | 50 ppm |
| Ethanol | Kurzzeitwert 15(Miw) 4x (MAK) | 36 mg/m ³ |
| | Tagesmittelwert (MAK) | 1000 ppm |
| | Tagesmittelwert (MAK) | 1900 mg/m ³ |
| | Kurzzeitwert 60(Mow) 3x (MAK) | 2000 ppm |
| | Kurzzeitwert 60(Mow) 3x (MAK) | 3800 mg/m ³ |

UK

| | | |
|--------------------|---|------------------------|
| Ammonia, anhydrous | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 25 ppm |
| | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 18 mg/m ³ |
| | Short time value (Workplace exposure limit (EH40/2005)) | 35 ppm |
| | Short time value (Workplace exposure limit (EH40/2005)) | 25 mg/m ³ |
| Ethanol | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 1000 ppm |
| | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 1920 mg/m ³ |
| 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 ³ |
| | Short time value (Workplace exposure limit (EH40/2005)) | 500 ppm |
| | Short time value (Workplace exposure limit (EH40/2005)) | 1250 mg/m ³ |

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 |
| Ammonia | Time-weighted average exposure limit 8 h (TLV - Adopted Value) | 25 ppm |
| | Short time value (TLV - Adopted Value) | 35 ppm |
| Ethanol | Short time value (TLV - Adopted Value) | 1000 ppm |

b) National biological limit values

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

Germany

| | | | |
|----------------------|---|---------|--|
| 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 |
|----------------------|--|---------|-------------------------|

8.1.2 Sampling methods

| Product name | Test | Number |
|--|-------|---------|
| Ammonia (organic and inorganic gases by Extractive FTIR) | NIOSH | 3800 |
| Ammonia | NIOSH | 6015 |
| Ammonia | NIOSH | 6015REV |
| Ammonia | NIOSH | 6016 |
| Ammonia | NON | 41 |
| Ammonia | OSHA | ID 188 |
| Ethanol (Ethylalcohol) | NIOSH | 3900 |
| Ethanol (Ethylalcohol) | OSHA | 5001 |
| Ethanol (Volatile Organic compounds) | NIOSH | 2549 |
| ethanol | NIOSH | 8002 |
| Ethyl Alcohol (Ethanol)(Alcohols I) | NIOSH | 1400 |
| Isopropanol (Volatile Organic compounds) | NIOSH | 2549 |
| Isopropyl Alcohol (Alcohols I) | NIOSH | 1400 |
| Isopropyl Alcohol | NIOSH | 3900 |
| Isopropyl Alcohol | OSHA | 5001 |

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

5 / 19

NOVAFLUSH DPF TWO

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

propan-2-ol

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

ethanol

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|--------------------------|---------------------------------------|-----------------------|--------|
| DNEL | Long-term systemic effects inhalation | 380 mg/m ³ | |
| | Long-term systemic effects dermal | 8238 mg/kg bw/day | |

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|--------------------------|---------------------------------------|-----------------------|--------|
| DNEL | Long-term systemic effects inhalation | 6.2 mg/m ³ | |
| | Long-term systemic effects dermal | 11 mg/kg bw/day | |

ammonia

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|--------------------------|---------------------------------------|------------------------|---------------------------------|
| DNEL | Long-term systemic effects inhalation | 47.6 mg/m ³ | Test data of the pure substance |
| | Acute systemic effects inhalation | 47.6 mg/m ³ | Test data of the pure substance |
| | Long-term local effects inhalation | 14 mg/m ³ | Test data of the pure substance |
| | Acute local effects inhalation | 36 mg/m ³ | Test data of the pure substance |
| | Long-term systemic effects dermal | 6.8 mg/kg bw/day | Test data of the pure substance |
| | Acute systemic effects dermal | 6.8 mg/kg bw/day | Test data of the pure substance |

DNEL/DMEL - General population

propan-2-ol

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

ethanol

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|--------------------------|---------------------------------------|-----------------------|--------|
| DNEL | Long-term systemic effects inhalation | 114 mg/m ³ | |

