



# SAFETY DATA SHEET

**MATERION**

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

### 1.1. Product identifier

**Name of the substance** RM FLUORIDE  
**Identification number** 237-252-8 (EC number)  
**Synonyms** None.  
**Document number** 1LO  
**Materion Code** 1LO  
**Issue date** 11-January-2018  
**Version number** 01

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

**Identified uses** Not available.  
**Uses advised against** None known.

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

#### Supplier

**Company name** Materion Advanced Chemicals Inc.  
**Address** 407 N. 13th Street  
1316 W. St. Paul Avenue  
Milwaukee, WI 53233  
United States  
**Division** Milwaukee  
**Telephone** 414.212.0257  
**e-mail** advancedmaterials@materion.com  
**Contact person** Noreen Atkinson

### 1.4. Emergency telephone number

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies. According to GHS criteria.

#### Classification according to Regulation (EC) No 1272/2008 as amended

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

**Hazard summary** WARNING

May cause damage to organs through prolonged or repeated exposure. Causes serious eye irritation. Causes skin irritation. May cause irritation to the respiratory system. Possible reproductive hazard. Not classified for health hazards. However, occupational exposure to the mixture or substance(s) may cause adverse health effects.

### 2.2. Label elements

#### Label according to Regulation (EC) No. 1272/2008 as amended

**Contains:** RM FLUORIDE

#### Hazard pictograms



**Signal word** Warning

#### Hazard statements

H319 Causes serious eye irritation.  
H315 Causes skin irritation.  
H335 May cause respiratory irritation.  
H362 May cause harm to breast-fed children.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H361 Suspected of damaging fertility or the unborn child.

## Precautionary statements

### Prevention

|      |                                                                           |
|------|---------------------------------------------------------------------------|
| P202 | Observe good industrial hygiene practices.                                |
| P260 | Do not handle until all safety precautions have been read and understood. |
| P263 | Do not breathe dust/fume/gas/mist/vapors/spray.                           |
| P264 | Avoid contact during pregnancy/while nursing.                             |
| P270 | Wash thoroughly after handling.                                           |
| P280 | Do not eat, drink or smoke when using this product.                       |
| P280 | Wear eye protection/face protection.                                      |
| P280 | Wear protective gloves.                                                   |
| P281 | Use personal protective equipment as required.                            |

### Response

|                    |                                                                                                                                  |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------|
|                    | Wash hands after handling.                                                                                                       |
| P302 + P352        | IF ON SKIN: Wash with plenty of water.                                                                                           |
| P304 + P340        | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                                                       |
| P304 + P340 + P312 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical assistance if you feel unwell.            |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308 + P313        | IF exposed or concerned: Get medical advice/attention.                                                                           |
| P312               | Call a POISON CENTRE/doctor if you feel unwell.                                                                                  |
| P332 + P313        | If skin irritation occurs: Get medical advice/attention.                                                                         |
| P337 + P313        | If eye irritation persists: Get medical advice/attention.                                                                        |
| P362 + P364        | Take off contaminated clothing and wash it before reuse.                                                                         |

### Storage

|             |                                                                                                             |
|-------------|-------------------------------------------------------------------------------------------------------------|
| P403 + P233 | Store away from incompatible materials.<br>Store in a well-ventilated place. Keep container tightly closed. |
|-------------|-------------------------------------------------------------------------------------------------------------|

### Disposal

|      |                                                                                                                                                           |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| P501 | Dispose of waste and residues in accordance with local authority requirements.<br>Dispose of contents/container (in accordance with related regulations). |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|

### Supplemental label information

For further information, please contact the Product Stewardship Department at +1.800.862.4118.

### 2.3. Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

#### General information

| Chemical name          | %                                                                                               | CAS-No. / EC No.        | REACH Registration No. | INDEX No. | Notes |
|------------------------|-------------------------------------------------------------------------------------------------|-------------------------|------------------------|-----------|-------|
| RM FLUORIDE            | 100                                                                                             | 16984-48-8<br>237-252-8 | -                      | -         | #     |
| <b>Classification:</b> | Skin Irrit. 2;H315, Eye Irrit. 2;H319, STOT SE 3;H335, Repr. 2;H361, Lact.;H362, STOT RE 2;H373 |                         |                        |           |       |

#### List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.  
DSD: Directive 67/548/EEC.  
M: M-factor  
vPvB: very persistent and very bioaccumulative substance.  
PBT: persistent, bioaccumulative and toxic substance.  
#: This substance has been assigned Community workplace exposure limit(s).

## SECTION 4: First aid measures

### General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 4.1. Description of first aid measures

#### Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

#### Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

#### Eye contact

Rinse with water. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

#### Ingestion

Rinse mouth. Get medical attention if symptoms occur.

