| SECTION 1: Identification of the substance/mixture and of the company/undertaking |
|--|
| · 1.1 Product identifier |
| · Trade name: <u>SULPHURIC ACID 96%</u> |
| • Article number: 20-5503-05 |
| Registration number 01-2119458838-20 1.2 Relevant identified uses of the substance or mixture and uses advised against |
| · Product category |
| PC1 Adhesives, sealants |
| PC2 Adsorbents |
| PC3 Air care products PC4 Anti-Freeze and de-icing products |
| PC7 Base metals and alloys |
| PC8 Biocidal products |
| PC9a Coatings and paints, thinners, paint removers |
| PC9b Fillers, putties, plasters, modelling clay PC9c Finger paints |
| PC11 Explosives |
| PC12 Fertilisers |
| PC13 Fuels |
| PC14 Metal surface treatment products |
| PC15 Non-metal-surface treatment products PC16 Heat transfer fluids |
| PC17 Hydraulic fluids |
| PC18 Ink and toners |
| PC19 Intermediate |
| PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agentsPC21 Laboratory chemicals |
| PC23 Leather treatment products |
| PC24 Lubricants, greases, release products |
| PC25 Metal working fluids |
| PC26 Paper and board treatment products |
| PC27 Plant protection products PC28 Perfumes, fragrances |
| PC29 Pharmaceuticals |
| PC30 Photo-chemicals |
| PC31 Polishes and wax blends |
| PC32 Polymer preparations and compounds |
| PC33 Semiconductors PC34 Textile dyes, and impregnating products |
| PC35 Washing and cleaning products (including solvent based products) |
| PC36 Water softeners |
| PC37 Water treatment chemicals |
| PC38 Welding and soldering products, flux products PC39 Cosmetics, personal care products |
| PC40 Extraction agents |
| PC42: Electrolytes for batteries |
| PC 0: Other: Electrolytes |
| PC 0: Other: Electrical batteries and accumulators |
| PC 0: Other: Maintenance of sulphuric acid containing batteries • Article category |
| AC1 Vehicles |
| AC3 Electrical batteries and accumulators |
| Application of the substance / the mixture |
| The product has many industrial, professional and consumer applications. The product is used in the manufacture of fertilisers and in many industrial processes |
| · Uses advised against |
| Any use involving aerosol formation or vapour or dust release in excess of the assigned workplace exposure |
| limits where workers are exposed without suitable respiratory protective equipment (RPE). |
| Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (BPE) |
| protective equipment (PPE). (Contd. on page 2) |
| GB - |
| |

Printing date 19.07.2022

Revision: 19.07.2022

Trade name: SULPHURIC ACID 96%

| D | (Contd. of page 1) |
|---|---|
| | blving the use of incompatible substances - refer to section 10. blving extreme heat use advised against. |
| | s intended exclusively for industrial and professional use. |
| | ansactions of sulphuric acid on its own or in mixtures shall be reported under REGULATION |
| (EU) No 98/2 | 013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 January 2013 or |
| | and use of explosives precursors. |
| - | |
| | the supplier of the safety data sheet |
| Manufacture Severn Biotee | |
| Unit 2, | li Liu. |
| Park Lane, | |
| Kidderminste | |
| Worcestershi | |
| DY11 6TJ | |
| UK | |
| Tel: 0044 150 | 2 825286 |
| Fax: 0044 15 | |
| | evernbiotech.com |
| . Further info | mation obtainable from: Product safety department. |
| | cy telephone number: |
| | Poisons Information Service. E-mail: npis.birmingham@nhs.net; Tel: +44 (0)344 892 0111 |
| | |
| | |
| SECTION | 2: Hazards identification |
| | |
| · Classification | tion of the substance or mixture a according to Regulation (EC) No 1272/2008 |
| | according to Regulation (EC) No 1272/2008 |
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| Classification | according to Regulation (EC) No 1272/2008 |
| • Classification Classification con Skin Corr. 1A Eye Dam. 1 • 2.2 Label ele | n according to Regulation (EC) No 1272/2008 rosion . H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. ments |
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Printing date 19.07.2022

Revision: 19.07.2022

Trade name: SULPHURIC ACID 96%

• **vPvB:** Not applicable.