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|--------------------------|---------------------------------------|------------------------|--------|
| DNEL | Long-term systemic effects inhalation | 1.53 mg/m ³ | |
| | Long-term systemic effects dermal | 5.5 mg/kg bw/day | |
| | Long-term systemic effects oral | 0.44 mg/kg bw/day | |

ammonia

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|--------------------------|---------------------------------------|------------------------|---------------------------------|
| DNEL | Long-term systemic effects inhalation | 23.8 mg/m ³ | Test data of the pure substance |
| | Acute systemic effects inhalation | 23.8 mg/m ³ | Test data of the pure substance |
| | Long-term local effects inhalation | 2.8 mg/m ³ | Test data of the pure substance |
| | Acute local effects inhalation | 7.2 mg/m ³ | Test data of the pure substance |
| | Long-term systemic effects dermal | 68 mg/kg bw/day | Test data of the pure substance |
| | Acute systemic effects dermal | 68 mg/kg bw/day | Test data of the pure substance |
| | Long-term systemic effects oral | 6.8 mg/kg bw/day | Test data of the pure substance |
| | Acute systemic effects oral | 6.8 mg/kg bw/day | Test data of the pure substance |

PNEC

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

6 / 19

NOVAFLUSH DPF TWO

ethanol

| Compartments | Value | Remark |
|-------------------------------------|-----------------------|--------|
| Fresh water | 0.96 mg/l | |
| Marine water | 0.79 mg/l | |
| Fresh water (intermittent releases) | 2.75 mg/l | |
| STP | 580 mg/l | |
| Fresh water sediment | 3.6 mg/kg sediment dw | |
| Marine water sediment | 2.9 mg/kg sediment dw | |
| Soil | 0.63 mg/kg soil dw | |
| Oral | 0.38 g/kg food | |

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

| Compartments | Value | Remark |
|-------------------------------------|-------------------------|--------|
| Fresh water | 0.034 mg/l | |
| Marine water | 0.003 mg/l | |
| Fresh water (intermittent releases) | 0.034 mg/l | |
| STP | 24 mg/l | |
| Fresh water sediment | 5.24 mg/kg sediment dw | |
| Marine water sediment | 0.524 mg/kg sediment dw | |
| Soil | 1.02 mg/kg soil dw | |
| Oral | 11.1 mg/kg food | |

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

Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

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 |
|-------------------------------|----------------------------|-----------|------------------|--------|
| rubber | > 480 minutes | 0.7 mm | Class 6 | |
| PVC | > 480 minutes | 0.7 mm | Class 6 | |
| neoprene (chloroprene rubber) | > 480 minutes | 0.7 mm | Class 6 | |

c) Eye protection:

Safety glasses (EN 166).

d) Skin 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 | Liquid |
| Colour | Blue |
| Odour | Characteristic odour |
| Odour threshold | No data available in the literature |
| Melting point | No data available in the literature |
| Boiling point | No data available in the literature |
| Flammability | Not classified as flammable |
| Explosion limits | No data available in the literature |
| Flash point | > 93 °C |
| Auto-ignition temperature | No data available in the literature |
| Decomposition temperature | No data available in the literature |
| pH | 11 |
| Kinematic viscosity | No data available in the literature |
| Dynamic viscosity | No data available in the literature |
| Solubility | Water ; complete |
| Log Kow | Not applicable (mixture) |
| Vapour pressure | No data available in the literature |
| Absolute density | 970 kg/m ³ |

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

7 / 19

NOVAFLUSH DPF TWO

| | |
|-------------------------|-------------------------------------|
| Relative density | 0.97 |
| | 1.02 ; 20 °C |
| Relative vapour density | No data available in the literature |
| Particle size | Not applicable (liquid) |

9.2. Other information

| | |
|------------------|---------------------|
| Evaporation rate | 0.3 ; Butyl acetate |
|------------------|---------------------|

SECTION 10: Stability and reactivity

10.1. Reactivity

Heating increases the fire hazard. Basic reaction.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Precautionary measures

Keep away from naked flames/heat.

10.5. Incompatible materials

Oxidizing agents, (strong) acids.