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

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct contact with eyes may cause temporary irritation. May cause respiratory irritation. Skin irritation.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### General fire hazards

No unusual fire or explosion hazards noted.

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Water fog. Foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical powder.

##### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire. Use fire-extinguishing media appropriate for surrounding materials.

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

During fire, gases hazardous to health may be formed.

#### 5.3. Advice for firefighters

##### Special protective equipment for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

##### Special firefighting procedures

Move containers from fire area if you can do so without risk.

#### Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

### SECTION 6: Accidental release measures

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

##### For non-emergency personnel

Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

##### For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

#### 6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

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

Stop the flow of material, if this is without risk. Following product recovery, flush area with water.

#### 6.4. Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Avoid prolonged exposure. Observe good industrial hygiene practices.

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

Store in original tightly closed container. Store in a closed container away from incompatible materials. Store away from incompatible materials (see Section 10 of the SDS).

#### 7.3. Specific end use(s)

Not available.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

##### Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

| Material                     | Type | Value                  | Form                |
|------------------------------|------|------------------------|---------------------|
| RM FLUORIDE (CAS 16984-48-8) | MAK  | 2,5 mg/m <sup>3</sup>  | Inhalable fraction. |
|                              | STEL | 12,5 mg/m <sup>3</sup> | Inhalable fraction. |

##### Belgium. Exposure Limit Values.

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | MAC  | 2,5 mg/m <sup>3</sup> |

**Czech Republic. OELs. Government Decree 361**

| Material                     | Type    | Value                 |
|------------------------------|---------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | Ceiling | 5 mg/m <sup>3</sup>   |
|                              | TWA     | 2,5 mg/m <sup>3</sup> |

**Denmark. Exposure Limit Values**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TLV  | 2,5 mg/m <sup>3</sup> |

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Finland. Workplace Exposure Limits**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | VME  | 2,5 mg/m <sup>3</sup> |

**Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)**

| Material                     | Type | Value               | Form                |
|------------------------------|------|---------------------|---------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 1 mg/m <sup>3</sup> | Inhalable fraction. |

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace**

| Material                     | Type | Value               | Form                |
|------------------------------|------|---------------------|---------------------|
| RM FLUORIDE (CAS 16984-48-8) | AGW  | 1 mg/m <sup>3</sup> | Inhalable fraction. |

**Greece. OELs (Decree No. 90/1999, as amended)**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Hungary. OELs. Joint Decree on Chemical Safety of Workplaces**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | STEL | 10 mg/m <sup>3</sup>  |
|                              | TWA  | 2,5 mg/m <sup>3</sup> |

**Iceland. OELs. Regulation 154/1999 on occupational exposure limits**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 0,6 mg/m <sup>3</sup> |

**Latvia. OELs. Occupational exposure limit values of chemical substances in work environment**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Lithuania. OELs. Limit Values for Chemical Substances, General Requirements**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Netherlands. OELs (binding)**

| Material                     | Type | Value               |
|------------------------------|------|---------------------|
| RM FLUORIDE (CAS 16984-48-8) | STEL | 2 mg/m <sup>3</sup> |

**Norway. Administrative Norms for Contaminants in the Workplace**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TLV  | 0,5 mg/m <sup>3</sup> |

**Poland. MACs. Regulation regarding maximum permissible concentrations and intensities of harmful factors in the work environment, Annex 1**

| Material                     | Type | Value               |
|------------------------------|------|---------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2 mg/m <sup>3</sup> |

**Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Romania. OELs. Protection of workers from exposure to chemical agents at the workplace**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Spain. Occupational Exposure Limits**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)**

| Material                     | Type | Value               |
|------------------------------|------|---------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2 mg/m <sup>3</sup> |

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

| Material                     | Type | Value               | Form            |
|------------------------------|------|---------------------|-----------------|
| RM FLUORIDE (CAS 16984-48-8) | STEL | 4 mg/m <sup>3</sup> | Inhalable dust. |
|                              | TWA  | 1 mg/m <sup>3</sup> | Inhalable dust. |

**UK. EH40 Workplace Exposure Limits (WELs)**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU**

| Material                     | Type | Value                 |
|------------------------------|------|-----------------------|
| RM FLUORIDE (CAS 16984-48-8) | TWA  | 2,5 mg/m <sup>3</sup> |

**Biological limit values****Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)**

| Material                     | Value  | Determinant | Specimen            | Sampling time |
|------------------------------|--------|-------------|---------------------|---------------|
| RM FLUORIDE (CAS 16984-48-8) | 7 mg/g | Fluoride    | Creatinine in urine | *             |
|                              | 4 mg/g | Fluoride    | Creatinine in urine | *             |

\* - For sampling details, please see the source document.

