



# 1. Identification

| Product identifier              | MATRIX LIGHT MASTER HIGH RISER LEVEL 9 PRE-BONDED    |  |
|---------------------------------|--|--|
| Other means of identification   |  |  |
| SDS number                      | 41-23-0000031  |  |
| Recommended use                 | Personal care product used for cosmetic effect.      |  |
| <b>Recommended restrictions</b> | None known.  |  |
| Manufacturer/Importer/Supplier  | /Distributor information                             |  |
| US Address:                     | L'Oreal USA Products, Inc                            |  |
| oo Address.                     | 133 Terminal Avenue                                  |  |
|                                 | Clark, NJ 07066                                      |  |
|                                 | USA  |  |
| Canadian Address:               | L'Oreal Canada                                       |  |
|                                 | 4895 rue Hickmore                                    |  |
|                                 | Ville St-Laurent, H4T 1K5                            |  |
|                                 | Canada   |  |
| Emergency Phone # :             | 1-800-535-5053 (International: 352-323-3500)         |  |
|                                 | In Canada - 1-613-996-6666 (Canutec (*666 Cellular)) |  |
| For further Information:        | 1-732-499-2741                                       |  |
| Poison Control # :              | 412-390-3326   |  |

# 2. Hazard(s) identification

| Physical hazards     | Self-reactive substances and mixtures           | Туре F                                  |
|----------------------|---|---|
| Health hazards       | Acute toxicity, oral                            | Category 4                              |
|                      | Skin corrosion/irritation                       | Category 1B                             |
|                      | Serious eye damage/eye irritation               | Category 1                              |
|                      | Sensitization, respiratory                      | Category 1                              |
|                      | Sensitization, skin                             | Category 1                              |
|                      | Specific target organ toxicity, single exposure | Category 3 respiratory tract irritation |
| OSHA defined hazards | Not classified.                                 |   |

# **OSHA** defined hazards

Label elements



Signal word Hazard statement Danger

Heating may cause a fire. Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.

| Precautionary statement                      |   |
|--|---|
| Prevention                                   | Keep away from heat/sparks/open flames/hot surfaces No smoking. Keep/Store away from clothing and other combustible materials. Keep only in original container. Do not breathe dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.                                     |
| Response                                     | If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. In case of fire: Use appropriate media to extinguish. |
| Storage                                      | Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store<br>at temperatures not exceeding 25°C / 77°F. Store away from other materials.   |
| Disposal                                     | Dispose of contents/container in accordance with local/regional/national/international regulations.   |
| Hazard(s) not otherwise<br>classified (HNOC) | None known.   |
| Supplemental information                     | None.   |

## 3. Composition/information on ingredients

**Mixtures** 

| Chemical name        | Common name and synonyms | CAS number | %    |
|----------------------|--------------------------|------------|------|
| POTASSIUM PERSULFATE |                          | 7727-21-1  | 41.6 |
| SODIUM METASILICATE  |                          | 6834-92-0  | 14.5 |
| AMMONIUM PERSULFATE  |                          | 7727-54-0  | 11.6 |
| SODIUM SILICATE      |                          | 1344-09-8  | 4.37 |
| MINERAL OIL          |                          | 8042-47-5  | 4    |
| CITRIC ACID          |                          | 5949-29-1  | 3.64 |
| UREA                 |                          | 57-13-6    | 2.5  |

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

## 4. First-aid measures

| Inhalation   | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a poison center or doctor/physician. |
|--|--|
| Skin contact   | Remove contaminated clothing immediately and wash skin with soap and water. Call a physician<br>or poison control center immediately. Chemical burns must be treated by a physician. Wash<br>contaminated clothing before reuse.   |
| Eye contact  | Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.   |
| Ingestion  | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.  |
| Most important<br>symptoms/effects, acute and<br>delayed                     | Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Difficulty in breathing.   |
| Indication of immediate<br>medical attention and special<br>treatment needed | Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.   |
| General information  | If you feel unwell, seek medical advice (show the label where possible).<br>Ensure that medical personnel are aware of the material(s) involved, and take precautions to<br>protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated<br>clothing before reuse.   |

## 5. Fire-fighting measures

**Suitable extinguishing media** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

| Unsuitable extinguishing media                                   | Do not use water jet as an extinguisher, as this will spread the fire.                        |
|--|---|
| Specific hazards arising from the chemical                       | During fire, gases hazardous to health may be formed.   |
| Special protective equipment<br>and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting<br>equipment/instructions                          | Use water spray to cool unopened containers.  |
| Specific methods   | Use standard firefighting procedures and consider the hazards of other involved materials.    |
| General fire hazards   | Heating may cause a fire.   |

## 6. Accidental release measures

| Personal precautions,<br>protective equipment and<br>emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear<br>appropriate protective equipment and clothing during clean-up. Do not breathe dust. Use a<br>NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding<br>the exposure limits. Do not touch damaged containers or spilled material unless wearing<br>appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if<br>significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
|---|--|
| Methods and materials for<br>containment and cleaning up                  | Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Minimize dust generation and accumulation. Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.   |
|   | Large Spills: Wet down with water and dike for later disposal. Absorb in vermiculite, dry sand or earth and place into containers. Shovel the material into waste container. Following product recovery, flush area with water.  |
|   | Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  |
|   | Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.  |
| Environmental precautions   | Avoid discharge into drains, water courses or onto the ground.   |
| 7. Handling and storage   |  |
| Precautions for safe handling   | Minimize dust generation and accumulation. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.   |
| Conditions for safe storage, including any incompatibilities              | Store locked up. Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Keep only in the original container. Store in a well-ventilated place. Store away from other materials. Keep out of the reach of children.  |