10.6. Hazardous decomposition products

Upon combustion: CO and CO₂ 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

NOVAFLUSH DPF TWO

No (test) data on the mixture available

Judgement is based on the relevant ingredients

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 | |

ethanol

| Route of exposure | Parameter | Method | Value | Exposure time | Species | Value determination | Remark |
|----------------------|-----------|------------------------|------------------|---------------|---------------------|---------------------|--------|
| Oral | LD50 | OECD 401 | 10470 mg/kg bw | | Rat (male / female) | Experimental value | |
| Skin | LD50 | | > 15800 mg/kg bw | | Rabbit | Experimental value | |
| Inhalation (vapours) | LC50 | Equivalent to OECD 403 | 124.7 mg/l air | 4 h | Rat (male / female) | Experimental value | |

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

| Route of exposure | Parameter | Method | Value | Exposure time | Species | Value determination | Remark |
|-------------------|-----------|---------------|-----------------|---------------|---------------------|---------------------|--------|
| Oral | LD50 | OECD 401 | 1064 mg/kg bw | | Rat (male / female) | Experimental value | |
| Dermal | LD50 | EU Method B.3 | > 2000 mg/kg bw | 24 h | Rat (male / female) | Read-across | |
| Inhalation | | | | | | Data waiving | |

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

8 / 19

NOVAFLUSH DPF TWO

ammonia

| Route of exposure | Parameter | Method | Value | Exposure time | Species | Value determination | Remark |
|-------------------|-----------|------------------------|---------------|---------------|------------|---------------------|---------------------------------|
| Oral | LD50 | Equivalent to OECD 401 | 350 mg/kg bw | | Rat (male) | Experimental value | Aqueous solution |
| Dermal | | | | | | Data waiving | |
| Inhalation | LC50 | | 9.85 mg/l air | 60 minutes | Rat (male) | Experimental value | Test data of the pure substance |

Conclusion

Not classified for acute toxicity

Corrosion/irritation

NOVAFLUSH DPF TWO

No (test)data on the mixture available

Classification is based on the relevant ingredients

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 | |

ethanol

| Route of exposure | Result | Method | Exposure time | Time point | Species | Value determination | Remark |
|-------------------|----------------|----------|---------------|-----------------------|---------|---------------------|------------------|
| Eye | Irritating | OECD 405 | | 24; 48; 72 hours | Rabbit | Experimental value | Single treatment |
| Skin | Not irritating | OECD 404 | 24 h | 1; 2; 3; 4; 5; 7 days | Rabbit | Experimental value | Single treatment |

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

| Route of exposure | Result | Method | Exposure time | Time point | Species | Value determination | Remark |
|-------------------|--------------------|----------|---------------|-----------------------------------|---------|---------------------|------------------|
| Eye | Serious eye damage | OECD 405 | | 1; 24; 48; 72 hrs; 7; 14; 21 days | Rabbit | Experimental value | Single treatment |
| Skin | Irritating | OECD 404 | 24 h | 24; 72 hours | Rabbit | Experimental value | |

ammonia

| Route of exposure | Result | Method | Exposure time | Time point | Species | Value determination | Remark |
|-------------------|--------------------------------|--------|---------------|------------|---------|---------------------|--------|
| Eye | Serious eye damage; category 1 | | | | | Annex VI | |
| Skin | Corrosive; category 1B | | | | | Annex VI | |

Conclusion

Causes serious eye irritation.

Not classified as irritating to the respiratory system

Not classified as irritating to the skin

Respiratory or skin sensitisation

NOVAFLUSH DPF TWO

No (test)data on the mixture available

Judgement is based on the relevant ingredients

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 | |

ethanol

| Route of exposure | Result | Method | Exposure time | Observation time point | Species | Value determination | Remark |
|----------------------|-----------------|------------------------|---------------|------------------------|-----------------------|---------------------|--------|
| Dermal (on the ears) | Not sensitizing | Equivalent to OECD 429 | | | Mouse (male / female) | Experimental value | |
| Inhalation (vapours) | Not sensitizing | | | | Rat (male / female) | Experimental value | |

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

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

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

9 / 19

NOVAFLUSH DPF TWO

ammonia

| Route of exposure | Result | Method | Exposure time | Observation time point | Species | Value determination | Remark |
|-------------------|--------|--------|---------------|------------------------|---------|---------------------|--------|
| Skin | | | | | | Data waiving | |
| Inhalation | | | | | | Data waiving | |

