

Revision: 1.1

Revision date:

16 April 2021

Date printed:

12 August 2023

Section 1. Identification

1.1 Product Identifier 3087

Product Name SULPHURIC ACID 2.0M (4N)
CAS Number 7664-93-9
REACH Registration No A registration number is not available as the substance or its uses are exempt, the annual tonnage does not require a registration or the registration is envisaged for a later date.
Molecular Formula $H_2SO_4 = 98.07$

1.2 Relevent identified uses of the substance or mixture & uses advised against

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

1.3 Supplier Vickers Laboratories Ltd



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Section 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to regulation 1272/2008/EC

Skin corrosion/irritation, category 1A

H314: Causes severe skin burns and eye damage.

2.2 Label elements

Labelling according to regulation 1272/2008/EC

Signal word Danger

Hazard Pictograms



Hazard Statements Causes severe skin burns and eye damage.

Precautionary Statements Wear protective gloves / protective clothing / eye protection / face protection. Wash thoroughly after handling. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.

Section 3. Composition

3.1 Substances

| Component | CAS No. | EEC No. | REACH No. | Conc w/w | CLP Classification (1272/2008/CE) |
|----------------|-----------|-----------|-----------------------|----------|-----------------------------------|
| Sulphuric acid | 7664-93-9 | 231-639-5 | 01-2119458838-20-XXXX | 17.8% | Skin Corr. 1A |

Section 4. First Aid

4.1 Description of first aid measures

| | |
|--------------------------------------|---|
| Eyes | Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION URGENTLY. |
| Skin | Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. OBTAIN MEDICAL ATTENTION URGENTLY. |
| Inhalation | Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If conscious place in a sitting position. OBTAIN MEDICAL ATTENTION URGENTLY. |
| Ingestion | If conscious give plenty of water to drink. Do not induce vomiting. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY. |
| Personal protection for first aiders | Wear protective gloves / eye protection. |

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

No further relevant information available.

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

No further relevant information available.

Section 5. Fire Fighting

5.1 Extinguishing media

| | |
|---------------------|--|
| Extinguishing Media | Consider what other flammable materials are present and act accordingly. |
| Unsuitable Media | Do not allow water to come into direct contact with material. |

5.2 Special hazards arising from the substance or mixture

| | |
|---------|---|
| Hazards | May evolve toxic fumes if involved in a fire. |
|---------|---|

5.3 Advice for firefighters

| | |
|-------------------------|--|
| Advice for firefighters | Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus. |
|-------------------------|--|

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

| | |
|---------------------|--|
| Personal Protection | Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so. |
|---------------------|--|

6.2 Environmental precautions

| | |
|---------------|--|
| Environmental | Keep material out of sewers, storm drains, surface waters and soil. Keep non-neutralised material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs. |
|---------------|--|

6.3 Methods and material for containment and cleaning up

| | |
|----------------|--|
| Major Spillage | Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water. |
| Minor Spillage | Neutralise spill with soda ash, lime, calcium carbonate or sodium bicarbonate. Wash area down with copious amounts of water. |

6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

Section 7. Storage & Handling

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing. When diluting acid always add, acid to water cautiously with agitation.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage .

7.3 Specific end use(s)

See section 1.2.

Section 8. Workplace Exposure & Personal Protection

8.1 Control parameters

| Component | CAS No | Concentration | Workplace Exposure Limits | | |
|----------------|-----------|---------------|---------------------------|-------------------------|---|
| | | | Long Term (8hr TWA) | Short Term 15min period | |
| Sulphuric acid | 7664-93-9 | 17.8% | - | 0.05 mg/m-3 | - |

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

8.2 Exposure controls

| | |
|------------------------|--|
| Respiratory Protection | Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge respirator, or use self contained breathing apparatus. |
| Hand Protection | Use PVC gauntlets. |
| Eye Protection | Use chemical full face shield. |
| Skin Protection | If skin contact or contamination of clothing is likely, protective clothing must be worn. Wear PVC oversuit. |
| Special Hazards | No special precautions required. |

Section 9. Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

| | |
|-----------------------|--|
| Appearance | Clear colourless liquid. |
| Odour | Odourless. |
| pH | 1 @ 20°C |
| Boiling Point | Not available |
| Melting Point | Not applicable |
| Flash Point | Not applicable |
| Upper Flammable Limit | Not applicable |
| Lower Flammable Limit | Not applicable |
| Auto Ignition | Not applicable |
| Explosive Properties | No. |
| Oxidising Properties | No. |
| Vapour Pressure | Not applicable |
| Relative Density | 1.1240 |
| Water Solubility | Completely soluble in water with moderate increase in temperature. |

9.2 Other information

No data available.