## 8. Exposure controls/personal protection

## **Occupational exposure limits**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

| US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)<br>Components Type Value Form |     |           |                     |
|---|-----|-----------|---------------------|
| MINERAL OIL (CAS<br>8042-47-5)  | PEL | 5 mg/m3   | Mist.               |
| US. ACGIH Threshold Limit Values<br>Components Type Value Form                                  |     |           |                     |
| AMMONIUM PERSULFATE<br>(CAS 7727-54-0)  | TWA | 0.1 mg/m3 |                     |
| MINERAL OIL (CAS<br>8042-47-5)  | TWA | 5 mg/m3   | Inhalable fraction. |
| POTASSIUM<br>PERSULFATE (CAS<br>7727-21-1)  | TWA | 0.1 mg/m3 |                     |

| US. NIOSH: Pocket Guide to Chemical Hazards |  |  |                    |
|---|--|--|--------------------|
| Components                                  | Туре   | Value  | Form               |
| MINERAL OIL (CAS<br>8042-47-5)              | STEL   | 10 mg/m3   | Mist.              |
|   | TWA  | 5 mg/m3  | Mist.              |
| US. Workplace Environme                     | ental Exposure Level (WEEL) Guides   |  |                    |
| Components                                  | Туре   | Value  | Form               |
| UREA (CAS 57-13-6)                          | TWA  | 10 mg/m3   | Total particulate. |
| Biological limit values                     | No biological exposure limits noted for th   | No biological exposure limits noted for the ingredient(s). |                    |
| Appropriate engineering<br>controls         | Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. Eye wash facilities and emergency shower must be available when handling this product. |  |                    |
| Individual protection measure               | s, such as personal protective equipment   | t  |                    |
| Eye/face protection                         | Applicable for industrial settings only. Wear safety glasses with side shields (or goggles) and a face shield.   |  |                    |
| Skin protection                             |  |  |                    |
| Hand protection                             | Applicable for industrial settings only. Wear appropriate chemical resistant gloves.   |  |                    |
| Other                                       | Applicable for industrial settings only. Wear appropriate chemical resistant clothing.   |  | sistant clothing.  |
| Respiratory protection                      | Applicable for industrial settings only. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Dust & vapor respirator.  |  |                    |
| Thermal hazards                             | Wear appropriate thermal protective clothing, when necessary.  |  |                    |
| General hygiene<br>considerations           | Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.  |  |                    |

# 9. Physical and chemical properties

| Appearance                              |                 |
|---|-----------------|
| Physical state                          | Solid.          |
| Form                                    | Powder.         |
| Color                                   | Not available.  |
| Odor                                    | Not available.  |
| Odor threshold                          | Not available.  |
| рН                                      | Not applicable. |
| Melting point/freezing point            | Not available.  |
| Initial boiling point and boiling range | Not applicable. |
| Flash point                             | Not applicable. |
| Evaporation rate                        | Not available.  |
| Flammability (solid, gas)               | Not available.  |
| Upper/lower flammability or expl        | osive limits    |
| Flammability limit - lower<br>(%)       | Not available.  |
| Flammability limit - upper<br>(%)       | Not available.  |
| Explosive limit - lower (%)             | Not available.  |
| Explosive limit - upper (%)             | Not available.  |
| Vapor pressure                          | Not available.  |

| Vapor density                              | Not available.  |
|--|---|
| Relative density                           | Not available.  |
| Solubility(ies)                            |   |
| Solubility (water)                         | Not available.  |
| Partition coefficient<br>(n-octanol/water) | Not available.  |
| Auto-ignition temperature                  | Not available.  |
| Decomposition temperature                  | Not available.  |
| Viscosity                                  | Not available.  |
| Other information                          |   |
| Explosive properties                       | Not explosive.  |
| Oxidizing properties                       | Not oxidizing.  |
| pH in aqueous solution                     | 10 - 10.6 (1%)  |
| 10. Stability and reactivity               | ,   |
| Reactivity                                 | The product is stable and non-reactive under normal conditions of use, storage and transport.                           |
| Chemical stability                         | Material is stable under normal conditions.   |
| Possibility of hazardous<br>reactions      | No dangerous reaction known under conditions of normal use.   |
| Conditions to avoid                        | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials. |
| Incompatible materials                     | Combustible material.   |
| Hazardous decomposition                    | No hazardous decomposition products are known.  |

# 11. Toxicological information

products

## Information on likely routes of exposure

| Inhalation   | May cause irritation to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Prolonged inhalation may be harmful.  |
|--|--|
| Skin contact   | Causes severe skin burns. May cause an allergic skin reaction.   |
| Eye contact  | Causes serious eye damage.   |
| Ingestion  | Causes digestive tract burns. Harmful if swallowed.  |
| Symptoms related to the<br>physical, chemical and<br>toxicological characteristics | Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Difficulty in breathing. |