(Contd. of page 2)

51 - 98%

Skin Corr. 1A, H314

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

 \cdot **Description:** An aqueous solution of sulphuric acid

· Dangerous components:

CAS: 7664-93-9 Sulphuric acid EINECS: 231-639-5

• Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

\cdot 4.1 Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

Corrosive to all bodily tissues - the severity of injury depends on the concentration of the solution and the duration of exposure.

SWIFT ACTION IS ESSENTIAL!

· After inhalation:

Supply fresh air.

Call a doctor immediately.

In case of unconsciousness place patient stably in side position for transportation.

DON'T DELAY!

- · After skin contact:
- Immediately rinse with water. Call a doctor immediately.

Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing. DO NOT DELAY!

Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes

· After eye contact:

Check for and remove any contact lenses.

Rinse opened eye for several minutes under running water. Then consult a doctor.

Call a doctor immediately.

DO NOT DELAY!

• After swallowing:

Wash mouth out with water

Drink plenty of water and provide fresh air. Call for a doctor immediately.

Do not induce vomiting; call for medical help immediately.

If vomiting occurs spontaneously, keep head below hips to prevent aspiration. DO NOT DELAY!

- Information for doctor: Treat symptomatically and supportively.
- 4.2 Most important symptoms and effects, both acute and 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: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- \cdot For safety reasons unsuitable extinguishing agents: Water
- **5.2 Special hazards arising from the substance or mixture** Direct contact with water can cause violent liberation of heat and splattering of the material. Not combustible. Many reactions may cause fire or explosion.

(Contd. on page 4)

Printing date 19.07.2022

Revision: 19.07.2022

Trade name: SULPHURIC ACID 96%

(Contd. of page 3) Contact with metals may produce flammable hydrogen gas. The substance is a strong dehydrating agent, which may cause ignition of finely divided organic materials upon contact. Oxides of sulphur may be produced in a fire situation. · 5.3 Advice for firefighters · Protective equipment: Wear self-contained respiratory protective device. Wear fully protective suit. Do not inhale explosion gases or combustion gases. · Additional information Cool endangered receptacles with water spray. Collect contaminated fire fighting water separately. It must not enter the sewage system. In a fire or if heated, a pressure increase will occur and the container may burst. Slightly viscous, strongly hygroscopic. Mixable with water. Aqueous solution reacts acidic. Slightly volatile. Acts oxidizing with increasing temperature. **SECTION 6: Accidental release measures** · 6.1 Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation Wear protective equipment. Keep unprotected persons away. No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. **6.2 Environmental precautions:** Do not allow to penetrate the ground/soil. Do not allow product to reach sewage system or any water course in the undiluted form. 6.3 Methods and material for containment and cleaning up: Ensure adequate ventilation. Do not use water. Consult an expert! Evacuate danger area! Do NOT absorb in saw-dust or other combustible absorbents. LARGE SPILL : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. SMALL SPILL: Stop leak if without risk. Move containers from spill area. Absorb with an inert dry noncombustible material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. · 6.4 Reference to other sections See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7: Handling and storage

 \cdot 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

(Contd. on page 5)

GB

Printing date 19.07.2022

Revision: 19.07.2022

Trade name: SULPHURIC ACID 96%

(Contd. of page 4) The product must only be handled by authorised, trained and experienced professionals under strictly controlled conditions.

Conduct maintenance and other work on or in storage/reactor/mixing vessels or closed spaces ONLY under strict Permit to Work conditions.

Inspect the electrical fittings regularly against the risk of corrosion.

Prevent formation of aerosols.

When diluting, always add the acid to the water; never add water to the acid.

Warn relevant workers of the dangers of working with this product and provide suitable and sufficient training to ensure safe working.

The product is corrosive to all bodily tissues. Direct contact (skin, eyes and by inhalation) and ingestion must be prevented. A safe system of work, taking into account the product properties and the operation taking place, must be formulated (by a competent, trained and suitably experienced person) prior to work taking place and the system must be followed to ensure the safety of workers and other who may be affected.

· Information about fire - and explosion protection: No special measures required.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

- Requirements to be met by storerooms and receptacles: Prevent any seepage into the ground.
- · Information about storage in one common storage facility:

Store away from water.

Store away from foodstuffs.

Do not store together with alkalis (caustic solutions).