Conclusion

Not classified as sensitizing for skin

Not classified as sensitizing for inhalation

Specific target organ toxicity

NOVAFLUSH DPF TWO

No (test)data on the mixture available

Judgement is based on the relevant ingredients

propan-2-ol

| Route of exposure | Parameter | Method | Value | Organ/Effect | Exposure time | Species | Value determination | Remark |
|----------------------|------------|------------------------|----------|--|-------------------------------------|---------------------|---------------------|--------|
| 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 | |

ethanol

| Route of exposure | Parameter | Method | Value | Organ/Effect | Exposure time | Species | Value determination | Remark |
|----------------------|-----------|------------------------|------------|--------------------------------|------------------------------------|------------|---------------------|--------|
| Oral (stomach tube) | LOAEL | Equivalent to OECD 408 | 3200 mg/kg | Liver; kidney (histopathology) | 7 weeks (daily) - 14 weeks (daily) | Rat (male) | Experimental value | |
| Dermal | | | | | | | Data waiving | |
| Inhalation (vapours) | NOAEL | Subacute toxicity test | > 20 mg/l | No effect | 26 days (6h / day) | Rat (male) | Experimental value | |

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

| Route of exposure | Parameter | Method | Value | Organ/Effect | Exposure time | Species | Value determination | Remark |
|-------------------|-----------|------------------------|-----------------|--|-------------------------------------|-----------------------|---------------------|--------|
| Oral (diet) | NOAEL | Equivalent to OECD 408 | 88 mg/kg bw/day | No effect | 13 weeks (daily) - 14 weeks (daily) | Rat (male / female) | Experimental value | |
| Dermal | LOEL | Equivalent to OECD 411 | 0.27 % | Skin (tingling/irritation of the skin) | 13 weeks (5 days / week) | Mouse (male / female) | Experimental value | |

ammonia

| Route of exposure | Parameter | Method | Value | Organ/Effect | Exposure time | Species | Value determination | Remark |
|---------------------|-----------|--------------------------|---------------------------|---------------------------|------------------------------------|---------------------|---------------------|------------------|
| Oral (stomach tube) | NOAEL | OECD 422 | 250 mg/kg bw/day | General (no effect) | 35 day(s) | Rat (male / female) | Read-across | Aqueous solution |
| Oral (stomach tube) | LOAEL | OECD 422 | 750 mg/kg bw/day | General (overall effects) | 35 day(s) | Rat (male / female) | Read-across | |
| Dermal | | | | | | | Data waiving | |
| Inhalation (gases) | LOEL | Subchronic toxicity test | 119 mg/m ³ air | General (histopathology) | 18 weeks (6h / day, 5 days / week) | Guinea pig (male) | Experimental value | |

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

NOVAFLUSH DPF TWO

No (test)data on the mixture available

Judgement is based on the relevant ingredients

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

10 / 19

NOVAFLUSH DPF TWO

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 | |

ethanol

| 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 | |

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

| Result | Method | Test substrate | Effect | Value determination | Remark |
|---|----------------|--|--------|---------------------|--------|
| Negative with metabolic activation, negative without metabolic activation | OECD 487 | Human lymphocytes | | Experimental value | |
| Negative with metabolic activation, negative without metabolic activation | EU Method B.17 | Chinese hamster lung fibroblasts (V79) | | Experimental value | |

ammonia

| 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 | Test data of the pure substance |

Mutagenicity (in vivo)

NOVAFLUSH DPF TWO

No (test)data on the mixture available

Judgement is based on the relevant ingredients

propan-2-ol

| Result | Method | Exposure time | Test substrate | Organ/Effect | Value determination | Remark |
|----------------------------|------------------------|---------------|-----------------------|--------------|---------------------|----------------------------------|
| Negative (Intraperitoneal) | Equivalent to OECD 474 | | Mouse (male / female) | No effect | Experimental value | Single intraperitoneal injection |

ethanol

| Result | Method | Exposure time | Test substrate | Organ/Effect | Value determination | Remark |
|---------------------------------|------------------------|-------------------|----------------|--------------|---------------------|--------|
| Ambiguous (Oral (stomach tube)) | Equivalent to OECD 478 | 5 days (1x / day) | Mouse (male) | | Experimental value | |