## Information on toxicological effects

| Acute toxicity                             | Harmful if swallowed.           |                          |
|--|---------------------------------|--------------------------|
| Product                                    | Species                         | Test Results             |
| MATRIX LIGHT MASTER                        | R HIGH RISER LEVEL 9 PRE-BONDED |                          |
| Acute                                      |                                 |                          |
| Dermal                                     |                                 |                          |
| ATEmix                                     |                                 | 12860 mg/kg              |
| <b>Inhalation</b><br><i>Dust</i><br>ATEmix |                                 | 21.88 mg/l               |
| Oral                                       |                                 | 21.00 mg/                |
| ATEmix                                     |                                 | 1317 mg/kg               |
| Components                                 | Species                         | Test Results             |
| AMMONIUM PERSULFA                          | TE (CAS 7727-54-0)              |                          |
| <u>Acute</u>                               |                                 |                          |
| Dermal                                     |                                 |                          |
| LD50                                       | Rat                             | > 2000 mg/kg             |
|  |                                 | > 2000 mg/kg bw OECD 402 |

| Components              | Species           | Test Results   |
|-------------------------|-------------------|--|
| Inhalation              |                   |  |
| LC50                    | Rat               | > 2.95 mg/l, 4 h EPA OPP 81-3  |
| Oral                    |                   |  |
| LD50                    | Rat               | 700 mg/kg bw OECD 401  |
| CITRIC ACID (CAS 5949-2 | 9-1)              |  |
| <u>Acute</u>            |                   |  |
| Dermal                  |                   |  |
| LD50                    | Rat               | > 2000 mg/kg, 24 Hours   |
| Oral                    |                   |  |
| LD50                    | Mouse             | 5400 mg/kg   |
|                         | Rat               | 6730 mg/kg   |
|                         |                   | or oo mgmg   |
| MINERAL OIL (CAS 8042-4 | +7-5)             |  |
| <u>Acute</u>            |                   |  |
| Dermal                  | Data              |  |
| LD50                    | Rabbit            | > 2000 mg/kg OECD 402  |
| Inhalation              |                   |  |
| Aerosol                 |                   |  |
| LC50                    | Rat               | > 5 mg/L air, 4 h OECD 403   |
| Oral                    |                   |  |
| LD50                    | Rat               | > 5000 mg/kg OECD 401  |
| POTASSIUM PERSULFAT     | E (CAS 7727-21-1) |  |
| Acute                   |                   |  |
| Dermal                  |                   |  |
| LD50                    | Rabbit            | > 10000 mg/kg  |
| Inhalation              |                   |  |
| LC50                    | Rat               | > 42.9 mg/l, 1 h   |
| Oral                    |                   |  |
| LD50                    | Rat               | 1130 mg/kg OECD 401  |
|                         |                   |  |
| SODIUM METASILICATE (   | CAS 6834-92-0)    |  |
| <u>Acute</u>            |                   |  |
| Dermal                  |                   |  |
| LD50                    | Rat               | > 5000 mg/kg Based on test data for<br>structurally similar materials.       |
| Inhalation              |                   | Structurary Similar matchais.  |
| LC50                    | Rat               | > 2.06 mg/l 4.4 h Record on toot data for                                    |
| LC30                    | Rat               | > 2.06 mg/l, 4.4 h Based on test data for<br>structurally similar materials. |
| Oral                    |                   | ,  |
| LD50                    | Rat               | 1152 mg/kg   |
|                         |                   | 1102 mg/kg   |
| SODIUM SILICATE (CAS 1  | 344-03-0)         |  |
| <u>Acute</u>            |                   |  |
| Dermal                  | Dabbit            |  |
| LD50                    | Rabbit            | > 5000 mg/kg bw EPA OPPTS 870.1200   |
| Inhalation              |                   |  |
| LC50                    | Rat               | > 2.06 mg/L air, 4.4 h EPA OPPTS<br>870.1300                                 |
| 0                       |                   | 070.1000   |
| Oral                    | Det               |  |
| LD50                    | Rat               | 3400 mg/kg bw OECD 401   |
| UREA (CAS 57-13-6)      |                   |  |
| <u>Acute</u>            |                   |  |
| Oral                    |                   |  |
| LD50                    | Rat               | 8471 mg/kg   |

| Skin corrosion/irritation            | Causes severe skin burns and   | eye damage.                                    |
|--------------------------------------|--------------------------------|--|
| Irritation Corrosion - Ski           | n                              |  |
| SODIUM METASILIC                     | ATE                            | OECD 404                                       |
|                                      |                                | Result: Corrosive                              |
|                                      |                                | Species: Rabbit                                |
| AMMONIUM PERSU                       | LFATE                          | OECD 404                                       |
|                                      |                                | Result: Irritating                             |
|                                      |                                | Species: Rabbit                                |
| SODIUM SILICATE                      |                                | OECD 404<br>Result: Irritating                 |
|                                      |                                | Species: Rabbit                                |
| MINERAL OIL                          |                                | OECD 404                                       |
|                                      |                                | Result: Not Irritating                         |
|                                      |                                | Species: Rabbit                                |
| UREA                                 |                                | OECD 404                                       |
|                                      |                                | Result: Not Irritating                         |
|                                      |                                | Species: Rabbit                                |
| CITRIC ACID                          |                                | OECD 404                                       |
|                                      |                                | Result: Slightly Irritating                    |
|                                      |                                | Species: Rabbit                                |
| POTASSIUM PERSU                      |                                | Result: Irritating<br>Species: Human           |
|                                      | O                              | Species: Human                                 |
| Serious eye damage/eye<br>irritation | Causes serious eye damage.     |  |
|                                      |                                |  |
| Irritation Corrosion - Eye           |                                |  |
| SODIUM METASILIC                     | AIE                            | IRE<br>Result: Corrosive                       |
|                                      |                                | Species: In vitro                              |
| AMMONIUM PERSU                       | ΙΕΔΤΕ                          | OECD 405                                       |
|                                      |                                | Result: Irritating                             |
|                                      |                                | Species: Rabbit                                |
| CITRIC ACID                          |                                | OECD 405                                       |
|                                      |                                | Result: Irritating                             |
|                                      |                                | Species: Rabbit                                |
| MINERAL OIL                          |                                | OECD 405                                       |
|                                      |                                | Result: Not Irritating                         |
|                                      |                                | Species: Rabbit                                |
| UREA                                 |                                | OECD 405<br>Result: Slightly Irritating        |
|                                      |                                | Species: Rabbit                                |
| SODIUM SILICATE                      |                                | Result: Corrosive                              |
|                                      |                                | Species: Rabbit                                |
| POTASSIUM PERSU                      | ILFATE                         | Result: Irritating                             |
|                                      |                                | Species: Human                                 |
| Respiratory or skin sensitization    |                                |  |
| Respiratory sensitization            |                                | symptoms or breathing difficulties if inhaled. |
| AMMONIUM PERSULFATE                  |                                | Result: Sensitizing                            |
|                                      |                                | Species: Human                                 |
| POTASSIUM PERSULFATE                 |                                | Result: Sensitizing                            |
|                                      |                                | Species: Human                                 |
| Skin sensitization                   | May cause an allergic skin rea | ction.   |
| Sensitization                        |                                |  |
| AMMONIUM PERSU                       | LFATE                          | OECD 406                                       |
|                                      |                                | Result: Sensitizing                            |
|                                      |                                | Species: Guinea pig                            |
| SODIUM SILICATE                      |                                | OECD 429                                       |
|                                      |                                | Result: Not Sensitizing                        |
|                                      |                                | Species: Mouse                                 |
| POTASSIUM PERSU                      | ILFAIE                         | OECD 429                                       |
|                                      |                                | Result: Sensitizing<br>Species: Mouse          |
| Skin sensitization                   |                                | อрестез. เพบนระ                                |
| CITRIC ACID                          |                                | OECD 406                                       |
|                                      |                                | Result: Not Sensitizing                        |
|                                      |                                | Species: Guinea pig                            |