**Czech Republic. Limit Values for Indicators of Biological Exposure Tests in Urine and Blood, Annex 2, Tables 1 and 2, Government Decree 432/2003 Sb.**

| Material                     | Value        | Determinant | Specimen            | Sampling time |
|------------------------------|--------------|-------------|---------------------|---------------|
| RM FLUORIDE (CAS 16984-48-8) | 60 µmol/mmol | Fluoride    | Creatinine in urine | *             |
|                              | 10 mg/g      | Fluoride    | Creatinine in urine | *             |

\* - For sampling details, please see the source document.

**France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065)**

| Material                     | Value   | Determinant | Specimen            | Sampling time |
|------------------------------|---------|-------------|---------------------|---------------|
| RM FLUORIDE (CAS 16984-48-8) | 3 mg/g  | Fluorures   | Creatinine in urine | *             |
|                              | 10 mg/g | Fluorures   | Creatinine in urine | *             |

\* - For sampling details, please see the source document.

**Germany. TRGS 903, BAT List (Biological Limit Values)**

| Material                     | Value  | Determinant | Specimen            | Sampling time |
|------------------------------|--------|-------------|---------------------|---------------|
| RM FLUORIDE (CAS 16984-48-8) | 7 mg/g | Fluorid     | Creatinine in urine | *             |
|                              | 4 mg/g | Fluorid     | Creatinine in urine | *             |

\* - For sampling details, please see the source document.

**Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices**

| Material                     | Value        | Determinant | Specimen            | Sampling time |
|------------------------------|--------------|-------------|---------------------|---------------|
| RM FLUORIDE (CAS 16984-48-8) | 7 mg/g       | fluoride    | Creatinine in urine | *             |
|                              | 4 mg/g       | fluoride    | Creatinine in urine | *             |
|                              | 42 µmol/mmol | fluoride    | Creatinine in urine | *             |
|                              | 24 µmol/mmol | fluoride    | Creatinine in urine | *             |

\* - For sampling details, please see the source document.

**Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2**

| Material                     | Value  | Determinant | Specimen            | Sampling time |
|------------------------------|--------|-------------|---------------------|---------------|
| RM FLUORIDE (CAS 16984-48-8) | 7 mg/g | Fluorides   | Creatinine in urine | *             |
|                              | 4 mg/g | Fluorides   | Creatinine in urine | *             |

\* - For sampling details, please see the source document.

**Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4**

| Material                     | Value  | Determinant | Specimen | Sampling time |
|------------------------------|--------|-------------|----------|---------------|
| RM FLUORIDE (CAS 16984-48-8) | 3 mg/l | Fluoruros   | Urine    | *             |
|                              | 2 mg/l | Fluoruros   | Urine    | *             |

\* - For sampling details, please see the source document.

**Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)**

| Material                     | Value  | Determinant | Specimen | Sampling time |
|------------------------------|--------|-------------|----------|---------------|
| RM FLUORIDE (CAS 16984-48-8) | 4 mg/l | Fluorid     | Urine    | *             |

\* - For sampling details, please see the source document.

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no effect levels (DNELs)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

**8.2. Exposure controls**

**Appropriate engineering controls** Good general ventilation (typically 10 air changes per hour) 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. Ensure adequate ventilation, especially in confined areas.

**Individual protection measures, such as personal protective equipment**

**General information** Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Use personal protective equipment as required.

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection**

**- Hand protection** Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier. Wear protective gloves.

**- Other** Wear suitable protective clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**Hygiene measures** When using, do not eat, drink or smoke. 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.

**Environmental exposure controls** Environmental manager must be informed of all major releases.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties****Appearance**

**Physical state** Solid.  
**Form** Solid.  
**Colour** Not available.

**Odour** Not available.

**Odour threshold** Not available.

**pH** Not available.

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** Not available.

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

## Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Vapour pressure** Not available.

**Vapour density** Not available.

**Relative density** Not available.

## Solubility(ies)

**Solubility (water)** Not available.

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Explosive properties** Not explosive.

**Oxidising properties** Not oxidising.

## 9.2. Other information

**Molecular formula** F

**Molecular weight** 19 g/mol

## SECTION 10: Stability and reactivity

**10.1. Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**10.2. Chemical stability** Material is stable under normal conditions.

**10.3. Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.

**10.4. Conditions to avoid** Contact with incompatible materials.

**10.5. Incompatible materials** Strong oxidising agents.

**10.6. Hazardous decomposition products** No hazardous decomposition products are known.

## SECTION 11: Toxicological information

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

### Information on likely routes of exposure

**Inhalation** Prolonged inhalation may be harmful. May cause irritation to the respiratory system.

**Skin contact** No adverse effects due to skin contact are expected. Causes skin irritation.

**Eye contact** Causes serious eye irritation. Direct contact with eyes may cause temporary irritation.

**Ingestion** However, ingestion is not likely to be a primary route of occupational exposure. May cause discomfort if swallowed. Expected to be a low ingestion hazard.