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

| Result | Method | Exposure time | Test substrate | Organ/Effect | Value determination | Remark |
|--------------------------------|------------------------|---------------|----------------|--------------|---------------------|--------|
| Negative (Oral (stomach tube)) | Equivalent to OECD 478 | 5 day(s) | Mouse (male) | No effect | Experimental value | |

ammonia

| Result | Method | Exposure time | Test substrate | Organ/Effect | Value determination | Remark |
|----------|------------------------|---------------|----------------|-------------------------|---------------------|--------|
| Negative | Equivalent to OECD 474 | | Mouse (male) | Bone marrow (no effect) | Read-across | |

Conclusion

Not classified for mutagenic or genotoxic toxicity

Carcinogenicity

NOVAFLUSH DPF TWO

No (test)data on the mixture available

Judgement is based on the relevant ingredients

propan-2-ol

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

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

11 / 19

NOVAFLUSH DPF TWO

ethanol

| Route of exposure | Parameter | Method | Value | Organ/Effect | Exposure time | Species | Value determination | Remark |
|-----------------------|-----------|--------------------|---------------------|------------------------|---------------|----------------|---------------------|--------|
| Oral (drinking water) | NOAEL | EPA OPPTS 870.4200 | > 440 mg/kg bw/day | No carcinogenic effect | 105 week(s) | Mouse (female) | Experimental value | |
| Oral (drinking water) | NOAEL | EPA OPPTS 870.4200 | < 2600 mg/kg bw/day | No carcinogenic effect | 105 week(s) | Mouse (male) | Experimental value | |

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

| Route of exposure | Parameter | Method | Value | Organ/Effect | Exposure time | Species | Value determination | Remark |
|-------------------|-----------|------------------------|-------|------------------------|---------------|---------------------|---------------------|--------|
| Oral (diet) | NOEL | Equivalent to OECD 451 | 0.2 % | No carcinogenic effect | 2 year(s) | Rat (male / female) | Experimental value | |

ammonia

| Route of exposure | Parameter | Method | Value | Organ/Effect | Exposure time | Species | Value determination | Remark |
|-------------------|-----------|------------------------|------------------|------------------------|-------------------|--------------|---------------------|--------|
| Oral | NOAEL | Equivalent to OECD 453 | 256 mg/kg bw/day | No carcinogenic effect | 104 weeks (daily) | Rat (female) | Read-across | |

Conclusion

Not classified for carcinogenicity

Reproductive toxicity

NOVAFLUSH DPF TWO

No (test) data on the mixture available

Judgement is based on the relevant ingredients

propan-2-ol

| Category | Parameter | Method | Value | Exposure time | Species | Effect | Value determination | Remark |
|--|-----------|------------------------|------------------|---------------|---------------------|--------------------|---------------------|--------|
| Developmental toxicity (Oral (stomach tube)) | NOAEL | Equivalent to OECD 414 | 400 mg/kg bw/day | 10 day(s) | Rat | Foetus (no effect) | 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 | |

ethanol

| Category | Parameter | Method | Value | Exposure time | Species | Effect | Value determination | Remark |
|---|-----------|------------------------|---------------------|--------------------------|------------|-----------|---------------------|--------|
| Developmental toxicity (Inhalation (vapours)) | NOAEL | Equivalent to OECD 414 | ≥ 20000 ppm | 20 days (7h / day) | Rat | No effect | Experimental value | |
| Maternal toxicity (Inhalation (vapours)) | NOAEL | Equivalent to OECD 414 | 16000 ppm | 20 days (7h / day) | Rat | No effect | Experimental value | |
| Effects on fertility (Oral (stomach tube)) | NOAEL | Equivalent to OECD 415 | > 6000 mg/kg bw/day | 9 weeks (2 times / week) | Rat (male) | No effect | Experimental value | |

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

| Category | Parameter | Method | Value | Exposure time | Species | Effect | Value determination | Remark |
|--|-----------|------------------------|------------------------------------|---------------|---------------------|-------------------|---------------------|--------|
| Developmental toxicity (Oral (stomach tube)) | LOAEL | Equivalent to OECD 414 | 200 mg/kg bw/day | 10 day(s) | Rat | Fetotoxicity | Experimental value | |
| Maternal toxicity (Oral (stomach tube)) | LOAEL | Equivalent to OECD 414 | 200 mg/kg bw/day | 10 day(s) | Rat | Maternal toxicity | Experimental value | |
| Effects on fertility (Oral (diet)) | NOAEL | Equivalent to OECD 416 | 37 mg/kg bw/day - 128 mg/kg bw/day | | Rat (male / female) | No effect | Read-across | |