Section 10. Stability & Reactivity

| | | |
|------|------------------------------------|--|
| 10.1 | Reactivity | No data available. |
| 10.2 | Chemical Stability | Stable under normal conditions |
| 10.3 | Possibility of hazardous reactions | No data available. |
| 10.4 | Conditions to Avoid | No specific conditions. |
| 10.5 | Incompatible Materials | Oxidising and reducing agents. Alkalis. Reacts with most metals to produce extremely flammable hydrogen gas. Peroxides, potassium permanganate, sodium, potassium, platinum, potassium tertiary butoxide. Combustible materials. Reacts with sulphide, phosphide, cyanide, carbide and silicides producing very toxic gases. Many organic compounds. |
| 10.6 | Hazardous Decomposition Products | Toxic and acidic dense white fumes. |

Section 11. Toxicological Information

11.1 Information on toxicological effects

| | |
|----------------------|---|
| Eyes | The liquid and solutions will cause severe burns. Damage can range from severe irritation and corneal scarring to permanent blindness. |
| Skin | The liquid and solutions will cause severe burns. Severe ulceration and scarring may occur in serious cases. The dilute acid is irritating to the skin. |
| LD50 Skin | Not available |
| Ingestion | Ingestion will cause severe mouth burns, and if swallowed extensive damage to the oesophagus. Symptoms may include salivation, thirst, difficulty in swallowing, pain, shock and vomiting. |
| LD50 Oral | 2140mg/kg Rat |
| Inhalation | Exposure to vapour concentrations above the occupational exposure limits will produce severe irritation of the eyes, nose, throat and respiratory tract. High concentrations of vapour will seriously damage the membranes lining the nose, throat and upper respiratory tract. |
| LD50 Inhalation | Not available |
| TCLo | Not available |
| Carcinogenicity | A positive association has been shown between the development of upper respiratory tract cancer and exposure to high levels of sulphuric acid mist. |
| Mutagenicity | Not considered to be a mutagen. |
| Reproductive Effects | None identified. |
| Other Information | The irritant effect provides warning that control of exposure is needed. 0.125-0.5 ppm are mildly annoying, 1.2-2.5 ppm definitely unpleasant and 10-20 ppm unbearable. |

Section 12. Ecological

| | | |
|------|----------------------------------|---|
| 12.1 | Toxicity | Dangerous to aquatic organism: causes damage to crops and vegetables. Natural alkalinity reduces damage caused by low pH. Aquatic toxicity LC50 Bluegill sunfish. 24 hr fresh water-24.5 mg/l, 48 hr tap-water-49 mg/l. |
| | LC50 Algal | Not available |
| | LC50 Crustacea | Not available |
| | LC50 Fish | Not available |
| 12.2 | Persistence and degradability | No data available. |
| 12.3 | Bioaccumulative potential | No data available. |
| 12.4 | Mobility in soil | No data available. |
| 12.5 | Results of PBT & vPvB assessment | Assessment not required. |
| 12.6 | Other adverse effects | None known at present. |

Section 13. Disposal Considerations

13.1 Waste treatment methods

| | |
|------------------------|--|
| Disposal Methods | Dispose of in a licensed incinerator. Never dispose of into water courses or sewerage systems. |
| Contaminated Packaging | Very carefully wash out containers with water. Use a licensed waste disposer. |

Section 14. Transport Information

| | |
|-----------------------------------|----------------------------------|
| 14.1 UN Number | 2796 |
| 14.2 Proper Shipping Name | Sulphuric acid |
| 14.3 Transport classes | |
| UN classification | 8 |
| Subsidiary hazard(s) | None |
| Transport category | 2 |
| ADR Hazard ID | 80 |
| Tunnel Restriction Code | E |
| 14.4 Packing Group | II |
| 14.5 Environment hazards | See section 12. |
| 14.6 Special precautions for user | No special precautions required. |
| 14.7 Transport in bulk | Not transported in bulk. |



Section 15. Regulatory Information

15.1 Safety, health and environment regulations specific for substance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification Skin corrosion/irritation, category 1A

Signal word Danger

Hazard Pictograms



Hazard Statements H314
Causes severe skin burns and eye damage.

Precautionary Statements P280, P264, P301+P330+P331, P303+P361+P353, P305+P351+P338
Wear protective gloves / protective clothing / eye protection / face protection. Wash thoroughly after handling. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing.

15.2 Chemical safety assessment

Assessment not required.

Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

Revision number: 1.1 (Supercedes revision 1.0)

Revision date: 16 April 2021

Reviewed by chemist: 16 April 2021

Printed date: 12 August 2023

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