

**Safety Data Sheet in accordance with 2012 OSHA Hazard Communication  
Standard: 29 CFR 1910.1200 and WHMIS 2015**

**RATIONAL Decalcifier MSDS**

**Section 1 – Chemical Product and Company Information**

Product Name: RATIONAL Decalcifier  
Article Number: 6006.0110  
Product Use: Cleaner

Preparation Date: 1/28/2011  
Revision Date: 7/18/2016

RATIONAL AG

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Germany

Telephone: +49-8191-32 70  
Emergency Telephone Number: CANUTEC (613) 996-6666  
Emergency Telephone Number: USA – 1-800-535-5053



**Section 2– Hazards Identification**

**GHS Classification:** Skin Corrosive – Category 1  
H314 – Causes severe skin burns and eye damage

Eye Irritant – Category 2  
H319 – Causes serious eye irritation

Metal Corrosive – Category 1  
H290 – May be corrosive to metals

**GHS Labeling:**

Symbols:



Signal Word: Danger

**Precautionary Statements:**

P264: Wash after handling

P272: Contaminated work clothing should not be allowed out of the workplace

P280: Wear protective gloves/ protective clothing/ eye protection

P302 + P352: If on skin, wash with soap and water

P333 + P313: If skin irritation occurs, seek medical attention immediately

P305 + P351 + P338: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P363: Wash contaminated clothing before reuse

P501: Dispose of contents/ container to an approved waste disposal plant

**Other Hazards Not Classified:** No significant hazards**Section 3 – Composition/Information on Ingredients**

Component	CAS #	%
Sulfamic Acid	5329-14-6	Confidential
Phosphoric Acid	7664-38-2	Confidential

**Section 4 – First Aid**

**Inhalation:** If inhaled, move to fresh air. If breathing is difficult, administer artificial respiration or oxygen as indicated. Contact a physician immediately.

**Ingestion:** Give small amounts of water. Do not induce vomiting. If vomiting occurs, keep head below hips to help prevent aspiration. Contact a physician immediately.

**Skin:** Wash affected area with soap and water. Immediately remove contaminated clothing and shoes. Launder contaminated clothing before reuse. Contact a physician if irritation develops.

**Eyes:** Flush with large amounts of cold water for at least 15 minutes. Do not let victim rub eyes. If irritation develops, contact a physician immediately.

### Section 5 – Fire Fighting Measures

Suitable extinguishing media: Carbon dioxide, Dry chemical, Foam, Water spray

Special hazards: None

Specific protective equipment and precautions for fire fighters: Isolate fire area and deny unnecessary entry. Use water spray, dry chemical, foam or carbon dioxide. Water may be ineffective but should be used to keep fire exposed containers cool. If a spill or leak has not ignited, use water spray to disperse the vapors. Water spray may be used only to keep fire exposed containers cool, protecting personnel attempting to stop leak and disperse vapors.

Unusual Fire and Explosion Hazards: None

Flash Point: None

Method Used: N/A

National Fire Protection Association (NFPA): Health 2 Flammability 0 Reactivity 0  
Other N/A

### Section 6 – Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Ensure adequate ventilation.

**Environmental Precautions:** Do not allow spilled material to enter sewers or streams. If material is released, indicate that there is a risk of slipping in the area. If spills are likely to enter any drain, waterway or groundwater, contact the appropriate governmental agency.

**Methods and materials for containment:** Add dry material to absorb (if large spill, dike to contain). Use recommended protective equipment, pick up bulk of spill and containerize for recovery or disposal. Flush area with water to remove residues. Spill may be carefully neutralized with lime.

Follow applicable Federal, Provincial and local reporting requirements.

### Section 7 – Handling and Storage

**Precautions for safe handling:** Read label for instructions in use of product. Prevent small spills and leakage to avoid slip hazard. Avoid contact with skin, eyes, and clothing. Do not wear contact lenses when handling this product. Keep out of the reach of children. Wash thoroughly after handling. Material can accumulate static charges which may cause an electrical spark (ignition source).

**Conditions for safe storage:** Store in closed containers in a cool, dry well ventilated area not exposed to sunlight. Maintain closure of bungs. Store at temperatures between 0°C and 40°C. May decompose if frozen below 0°C. Do not reuse container. Avoid container damage while storing.

Empty containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, bronze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity or

other sources of ignition; they may explode and cause injury or death. Do not attempt to refill containers since residue is difficult to remove. Empty drums should be completely drained, properly bunged and returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner in accordance with governmental regulations.