ammonia

| Category | Parameter | Method | Value | Exposure time | Species | Effect | Value determination | Remark |
|------------------------|-----------|------------------------|-------------------|----------------------------|---------------------|-----------|---------------------|--------|
| Developmental toxicity | NOAEL | Equivalent to OECD 414 | 100 mg/kg bw/day | 23 days (gestation, daily) | Rabbit | No effect | Read-across | |
| Maternal toxicity | NOAEL | Equivalent to OECD 414 | 1 mg/kg bw/day | 23 days (gestation, daily) | Rabbit | No effect | Read-across | |
| Effects on fertility | NOAEL (P) | OECD 422 | 1500 mg/kg bw/day | 28 day(s) - 53 day (s) | Rat (male / female) | No effect | Read-across | |

Conclusion

Not classified for reprotoxic or developmental toxicity

Aspiration hazard

NOVAFLUSH DPF TWO

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

12 / 19

NOVAFLUSH DPF TWO

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

Toxicity other effects

NOVAFLUSH DPF TWO

No (test)data on the mixture available

Chronic effects from short and long-term exposure

NOVAFLUSH DPF TWO

No effects known.

11.2. Information on other hazards

No evidence of endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

NOVAFLUSH DPF TWO

No (test)data on the mixture available

Judgement of the mixture is based on the relevant ingredients

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 |

ethanol

| | Parameter | Method | Value | Duration | Species | Test design | Fresh/salt water | Value determination |
|---|-----------|------------------------|------------|-----------|---------------------|---------------------|------------------|---|
| Acute toxicity fishes | LC50 | US EPA | 15300 mg/l | 96 h | Pimephales promelas | Flow-through system | Fresh water | Experimental value |
| Acute toxicity crustacea | LC50 | ASTM E729-80 | 5012 mg/l | 48 h | Ceriodaphnia dubia | Static system | Fresh water | Experimental value; Nominal concentration |
| Toxicity algae and other aquatic plants | ErC50 | Equivalent to OECD 201 | 275 mg/l | 3 day(s) | Chlorella vulgaris | Static system | Fresh water | Experimental value; Nominal concentration |
| | EC10 | Equivalent to OECD 201 | 12 mg/l | 3 day(s) | Chlorella vulgaris | Static system | Fresh water | Experimental value |
| Long-term toxicity fish | ChV | US EPA | 245 mg/l | 30 day(s) | Pisces | | Fresh water | QSAR; Lethal |
| Long-term toxicity aquatic crustacea | NOEC | | 9.6 mg/l | 9 day(s) | Daphnia magna | Semi-static system | Fresh water | Experimental value; Nominal concentration |
| Toxicity aquatic micro-organisms | EC50 | | 5800 mg/l | 4 h | Paramecium caudatum | Static system | Fresh water | Experimental value; Nominal concentration |

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

13 / 19

NOVAFLUSH DPF TWO

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

| | Parameter | Method | Value | Duration | Species | Test design | Fresh/salt water | Value determination |
|---|-----------|----------------------------------|---------------------|------------|---------------------------------|---------------------|------------------|--|
| Acute toxicity fishes | LC50 | APHA | 2.7 mg/l - 3.4 mg/l | 96 h | Pimephales promelas | Static system | Fresh water | Experimental value; Nominal concentration |
| Acute toxicity crustacea | EC50 | OECD 202 | 3.1 mg/l | 48 h | Daphnia magna | Static system | Fresh water | Experimental value; Nominal concentration |
| Toxicity algae and other aquatic plants | ErC50 | Equivalent to OECD 201 | 0.27 mg/l | 72 h | Pseudokirchneriella subcapitata | Static system | Fresh water | Experimental value; GLP |
| | NOEC | Equivalent to OECD 201 | 0.078 mg/l | 72 h | Pseudokirchneriella subcapitata | Static system | Fresh water | Experimental value; Growth rate |
| Long-term toxicity fish | NOEC | Equivalent to EPA OPPTS 850.1500 | 0.42 mg/l | 302 day(s) | Pimephales promelas | Flow-through system | Fresh water | Experimental value; Measured concentration |
| Long-term toxicity aquatic crustacea | NOEC | Equivalent to OECD 211 | 0.7 mg/l | 21 day(s) | Daphnia magna | Flow-through system | Fresh water | Experimental value; Measured concentration |