| Ski                           | in sensitization   |  |   |
|-------------------------------|--|--|---|
| MINERAL OIL                   |  |  | OECD 406  |
|                               |  |  | Result: Not Sensitizing<br>Species: Guinea pig  |
| SODIUM METASILICATE           |  | CATE   | OECD 429  |
|                               |  |  | Result: Not Sensitizing   |
|                               | POTASSIUM PERS   |  | Species: Mouse<br>OECD 429  |
|                               | FUTASSIUM FERS   | OUFATE   | Result: Sensitizing   |
|                               |  |  | Species: Guinea pig   |
|                               | UREA   |  | Result: Not Sensitizing<br>Species: Human   |
| Gorm coll n                   | nutagenicity   | Due to partial or complete lac                                     | k of data the classification is not possible.   |
|                               |  | Due to partial of complete lac                                     |   |
| IVIU                          | itagenicity<br>CITRIC ACID   |  | Result: In vitro and in vivo tests did not show mutagenic   |
|                               |  |  | effects.  |
|                               | SODIUM METASILI  |  | Result: In vitro and in vivo tests did not show mutagenic<br>effects.   |
|                               | SODIUM SILICATE  |  | Result: In vitro and in vivo tests did not show mutagenic<br>effects.   |
|                               |  | ULFATE   | Result: In vitro tests did not show mutagenic effects   |
|                               | MINERAL OIL<br>POTASSIUM PERS  | ULFATE   | Result: In vitro tests did not show mutagenic effects<br>Result: In vitro tests did not show mutagenic effects  |
|                               | UREA   |  | Result: In vitro tests did not show mutagenic effects   |
| Carcinogen                    | nicity   | Not classifiable as to carcinog<br>classification is not possible. | enicity to humans. Due to partial or complete lack of data the  |
| IARC M                        | Ionographs. Overall  | Evaluation of Carcinogenicity                                      |   |
|                               | NERAL OIL (CAS 804   |  | 3 Not classifiable as to carcinogenicity to humans.   |
| OSHA S                        | Specifically Regulate  | ed Substances (29 CFR 1910.1                                       |   |
|                               | t regulated.   |  |   |
| US Nat                        | tional Toxicology Pr   | ogram (NTD) Donort on Caroin                                       |   |
|                               |  | ogram (NTP) Report on Carcin                                       | ogens   |
| Not                           | t listed.  |  |   |
| No <sup>:</sup><br>Reproducti | t listed.<br><b>ve toxicity</b>  |  | k of data the classification is not possible.   |
| No <sup>:</sup><br>Reproducti | t listed.<br>ve toxicity<br>velopmental effects  |  | k of data the classification is not possible.   |
| No <sup>:</sup><br>Reproducti | t listed.<br><b>ve toxicity</b>  |  |   |
| No <sup>:</sup><br>Reproducti | t listed.<br><b>ve toxicity</b><br><b>velopmental effects</b><br>UREA  | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat  |
| No <sup>:</sup><br>Reproducti | t listed.<br>ve toxicity<br>velopmental effects  | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d  |
| No <sup>:</sup><br>Reproducti | t listed.<br><b>ve toxicity</b><br><b>velopmental effects</b><br>UREA  | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat  |
| No <sup>:</sup><br>Reproducti | t listed.<br><b>ve toxicity</b><br><b>velopmental effects</b><br>UREA  | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d   |
| No <sup>:</sup><br>Reproducti | t listed.<br><b>ve toxicity</b><br><b>velopmental effects</b><br>UREA<br>SODIUM METASILI   | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d<br>Result: NOAEL  |
| No <sup>:</sup><br>Reproducti | t listed.<br><b>ve toxicity</b><br><b>velopmental effects</b><br>UREA<br>SODIUM METASILI   | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat  |
| No <sup>:</sup><br>Reproducti | t listed.<br><b>ve toxicity</b><br><b>velopmental effects</b><br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE  | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat<br>> 250 mg/kg bw/d OECD 421<br>Result: NOAEL  |
| No <sup>:</sup><br>Reproducti | t listed.<br><b>ve toxicity</b><br><b>velopmental effects</b><br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS   | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat<br>> 250 mg/kg bw/d OECD 421<br>Result: NOAEL<br>Species: Rat  |
| No <sup>:</sup><br>Reproducti | t listed.<br><b>ve toxicity</b><br><b>velopmental effects</b><br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE  | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat<br>> 250 mg/kg bw/d OECD 421<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d, No effects on development   |
| No <sup>:</sup><br>Reproducti | t listed.<br><b>ve toxicity</b><br><b>velopmental effects</b><br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS   | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat<br>> 250 mg/kg bw/d OECD 421<br>Result: NOAEL<br>Species: Rat  |
| No <sup>:</sup><br>Reproducti | t listed.<br><b>ve toxicity</b><br><b>velopmental effects</b><br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS   | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat<br>> 250 mg/kg bw/d OECD 421<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d OECD 414, No effects on development  |
| No <sup>:</sup><br>Reproducti | t listed.<br><b>ve toxicity</b><br><b>velopmental effects</b><br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS<br>CITRIC ACID  | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat<br>> 250 mg/kg bw/d OECD 421<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 5000 mg/kg bw/d OECD 414, No effects on development<br>Result: NOAEL  |
| No<br>Reproducti<br>De        | t listed.<br><b>ve toxicity</b><br><b>velopmental effects</b><br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS<br>CITRIC ACID  | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat<br>> 250 mg/kg bw/d OECD 421<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d OECD 414, No effects on development  |
| No<br>Reproducti<br>De        | t listed.<br>ve toxicity<br>velopmental effects<br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS<br>CITRIC ACID<br>MINERAL OIL   | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat<br>> 250 mg/kg bw/d OECD 421<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d OECD 414, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 5000 mg/kg bw/d OECD 414, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 5000 mg/kg bw/d OECD 414, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 159 mg/kg bw/d   |
| No<br>Reproducti<br>De        | t listed.<br>ve toxicity<br>velopmental effects<br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS<br>CITRIC ACID<br>MINERAL OIL<br>productivity                                       | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat<br>> 250 mg/kg bw/d OECD 421<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d OECD 414, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 5000 mg/kg bw/d OECD 414, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 159 mg/kg bw/d<br>Result: NOAEL  |