### Section 8 – Exposure Controls/ Personal Protection

#### Exposure limits

Phosphoric Acid: OSHA TWA – 1 mg/m<sup>3</sup>; ACGIH TWA – 1 mg/m<sup>3</sup>, STEL – 3 mg/m<sup>3</sup>; NIOSH TWA – 1mg/m<sup>3</sup>, IDLH – 1000mg/m<sup>3</sup>

Alberta 8 hour OEL – 1 mg/m<sup>3</sup>; British Columbia TWA - 1 mg/m<sup>3</sup>; Ontario TWAEV - 1 mg/m<sup>3</sup>; Quebec TWAEV – 1 mg/m<sup>3</sup>

**Appropriate engineering controls:** Proper protection and controls is dependent upon the potential exposure conditions. No special requirements are needed under ordinary conditions where adequate ventilation is available.

#### **Individual: protective measures:**

**Respiratory Protection:** General room ventilation should be satisfactory. Exhaust ventilation may be necessary if misting is generated. Do not inhale vapors and aerosols.

**Eye Protection:** Safety glasses with side shields or chemical goggles are required. Contact lenses should also not be worn if the product could be splashed into the eyes.

**Hand Protection:** Wear neoprene rubber gloves if prolonged contact may occur or for Those with sensitive skin.

**Body protection:** For single, short duration and for prolonged or repeated exposures to the skin, wear impervious, protective clothing including rubber safety shoes to avoid skin contact.

### Section 9 - Physical/Chemical Characteristics

**Appearance and Odor:** Clear, yellow liquid, characteristic odor

**Boiling Point:** > 100°C

**Flash Point:** None

**Flammable Limits in air % by volume:** N/A

**Auto-Ignition Temp:** N/A

**UEL:** N/A

**LEL:** N/A

**Specific Gravity:** 1.09 @ 20°C

**Vapor Pressure @ 20°C:** 23 hPa

**Vapor Density:** N/A

**Solubility in Water:** Miscible

**Freezing Point:** N/D

**pH:** < 1.0

**Section 10 – Stability and Reactivity**

Stability:    Stable X    Unstable

Conditions to Avoid: Contact with heat, sparks, flame and all sources of ignition

Incompatibilities: Strong oxidizing agents and strong bases

Hazardous Decomposition Products: Oxides of carbon, nitrogen, phosphorus and sulfur

Hazardous Polymerization:    May occur        Will not occur X

**Section 11 – Toxicological Data****Sulfamic Acid**

Eye Irritation: Draize test rabbit ; 20 mg Moderate ;

Draize test rabbit ; 250 ug/24H

Skin Irritation: Draize test rabbit ; 500 mg/24H Severe

Inhalation Toxicity: LC 50 – 25.5 mg/m<sup>3</sup> Rat

Oral Toxicity: LD 50 - 3160 mg/kg (Rat)

**Phosphoric Acid**

Eye Irritation: Draize test rabbit ; 119 mg Severe

Skin Irritation: Draize test rabbit ; 595 mg/24H Severe

Inhalation Toxicity: LC 50 – 25.5 mg/m<sup>3</sup> Rat

Oral Toxicity: LD 50 - 1530 mg/kg Rat

Carcinogenicity:

NTP:    No

IARC:    No

ACGIH: No

**Section 12 – Ecological Information**

No further information is known

**Mobility:** Not established

**Persistence and Degradability:** Not established.

**Section 13 – Disposal Considerations**

**Disposal methods:** Dispose of in accordance with federal, state and local regulations.

**Precaution for disposal:** All recovered material should be packaged, labeled, transported and disposed or reclaimed in conformance with Good Engineering Practices. Comply with all applicable governmental regulations. Avoid land filling of liquids. Reclaim where possible.

**Section 14 – Transport Information**

Canadian TDG Classification:

Proper Shipping Name: Corrosive Liquid, Acid N.O.S. (Sulfamic Acid and Phosphoric Acid)

ID No.                    UN 1760

Hazard Class:            8

PG                        III

US Department of Transportation Classification

Proper Shipping Name: Corrosive Liquid, Acid N.O.S. (Sulfamic Acid and Phosphoric Acid)

ID No.                    UN 1760

Hazard Class:            8

PG                        III

ADR/IATA/IMDG

Proper Shipping Name: Corrosive Liquid, Acid N.O.S. (Sulfamic Acid and Phosphoric Acid)

ID No.                    UN 1760

Hazard Class:            8

PG                        III

**Section 15 – Regulatory Information**

US EPA Section 313 Toxic Chemical - no

DSL (Domestic Substances List)

All of the ingredients in this product are listed on the Canadian DSL

TSCA (Toxic Substance Control Act)

All of the ingredients in this product are listed on the TSCA Inventory.

**Section 16 – Other Information**

None

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