**Symptoms** Exposure may cause temporary irritation, redness, or discomfort.

### 11.1. Information on toxicological effects

**Acute toxicity** No data available.

**Skin corrosion/irritation** Due to partial or complete lack of data the classification is not possible.

**Serious eye damage/eye irritation** Due to partial or complete lack of data the classification is not possible.

**Respiratory sensitisation** Due to partial or complete lack of data the classification is not possible.

**Skin sensitisation** Due to partial or complete lack of data the classification is not possible. This product is not expected to cause skin sensitisation.

**Germ cell mutagenicity** Due to partial or complete lack of data the classification is not possible.

**Carcinogenicity** Due to partial or complete lack of data the classification is not possible.

**Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)**

Not listed.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

RM FLUORIDE (CAS 16984-48-8)

3 Not classifiable as to carcinogenicity to humans.

**Reproductive toxicity** Due to partial or complete lack of data the classification is not possible.



|                                                           |                                                                                                                                                |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Specific target organ toxicity - single exposure</b>   | Due to partial or complete lack of data the classification is not possible. May cause respiratory irritation.                                  |
| <b>Specific target organ toxicity - repeated exposure</b> | Due to partial or complete lack of data the classification is not possible. May cause damage to organs through prolonged or repeated exposure. |
| <b>Aspiration hazard</b>                                  | Due to partial or complete lack of data the classification is not possible.                                                                    |
| <b>Mixture versus substance information</b>               | No information available.                                                                                                                      |
| <b>Other information</b>                                  | Not available.                                                                                                                                 |

## SECTION 12: Ecological information

|                                                        |                                                                                                                                                                                                                                                     |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>12.1. Toxicity</b>                                  | 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. Not expected to be harmful to aquatic organisms. |
| <b>12.2. Persistence and degradability</b>             | No data is available on the degradability of this product.                                                                                                                                                                                          |
| <b>12.3. Bioaccumulative potential</b>                 | No data available.                                                                                                                                                                                                                                  |
| <b>Partition coefficient n-octanol/water (log Kow)</b> | Not available.                                                                                                                                                                                                                                      |
| <b>Bioconcentration factor (BCF)</b>                   | Not available.                                                                                                                                                                                                                                      |
| <b>12.4. Mobility in soil</b>                          | No data available.                                                                                                                                                                                                                                  |
| <b>12.5. Results of PBT and vPvB assessment</b>        | Not available.                                                                                                                                                                                                                                      |
| <b>12.6. Other adverse effects</b>                     | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.                                                             |

### 12.7. Additional information

#### Estonia Dangerous substances in groundwater Data

RM FLUORIDE (CAS 16984-48-8)

Fluoride (as F-ion, total) 1500 UG/L

Fluoride (as F-ion, total) 4000 UG/L

#### Estonia Dangerous substances in soil Data

RM FLUORIDE (CAS 16984-48-8)

Fluoride (as F-ion) 1200 mg/kg

Fluoride (as F-ion) 2000 mg/kg

Fluoride (as F-ion) 450 mg/kg

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

|                                     |                                                                                                                                                                                                                  |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Residual waste</b>               | Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Dispose of in accordance with local regulations. |
| <b>Contaminated packaging</b>       | 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.       |
| <b>EU waste code</b>                | The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.                                                                                                   |
| <b>Disposal methods/information</b> | Collect and reclaim or dispose in sealed containers at licensed waste disposal site.                                                                                                                             |
| <b>Special precautions</b>          | Dispose in accordance with all applicable regulations.                                                                                                                                                           |

## SECTION 14: Transport information

### ADR

14.1. - 14.6.: Not regulated as dangerous goods.

### RID

14.1. - 14.6.: Not regulated as dangerous goods.

### ADN

14.1. - 14.6.: Not regulated as dangerous goods.

### IATA

14.1. - 14.6.: Not regulated as dangerous goods.

### IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

## SECTION 15: Regulatory information

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

#### EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**

Not listed.

**Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**

Not listed.

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

Not listed.

#### Authorisations

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

#### Restrictions on use

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

Not listed.

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.**

Not listed.

#### Other EU regulations

**Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended**

Not listed.

#### Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

#### National regulations

Follow national regulation for work with chemical agents.

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

#### List of abbreviations

Not available.

#### Information on evaluation method leading to the classification of mixture

Not applicable.

#### Disclaimer

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