

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
 Product name : Sulfuric Acid 50%  
 Product code : M16035

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Industrial

#### 1.3. Supplier

JR Simplot Company  
 P.O. Box 70013  
 Boise, ID 83707  
 T 1-208-336-2110

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

### SECTION 2: Hazard(s) identification

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

##### GHS-US classification

|   |   |
|---|---|
| Corrosive to metals, Category 1                                 | H290 May be corrosive to metals.              |
| Skin corrosion/irritation, Category 1A                          | H314 Causes severe skin burns and eye damage. |
| Serious eye damage/eye irritation, Category 1                   | H318 Causes serious eye damage.               |
| Carcinogenicity, Category 1A                                    | H350 May cause cancer (Inhalation).           |
| Hazardous to the aquatic environment — Acute Hazard, Category 3 | H402 Harmful to aquatic life                  |

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) :

- H290 - May be corrosive to metals.
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage.
- H350 - May cause cancer (Inhalation).
- H402 - Harmful to aquatic life

Precautionary statements (GHS US) :

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P234 - Keep only in original container.
- P260 - Do not breathe mist, spray, or vapours.
- P264 - Wash Any exposed skin, hands, forearms and face thoroughly after handling.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves, protective clothing, and eye protection.
- P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
- P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
- 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 attention
- P310 - Immediately call a doctor, a POISON CENTER
- P321 - Specific treatment (see supplemental first aid instruction on this label)
- P363 - Wash contaminated clothing before reuse.
- P390 - Absorb spillage to prevent material damage.
- P405 - Store locked up.
- P406 - Store in corrosive resistant container with a resistant inner liner.

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P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name          | Product identifier  | %  | GHS-US classification |
|---------------|---------------------|----|-----------------------|
| sulfuric acid | (CAS-No.) 7664-93-9 | 50 | Skin Corr. 1A, H314   |
| Water         | (CAS-No.) 7732-18-5 | 50 | Not classified        |

\*Strong inorganic acid aerosols/mists containing this substance are carcinogenic to humans via inhalation. Under normal circumstances of use this route of exposure is not expected.

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
- First-aid measures after skin contact : Immediately call a POISON CENTER/doctor. Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
- First-aid measures after eye contact : Immediately call a POISON CENTER/doctor. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Rinse mouth. Do not induce vomiting. Call a physician immediately.

### 4.2. Most important symptoms and effects (acute and delayed)

- Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.
- Symptoms/effects : Causes severe skin burns and eye damage.
- Symptoms/effects after inhalation : May cause cancer by inhalation.
- Symptoms/effects after skin contact : Burns.
- Symptoms/effects after eye contact : Serious damage to eyes.
- Symptoms/effects after ingestion : Burns.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Sand. Water spray. Dry powder. Foam. Carbon dioxide.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

No additional information available

### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Notify authorities if product enters sewers or public waters.

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

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Avoid contact during pregnancy/while nursing. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

Hygiene measures : Wash hands, forearms and face thoroughly after handling. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Technical measures : Comply with applicable regulations.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use. Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up. Store in a well-ventilated place. Keep cool.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Metals.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

|                                  |
|----------------------------------|
| <b>sulfuric acid (7664-93-9)</b> |
| Not applicable                   |
| <b>Water (7732-18-5)</b>         |
| Not applicable                   |

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

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### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Wear protective gloves.

#### Eye protection:

Chemical goggles or face shield. Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Wear appropriate mask. [In case of inadequate ventilation] wear respiratory protection.

#### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

|  |                     |
|--|---------------------|
| Physical state                             | : Liquid            |
| Colour                                     | : Colourless        |
| Odour                                      | : characteristic    |
| Odour threshold                            | : No data available |
| pH   | : No data available |
| Melting point                              | : Not applicable    |
| Freezing point                             | : No data available |
| Boiling point                              | : No data available |
| Flash point                                | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Flammability (solid, gas)                  | : Non flammable.    |
| Vapour pressure                            | : No data available |
| Relative vapour density at 20 °C           | : No data available |
| Relative density                           | : No data available |
| Solubility                                 | : No data available |
| Log Pow                                    | : No data available |
| Auto-ignition temperature                  | : No data available |
| Decomposition temperature                  | : No data available |
| Viscosity, kinematic                       | : No data available |
| Viscosity, dynamic                         | : No data available |
| Explosive limits                           | : No data available |
| Explosive properties                       | : No data available |
| Oxidising properties                       | : No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Not established.