Conclusion

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2. Persistence and degradability

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 ³ | Calculated value |

ethanol

Biodegradation water

| Method | Value | Duration | Value determination |
|--------|--------------------------|-----------|---------------------|
| | 84 %; Oxygen consumption | 20 day(s) | Experimental value |

Phototransformation air (DT50 air)

| Method | Value | Conc. OH-radicals | Value determination |
|--------|-------------|----------------------|---------------------|
| | 36 h - 40 h | 5E5 /cm ³ | Calculated value |

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

Biodegradation water

| Method | Value | Duration | Value determination |
|-----------|-----------|-----------|---------------------|
| OECD 301B | 90 %; GLP | 28 day(s) | Experimental value |

Conclusion

Water

Contains readily biodegradable component(s)

12.3. Bioaccumulative potential

NOVAFLUSH DPF TWO

Log Kow

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

propan-2-ol

BCF fishes

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

Log Kow

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

ethanol

BCF fishes

| Parameter | Method | Value | Duration | Species | Value determination |
|-----------|--------|---------|----------|-----------------|---------------------|
| BCF | | 1 - 4.5 | 72 h | Cyprinus carpio | Read-across |

Log Kow

| Method | Remark | Value | Temperature | Value determination |
|----------|--------|-------|-------------|---------------------|
| OECD 107 | | -0.35 | 24 °C | Experimental value |

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

14 / 19

NOVAFLUSH DPF TWO

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

Log Kow

| Method | Remark | Value | Temperature | Value determination |
|--------|--------|-------|-------------|---------------------|
| | | < 2.7 | | Calculated |

ammonia

Log Kow

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

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

propan-2-ol

(log) Koc

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

ethanol

(log) Koc

| Parameter | Method | Value | Value determination |
|-----------|--------|-------|---------------------|
| log Koc | | 0 | Calculated value |

Percent distribution

| Method | Fraction air | Fraction biota | Fraction sediment | Fraction soil | Fraction water | Value determination |
|------------------|--------------|----------------|-------------------|---------------|----------------|---------------------|
| Mackay level III | 53 % | | 0.1 % | 14 % | 33 % | QSAR |

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

Percent distribution

| Method | Fraction air | Fraction biota | Fraction sediment | Fraction soil | Fraction water | Value determination |
|------------------|--------------|----------------|-------------------|---------------|----------------|---------------------|
| Mackay level III | 0 % | | 0.8 % | 83 % | 16 % | Calculated value |

Conclusion

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

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

NOVAFLUSH DPF TWO

Greenhouse gases

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 2024/590)

Water ecotoxicity pH

pH shift

propan-2-ol

Greenhouse gases

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573)

Groundwater

Groundwater pollutant

ethanol

Greenhouse gases

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573)

Groundwater

Groundwater pollutant

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

Greenhouse gases

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573)

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

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

15 / 19

NOVAFLUSH DPF TWO

Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. The waste code must be assigned by the user, preferably in consultation with the (environmental) authorities concerned.

13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

13.1.3 Packaging/Container

No data available

SECTION 14: Transport information

Road (ADR), Rail (RID), Inland waterways (ADN), Sea (IMDG/IMSBC), Air (ICAO-TI/IATA-DGR)

| | | |
|---|--|---|
| 14.1. UN number or ID number | Transport | Not subject |
| 14.2. UN proper shipping name | | |
| 14.3. Transport hazard class(es) | | |
| | Hazard identification number | |
| | Class | |
| | Classification code | |
| 14.4. Packing group | | |
| | Packing group | |
| | Labels | |
| 14.5. Environmental hazards | | |
| | Environmentally hazardous substance mark | no |
| 14.6. Special precautions for user | | |
| | Special provisions | |
| | Limited quantities | |
| 14.7. Maritime transport in bulk according to IMO instruments | | |
| | Annex II of MARPOL 73/78 | Not applicable, based on available data |

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 |
|------------------------|--------|
| 17.5 % - 25 % | |
| 169.75 g/l - 242.5 g/l | |