| No<br>Reproducti<br>De        | t listed.<br>ve toxicity<br>velopmental effects<br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS<br>CITRIC ACID<br>MINERAL OIL<br>productivity<br>SODIUM METASILI                    | Due to partial or complete lac                                     | <ul> <li>k of data the classification is not possible.</li> <li>&gt; 1000 mg/kg bw/d OECD 414<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 200 mg/kg bw/d<br/>Result: NOAEL<br/>Species: Mouse</li> <li>&gt; 200 mg/kg bw/d<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d OECD 421<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 295 mg/kg bw/d, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 295 mg/kg bw/d, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 5000 mg/kg bw/d OECD 414, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 159 mg/kg bw/d<br/>Result: NOAEL<br/>Species: Rat</li> </ul>   |
| No<br>Reproducti<br>De        | t listed.<br>ve toxicity<br>velopmental effects<br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS<br>CITRIC ACID<br>MINERAL OIL<br>productivity                                       | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat<br>> 250 mg/kg bw/d OECD 421<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d OECD 414, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 5000 mg/kg bw/d OECD 414, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 159 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat<br>> 159 mg/kg bw/d, Oral<br>Result: NOAEL   |
| No<br>Reproducti<br>De        | t listed.<br>ve toxicity<br>velopmental effects<br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS<br>CITRIC ACID<br>MINERAL OIL<br>productivity<br>SODIUM METASILI<br>SODIUM SILICATE | Due to partial or complete lac                                     | k of data the classification is not possible.<br>> 1000 mg/kg bw/d OECD 414<br>Result: NOAEL<br>Species: Rat<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Mouse<br>> 200 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat<br>> 250 mg/kg bw/d OECD 421<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 295 mg/kg bw/d OECD 414, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 5000 mg/kg bw/d OECD 414, No effects on development<br>Result: NOAEL<br>Species: Rat<br>> 159 mg/kg bw/d<br>Result: NOAEL<br>Species: Rat<br>> 159 mg/kg bw/d, Oral<br>Result: NOAEL<br>Species: Rat   |
| No<br>Reproducti<br>De        | t listed.<br>ve toxicity<br>velopmental effects<br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS<br>CITRIC ACID<br>MINERAL OIL<br>productivity<br>SODIUM METASILI                    | Due to partial or complete lac                                     | <ul> <li>k of data the classification is not possible.</li> <li>&gt; 1000 mg/kg bw/d OECD 414<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 200 mg/kg bw/d<br/>Result: NOAEL<br/>Species: Mouse</li> <li>&gt; 200 mg/kg bw/d<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d OECD 421<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 295 mg/kg bw/d, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 5000 mg/kg bw/d OECD 414, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 159 mg/kg bw/d<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 159 mg/kg bw/d, Oral<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 159 mg/kg bw/d, Oral<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d, Oral<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d OECD 421</li> </ul>  |
| No<br>Reproducti<br>De        | t listed.<br>ve toxicity<br>velopmental effects<br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS<br>CITRIC ACID<br>MINERAL OIL<br>productivity<br>SODIUM METASILI<br>SODIUM SILICATE | Due to partial or complete lac                                     | <ul> <li>k of data the classification is not possible.</li> <li>&gt; 1000 mg/kg bw/d OECD 414<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 200 mg/kg bw/d<br/>Result: NOAEL<br/>Species: Mouse</li> <li>&gt; 200 mg/kg bw/d<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d OECD 421<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 295 mg/kg bw/d, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 295 mg/kg bw/d, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 5000 mg/kg bw/d OECD 414, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 159 mg/kg bw/d, Oral<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 159 mg/kg bw/d, Oral<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d OECD 421<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d, Oral<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d OECD 421<br/>Result: NOAEL<br/>Species: Rat</li> </ul>   |
| No<br>Reproducti<br>De        | t listed.<br>ve toxicity<br>velopmental effects<br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS<br>CITRIC ACID<br>MINERAL OIL<br>productivity<br>SODIUM METASILI<br>SODIUM SILICATE | Due to partial or complete lac                                     | <ul> <li>k of data the classification is not possible.</li> <li>&gt; 1000 mg/kg bw/d OECD 414<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 200 mg/kg bw/d<br/>Result: NOAEL<br/>Species: Mouse</li> <li>&gt; 200 mg/kg bw/d<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d OECD 421<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 295 mg/kg bw/d, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 295 mg/kg bw/d, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 5000 mg/kg bw/d OECD 414, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 159 mg/kg bw/d<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 159 mg/kg bw/d, Oral<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 159 mg/kg bw/d, Oral<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d OECD 421<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d OECD 421<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d, No effects on fertility</li> </ul> |
| No<br>Reproducti<br>De        | t listed.<br>ve toxicity<br>velopmental effects<br>UREA<br>SODIUM METASILI<br>SODIUM SILICATE<br>AMMONIUM PERS<br>CITRIC ACID<br>MINERAL OIL<br>productivity<br>SODIUM SILICATE<br>AMMONIUM PERS   | Due to partial or complete lac                                     | <ul> <li>k of data the classification is not possible.</li> <li>&gt; 1000 mg/kg bw/d OECD 414<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 200 mg/kg bw/d<br/>Result: NOAEL<br/>Species: Mouse</li> <li>&gt; 200 mg/kg bw/d<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d OECD 421<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 295 mg/kg bw/d, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 295 mg/kg bw/d, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 5000 mg/kg bw/d OECD 414, No effects on development<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 159 mg/kg bw/d, Oral<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 159 mg/kg bw/d, Oral<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d OECD 421<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d, Oral<br/>Result: NOAEL<br/>Species: Rat</li> <li>&gt; 250 mg/kg bw/d OECD 421<br/>Result: NOAEL<br/>Species: Rat</li> </ul>   |