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### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong bases. metals.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapours.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

| Sulfuric Acid 50%          |                            |
|----------------------------|----------------------------|
| LD50 oral rat              | > 5000 mg/kg               |
| LC50 inhalation rat (mg/l) | 18 - 420 mg/m <sup>3</sup> |
| ATE US (vapours)           | 0.018 mg/l/4h              |
| ATE US (dust,mist)         | 0.018 mg/l/4h              |

Skin corrosion/irritation : Causes severe skin burns and eye damage.  
Serious eye damage/irritation : Causes serious eye damage.  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : May cause cancer (Inhalation).

| sulfuric acid (7664-93-9)                |                            |
|--|----------------------------|
| IARC group                               | 1 - Carcinogenic to humans |
| National Toxicology Program (NTP) Status | Known Human Carcinogens    |

Reproductive toxicity : Not classified  
STOT-single exposure : Not classified  
STOT-repeated exposure : Not classified  
Aspiration hazard : Not classified  
Viscosity, kinematic : No data available  
Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.  
Symptoms/effects : Causes severe skin burns and eye damage.  
Symptoms/effects after inhalation : May cause cancer by inhalation.  
Symptoms/effects after skin contact : Burns.  
Symptoms/effects after eye contact : Serious damage to eyes.  
Symptoms/effects after ingestion : Burns.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Harmful to aquatic life.

| Sulfuric Acid 50% |               |
|-------------------|---------------|
| LC50 fish 1       | 42 - 500 mg/l |
| EC50 Daphnia 1    | 28 - 88 mg/l  |

| sulfuric acid (7664-93-9)                 |   |
|---|---|
| LC50 fish 1                               | 42 mg/l (96 h; Gambusia affinis)          |
| EC50 Daphnia 1                            | 29 mg/l (24 h; Daphnia magna)             |
| LC50 fish 2                               | 49 mg/l (48 h; Lepomis macrochirus)       |
| TLM fish 1                                | 42 mg/l (96 h; Gambusia affinis)          |
| Threshold limit other aquatic organisms 1 | 6900 mg/l (24 h; Pseudomonas fluorescens) |

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### 12.2. Persistence and degradability

| Sulfuric Acid 50%               |  |
|---------------------------------|--|
| Persistence and degradability   | Not established.   |
| sulfuric acid (7664-93-9)       |  |
| Persistence and degradability   | Biodegradability: not applicable. No (test) data on mobility of the components available. Not established. |
| Biochemical oxygen demand (BOD) | Not applicable   |
| Chemical oxygen demand (COD)    | Not applicable   |
| ThOD                            | Not applicable   |
| BOD (% of ThOD)                 | Not applicable   |
| Water (7732-18-5)               |  |
| Persistence and degradability   | Not established.   |

### 12.3. Bioaccumulative potential

| Sulfuric Acid 50%         |   |
|---------------------------|---|
| Bioaccumulative potential | Not established.                                  |
| sulfuric acid (7664-93-9) |   |
| Log Pow                   | -2.2 (Estimated value)                            |
| Bioaccumulative potential | Bioaccumulation: not applicable. Not established. |
| Water (7732-18-5)         |   |
| Bioaccumulative potential | Not established.                                  |

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2796 Sulfuric acid (with not more than 51% acid), 8, II  
UN-No. (DOT) : UN2796  
Proper Shipping Name (DOT) : Sulfuric acid  
with not more than 51% acid  
Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136  
Packing group (DOT) : II - Medium Danger  
Hazard labels (DOT) : 8 - Corrosive



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

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|  |  |
|--|--|
| DOT Packaging Bulk (49 CFR 173.xxx)                              | : 242  |
| DOT Special Provisions (49 CFR 172.102)                          | : A3 - For combination packagings, if glass inner packagings (including ampoules) are used, they must be packed with absorbent material in tightly closed metal receptacles before packing in outer packagings.<br>A7 - Steel packagings must be corrosion-resistant or have protection against corrosion.<br>B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.<br>B15 - Packagings must be protected with non-metallic linings impervious to the lading or have a suitable corrosion allowance.<br>IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.<br>N6 - Battery fluid packaged with electric storage batteries, wet or dry, must conform to the packaging provisions of 173.159 (g) or (h) of this subchapter.<br>N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material.<br>T8 - 4 178.274(d)(2) Normal..... Prohibited<br>TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.<br>TP12 - This material is considered highly corrosive to steel. |
| DOT Packaging Exceptions (49 CFR 173.xxx)                        | : 154  |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : 1 L  |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)     | : 30 L   |
| DOT Vessel Stowage Location                                      | : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.  |
| Other information  | : No supplementary information available.  |

### Transportation of Dangerous Goods

#### Transport by sea

#### Air transport

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Sulfuric Acid 50%

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

#### sulfuric acid (7664-93-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Not subject to reporting requirements of the United States SARA Section 313  
Subject to reporting requirements of United States SARA Section 313

|  |         |
|--|---------|
| CERCLA RQ  | 1000 lb |
| RQ (Reportable quantity, section 304 of EPA's List of Lists) | 1000 lb |
| SARA Section 302 Threshold Planning Quantity (TPQ)           | 1000 lb |

#### Water (7732-18-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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### 15.2. International regulations

#### CANADA

**sulfuric acid (7664-93-9)**

Listed on the Canadian DSL (Domestic Substances List)

**Water (7732-18-5)**

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

**sulfuric acid (7664-93-9)**

Listed as carcinogen on NTP (National Toxicology Program)

### 15.3. US State regulations

| Component                | State or local regulations  |
|--------------------------|---|
| sulfuric acid(7664-93-9) | U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List |

## SECTION 16: Other information

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Revision date : 11/22/2019

Other information : None.

Full text of H-statements:

|      |  |
|------|--|
| H290 | May be corrosive to metals.              |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage.               |
| H350 | May cause cancer.                        |
| H402 | Harmful to aquatic life                  |

SDS US (GHS HazCom 2012)

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