Directive 2012/18/EU (Seveso III)

Not subject to registration according to Directive 2012/18/EU (Seveso III)

European drinking water standards (98/83/EC and 2020/2184)

NOVAFLUSH DPF TWO

| Parameter | Parametric value | Note | Reference |
|-----------|------------------|------|--|
| Sodium | 200 mg/l | | Listed in Annex I, Part C, of Directive (EU) 2020/2184 on the quality of water intended for human consumption. |

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"> · propan-2-ol · ethanol · ammonia | 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: (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; (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; (c) hazard class 4.1; (d) hazard class 5.1. | 1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects, 2. Articles not complying with paragraph 1 shall not be placed on the market. 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: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with H304, 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). 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: 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"; 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 |

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

16 / 19

NOVAFLUSH DPF TWO

| | | |
|----------------------------|---|--|
| | | lead to life threatening lung damage”; 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. |
| · propan-2-ol · ethanol | 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: — metallic glitter intended mainly for decoration, — artificial snow and frost, — “whoopee” cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs. 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: “For professional users only”. 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. 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. |
| · propan-2-ol · ammonia | Substances falling within one or more of the following points: (a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008: — 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 — reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation — skin sensitiser category 1, 1A or 1B — skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2 — serious eye damage category 1 or eye irritant category 2 (b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council (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. 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. | Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/2081 |

National legislation Belgium
NOVAFLUSH DPF TWO

No data available

propan-2-ol

| | |
|--|---|
| Agents cancérigènes, mutagènes et reprotoxiques et aux agents possédant des propriétés perturbant le système endocrinien (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
NOVAFLUSH DPF TWO

| | |
|----------------------|---|
| Waterbezwaarlijkheid | B (3); Algemene Beoordelingsmethodiek (ABM) |
|----------------------|---|

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

17 / 19

NOVAFLUSH DPF TWO

ethanol

| | |
|--|--|
| Huidopname (wettelijk) | Ethanol; H |
| SZW - Lijst van kankerverwekkende stoffen | ethanol; Opgenomen in SZW-lijst van kankerverwekkende stoffen |
| SZW - Lijst van voor de voortplanting giftige stoffen (ontwikkeling) | ethanol; ethylalcohol; Opgenomen in SZW-lijst van voor de voortplanting giftige stoffen (ontwikkeling); 1A |
| SZW - Lijst van voor de voortplanting giftige stoffen (vruchtbaarheid) | ethanol; ethylalcohol; Opgenomen in SZW-lijst van voor de voortplanting giftige stoffen (vruchtbaarheid); 1A |
| SZW - Lijst van voor de voortplanting giftige stoffen (borstvoeding) | ethanol; ethylalcohol; Opgenomen in SZW-lijst van voor de voortplanting giftige stoffen (borstvoeding) |

National legislation France

NOVAFLUSH DPF TWO

No data available

National legislation Germany

NOVAFLUSH DPF TWO

| | |
|-----|--|
| WGK | 1; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017 |
|-----|--|

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 |

ethanol

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

amines, C12-14 (even numbered) alkyldimethyl, N-oxides

| | |
|---------|-------|
| TA-Luft | 5.2.1 |
|---------|-------|

ammonia

| | |
|---------------------------------------|---|
| TRGS900 - Risiko der Fruchtschädigung | Ammoniak; Y; Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes nicht befürchtet zu werden |
|---------------------------------------|---|

National legislation Austria

NOVAFLUSH DPF TWO

No data available

National legislation United Kingdom

NOVAFLUSH DPF TWO

No data available

Other relevant data

NOVAFLUSH DPF TWO

No data available

propan-2-ol

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

ethanol

| | |
|-----------------------|----------------------|
| TLV - Carcinogen | Ethanol; A3 |
| IARC - classification | 1; Alcohol beverages |

15.2. Chemical safety assessment

No chemical safety assessment is required for a mixture.

SECTION 16: Other information

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

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H400 Very toxic to aquatic life.
- 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 |

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

18 / 19

NOVAFLUSH DPF TWO

| | |
|--------------|---|
| 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 |
| 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.

Reason for revision: 2; 3

Publication date: 2017-03-14

Date of revision: 2024-05-27

Revision number: 0200

BIG number: 58255

19 / 19