| Reproductivity |
|----------------|
| MINERAL OIL    |

|   | Opeoles. Nat   |
|---|--|
| Specific target organ toxicity -<br>single exposure   | May cause respiratory irritation.  |
| SODIUM METASILICATE                                   | Result: Irritating   |
| SODIUM SILICATE                                       | Result: Irritating   |
| POTASSIUM PERSULFATE                                  | Result: Irritating   |
| FUTASSIUMFERSULFATE                                   | Species: Human   |
|   |  |
| Specific target organ toxicity -<br>repeated exposure | Due to partial or complete lack of data the classification is not possible.                |
| MINERAL OIL   | > 2000 mg/kg bw/d OECD 411, Dermal   |
| MINERAL OIL   | Result: NOAEL  |
|   | -  |
|   | Species: Rat   |
|   | Test Duration: 90 d  |
| SODIUM METASILICATE                                   | > 227 mg/kg bw/d OECD 408, Oral  |
|   | Result: NOAEL  |
|   | Species: Rat   |
|   | Test Duration: 90 d  |
| MINERAL OIL   | > 50 mg/m3 air OECD 412, Inhalation  |
|   | Result: NOAEC  |
|   | Species: Rat   |
|   | Test Duration: 28 d  |
|   | >= 1200 mg/kg bw/d OECD 453, Oral  |
|   | Result: NOAEL  |
|   | Species: Rat   |
|   | Test Duration: 2 years   |
|   | 10.3 mg/m <sup>3</sup> , Inhalation  |
| AMMONIUM PERSULFATE                                   | Result: NOAEC  |
|   |  |
|   | Species: Rat   |
|   | Test Duration: 90 d  |
| POTASSIUM PERSULFATE                                  | 131.5 mg/kg bw/d OECD 407  |
|   | Result: NOAEL  |
|   | Species: Rat   |
|   | Test Duration: 28 d  |
| SODIUM SILICATE                                       | 2400 mg/kg bw/d OECD 407   |
|   | Result: NOAEL  |
|   | Species: Rat   |
|   | Test Duration: 28 d  |
| CITRIC ACID   | 4000 mg/kg bw/d, Oral  |
|   | Result: NOAEL  |
|   | Species: Rat   |
|   | Test Duration: 10 d  |
| AMMONIUM PERSULFATE                                   | 41.1 mg/kg bw/d OECD 407, Oral   |
|   | Result: NOAEL  |
|   | Species: Rat   |
|   | Test Duration: 28 d  |
| Achieve hours   |  |
| Aspiration hazard                                     | Due to partial or complete lack of data the classification is not possible.                |
| Further information                                   | May cause allergic respiratory and skin reactions. The reference to any animal testing for |

# 12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

individual constituents mentioned in this document is based on public, third-party data.

| Components      |                 | Species                         | Test Results    |  |
|-----------------|-----------------|---------------------------------|-----------------|--|
| AMMONIUM PERSUL | FATE (CAS 7727- | 54-0)                           |                 |  |
| Aquatic         |                 |                                 |                 |  |
| Acute           |                 |                                 |                 |  |
| Algae           | EC50            | Pseudokirchneriella subcapitata | 83.7 mg/l, 72 h |  |
| Crustacea       | EC50            | Daphnia magna                   | 120 mg/l, 48 h  |  |
| Fish            | LC50            | Oncorhynchus mykiss             | 76 mg/l, 96 h   |  |
| Other           | EC10            | Pseudomonas putida              | 36 mg/l, 18 h   |  |
|                 |                 |                                 |                 |  |

| Components                      |                    | Species           |   | Test Results                        |
|---------------------------------|--------------------|-------------------|---|-------------------------------------|
| Chronic                         |                    |                   |   |                                     |
| Algae                           | NOEC               | Desmodesmus       | s subspicatus                             | 32 mg/l, 72 h OECD 201              |
| CITRIC ACID (CAS 59             | 49-29-1)           |                   |   |                                     |
| Aquatic                         |                    |                   |   |                                     |
| Acute                           |                    |                   |   |                                     |
| Algae                           | LOEC               | Microcystis ae    | ruginosa                                  | 80 mg/l, 7 d                        |
| Crustacea                       | EC50               | Daphnia magr      | a   | 1535 mg/l, 24 h                     |
| Fish                            | LC50               | Leuciscus idus    | 3   | 440 - 760 mg/l, 96 h                |
| Other                           | NOAEC              | Pseudomonas       | putida                                    | 18 h                                |
| MINERAL OIL (CAS 80             | 042-47-5)          |                   |   |                                     |
| Aquatic                         |                    |                   |   |                                     |
| Acute                           |                    |                   |   |                                     |
| Algae                           | NOEL               | Pseudokirchne     | eriella subcapitata                       | > 100 mg/l, 72 h OECD 201           |
| Crustacea                       | EL50               | Daphnia magr      | na  | > 100 mg/l, 48 h OECD 202           |
| Fish                            | LL50               | Oncorhynchus      | s mykiss                                  | > 100 mg/l, 96 h OECD 203           |
| Chronic                         |                    |                   |   |                                     |
| Crustacea                       | NOEC               | Daphnia magr      | a   | 10 mg/l, 21 d OECD 211              |
| SODIUM METASILICA               | TE (CAS 6834-92-   | 0)                |   |                                     |
| Aquatic                         |                    |                   |   |                                     |
| Acute                           |                    |                   |   |                                     |
| Algae                           | EC50               | Pseudokirchne     | eriella subcapitata                       | > 207 mg/l, 72 h DIN 38412, Pt. 9   |
| Crustacea                       | EC50               | Daphnia magr      | a   | > 1700 mg/l, 48 h EU C.2            |
| Fish                            | LC50               | Danio rerio       |   | > 210 mg/l, 96 h OECD 203           |
| Other                           | EC50               | Activated slud    | ge of a predominantly                     | 100 mg/l, 3 h OECD 209              |
| SODIUM SILICATE (C              | AS 1344-09-8)      |                   |   |                                     |
| Aquatic                         | ,                  |                   |   |                                     |
| Acute                           |                    |                   |   |                                     |
| Algae                           | EC50               | Desmodesmus       | s subspicatus                             | > 345.4 mg/l, 72 h DIN 38412 Part 9 |
| Crustacea                       | EC50               | Daphnia magr      | na  | 1700 mg/l, 48 h EU C.2              |
| Fish                            | LC50               | Danio rerio       |   | 1108 mg/l, 96 h OECD 203            |
| Other                           | EC0                | Pseudomonas       | putida                                    | 3454 mg/l, 30 min DIN 38412 Part 2  |
| UREA (CAS 57-13-6)              |                    |                   |   |                                     |
| Aquatic                         |                    |                   |   |                                     |
| Crustacea                       | EC50               | Water flea (Da    | iphnia magna)                             | 3910 mg/l, 48 hours                 |
| Acute                           |                    | ``                | ,   | <b>-</b>                            |
| Crustacea                       | EC50               | Daphnia magr      | a   | > 10000 mg/l, 24 h DIN 38412, 11    |
| Fish                            | LC50               | Leuciscus idus    |   | > 6810 mg/l, 96 h                   |
| sistence and degradal           | bility             |                   |   |                                     |
| Biodegradability                | tion (Aerobic biod | aradation)        |   |                                     |
| MINERAL OIL                     | מטוע סומטופהן ווסט | -gradation)       | 31 % OECD 301 F                           |                                     |
|                                 |                    |                   | Result: Not Readily Bi                    |                                     |
| POTASSIUM PER<br>UREA           | SULFATE            |                   | Result: Not expected t<br>96 % OECD 302 B | o bioaccumulate                     |
| UNEA                            |                    |                   | Result: Inherently biod                   | legradable.                         |
| _                               |                    |                   | Test Duration: 16 d                       | -                                   |
| Percent degradat<br>CITRIC ACID | tion (Aerobic biod | egradation-ready) | 97 %                                      |                                     |
|                                 |                    |                   | 97 %<br>Result: Readily Biodeo            | gradable                            |
|                                 |                    |                   | Test Duration: 28 d                       |                                     |
| accumulative potentia           | l.                 |                   |   |                                     |

| Partition coefficient n-c | octanol / water (log Kow)   |
|---------------------------|---|
| CITRIC ACID               | -1.64   |
| UREA                      | -1.59 OECD 107  |
| Bioaccumulation           |   |
| CITRIC ACID               | Result: Bioaccumulation is unlikely.  |
| Mobility in soil          | No data available.  |
| Other adverse effects     | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |
| 13. Disposal considera    | ations  |

#### Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of **Disposal instructions** contents/container in accordance with local/regional/national/international regulations. Local disposal regulations Dispose in accordance with all applicable regulations. This product is a reactivity characteristic (D003) RCRA hazardous waste when intended for Hazardous waste code disposal. Dispose of in accordance with local regulations. Empty containers or liners may retain some Waste from residues / unused product residues. This material and its container must be disposed of in a safe manner (see: products Disposal instructions). **Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

#### DOT

| 501                        |   |  |  |
|----------------------------|---|--|--|
| FINISHED GOODS             |   |  |  |
| UN number                  | UN3230  |  |  |
| UN proper shipping name    | SELF-REACTIVE SOLID TYPE F (POTASSIUM PERSULFATE, AMMONIUM PERSULFATE), |  |  |
|                            | Limited Quantity  |  |  |
| Class                      | 4.1   |  |  |
| Packing group              | Not applicable.   |  |  |
| Transport hazard class(es) |   |  |  |
| Label(s)                   | Limited Quantity  |  |  |
| Packaging exceptions       | 151   |  |  |
| LTD QTY Net Inner Capacity | 500 g   |  |  |
| BULK                       |   |  |  |
| UN number                  | UN3230  |  |  |
| UN proper shipping name    | SELF-REACTIVE SOLID TYPE F (POTASSIUM PERSULFATE, AMMONIUM PERSULFATE)  |  |  |
| Class                      | 4.1   |  |  |
| Packing group              | Not applicable.   |  |  |
| Transport hazard class(es) |   |  |  |
| Label(s)                   | 4.1   |  |  |
| Packaging non bulk         | 224   |  |  |
| ΙΑΤΑ                       |   |  |  |
| FINISHED GOODS             |   |  |  |
| UN number                  | UN3230  |  |  |
| UN proper shipping name    | SELF-REACTIVE SOLID TYPE F (POTASSIUM PERSULFATE, AMMONIUM PERSULFATE)  |  |  |
| Class                      | 4.1   |  |  |
| Packing group              | Not applicable.   |  |  |
| ERG Number                 | 3L  |  |  |
| BULK                       |   |  |  |
| UN number                  | UN3230  |  |  |
| UN proper shipping name    | SELF-REACTIVE SOLID TYPE F (POTASSIUM PERSULFATE, AMMONIUM PERSULFATE)  |  |  |
| Class                      | 4.1   |  |  |
| Packing group              | Not applicable.   |  |  |
| ERG Number                 | 3L  |  |  |
| IMDG                       |   |  |  |
| FINISHED GOODS             |   |  |  |
| UN number                  | UN3230  |  |  |
| UN proper shipping name    | SELF-REACTIVE SOLID TYPE F (POTASSIUM PERSULFATE, AMMONIUM PERSULFATE), |  |  |
| - F - F - S                | Limited Quantity  |  |  |
|                            |   |  |  |

| 01                          | 4.1   |
|-----------------------------|---|
| Class<br>Packing group      | 4. i<br>Not applicable.   |
| Environmental Hazards       | Not applicable.   |
| Marine pollutant            | No.   |
| Transport hazard class(es)  |   |
| Label(s)                    | Limited Quantity  |
| EmS                         | F-J, S-G  |
| LTD QTY Net Inner Capacity  |   |
| BULK                        | <b>.</b>  |
| UN number                   | UN3230  |
| UN proper shipping name     | SELF-REACTIVE SOLID TYPE F (POTASSIUM PERSULFATE, AMMONIUM PERSULFATE)  |
| Class                       | 4.1   |
| Packing group               | Not applicable.   |
| Environmental hazards       |   |
| Marine pollutant            | No.   |
| EmS                         | F-J, S-G  |
| 15. Regulatory information  |   |
| US federal regulations      | This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication  |
| oo leacht regulations       | Standard, 29 CFR 1910.1200.   |
| Toxic Substances Control A  | ct (TSCA)   |
|                             | ort Notification (40 CFR 707, Subpt. D)   |
| Not regulated.              |   |
| •                           |   |
| CERCLA Hazardous Substan    | nce List (40 CFR 302.4)   |
| Not listed.                 | no notification   |
| SARA 304 Emergency releas   |   |
| Not regulated.              | d Substances (29 CFR 1910.1001-1052)  |
|                             | 1 Substances (29 CFR 1910.1001-1052)  |
| Not regulated.              |   |
| -                           | authorization Act of 1986 (SARA)  |
| SARA 302 Extremely hazard   | ous substance   |
| Not listed.                 |   |
| SARA 311/312 Hazardous      | No (Exempt)   |
| chemical                    |   |
| SARA 313 (TRI reporting)    |   |
| Not regulated.              |   |
| Other federal regulations   |   |
| •                           | 112 Hazardous Air Pollutants (HAPs) List  |
| Not regulated.              |   |
|                             | 112(r) Accidental Release Prevention (40 CFR 68.130)  |
| Not regulated.              | (   |
| Safe Drinking Water Act     | Not regulated.  |
| (SDWA)                      | not rogalatoa.  |
|                             |   |
| 16. Other information, incl | uding date of preparation or last revision  |
| Issue date                  | 07-12-2022  |
| Version #                   | 01  |
| NFPA ratings                | Health: 3   |
|                             | Flammability: 0   |
|                             | Instability: 1  |
| Disclaimer                  | The information provided in this Safety Data Sheet is correct to the best of our knowledge,   |
|                             | information and belief at the date of its publication. The information given is designed only as a  |
|                             | guidance for safe handling, use, processing, storage, transportation, disposal and release and is<br>not to be considered a warranty or quality specification. The information relates only to the specific |
|                             | material designated and may not be valid for such material used in combination with any other   |
|                             | materials or in any process, unless specified in the text.  |
|                             |   |