Store away from combustibles.

- · Further information about storage conditions:
- Store in a bunded area.

Store in cool, dry conditions in well sealed receptacles.

- Protect from humidity and water.
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

• Additional information about design of technical facilities: No further data; see item 7.

· Ingredients with limit values that require monitoring at the workplace:

7664-93-9 Sulphuric acid

WEL Long-term value: 0.05* mg/m³ *mist: is defined as fraction

· DNELs

Workers - Hazard via inhalation route
Local effects
Long term exposure

DNEL (Derived No Effect Level): 0.05 mg/m³
Most sensitive endpoint: irritation (respiratory tract)
Acute/short term exposure
DNEL (Derived No Effect Level): 0.1 mg/m³
Most sensitive endpoint:: irritation (respiratory tract)

PNEC (Derived No Effect Level): 0.1 mg/m³
Most sensitive endpoint:: irritation (respiratory tract)
PNECs
PNEC aqua (freshwater): 0.003 mg/L
PNEC aqua (marine water): 0.0025 mg/L
PNEC STP: 8.8 mg/L
PNEC sediment (freshwater): 0.002 mg/kg sediment dw
PNEC sediment (marine water): 0.002 mg/kg sediment dw

• Additional information: The lists valid during the making were used as basis.

(Contd. on page 6)

GB

Printing date 19.07.2022

Revision: 19.07.2022

Trade name: SULPHURIC ACID 96%

(Contd. of page 5)

• 8.2 Exposure controls

· Personal protective equipment:

• General protective and hygienic measures: Do not eat, drink, smoke or sniff while working.

Storing food in the working area is prohibited.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

A safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision.

Take note of assigned Workplace Exposure Limits.

Ensure that eyewash stations and safety showers are close to the workstation location.

Discard contaminated footwear.

Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Fluorinated rubber - FKM

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection:

Face protection



Tightly sealed goggles

· Body protection:

Acid resistant protective clothing

Body protection must be chosen depending on product properties, activity and possible exposure.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

- General Information
- · Appearance: Form:

Colour:

· Odour:

Fluid Colourless Mild

(Contd. on page 7)

GB

Printing date 19.07.2022

Revision: 19.07.2022

Trade name: SULPHURIC ACID 96%

| | (Contd. of page 6 |
|--|--|
| \cdot pH-value (10 g/l) at 20 °C: | <1 |
| Change in condition Melting point/freezing point: Initial boiling point and boiling ranges | -7 (97%) °C : 327 (97%) °C |
| · Flash point: | Not applicable. |
| · Auto-ignition temperature: | Product is not self-igniting. |
| · Explosive properties: | Product does not present an explosion hazard. |
| · Vapour pressure at 20 °C: | 0.485 hPa |
| · Density at 20 °C: | 1.4-1.9 g/cm ³ |
| Solubility in / Miscibility with water: | Fully miscible. |
| • Viscosity: Kinematic at 25 °C: | 21 mPas |
| • 9.2 Other information | NOTE: The physical data presented above are typical values and should not be construed as a specification. |

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

- 10.2 Chemical stability
- · Thermal decomposition / conditions to be avoided:

Risk of fire and explosion on contact with base(s), combustible substances, oxidants, reducing agents or water. Dissociates if heated above boiling point. At 450 degree C sulphuric acid is completely dissociated.

· 10.3 Possibility of hazardous reactions

Exothermic when mixed with water.

Reacts with cyanides and sulphides to form poisonous gases.

The substance is a strong oxidant and reacts violently with combustible and reducing materials. The substance is a strong acid, it reacts violently with bases and is corrosive to most common metals forming a flammable/explosive gas (hydrogen).

Reacts violently with water and organic materials with evolution of heat.

Upon heating, irritating or toxic fumes (or gases) (sulphur oxides) are formed.

Risk of explosion in contact with: combustable substances; potassium; potassium hydroxide; bases; sodium; sodium hydroxide; organic substances; water; hydrogen peroxide acetic aldehyde; acetoncyanhydrine; alkaline oxides (rarely); alkylnitrates; ammonia iron(III)sufate; dodecahydrate (rarely); benzaldehyde-p-bromide phenyl hydrazone peroxide; benzyl alcohol (heat); bromates; carbides; chlorates -> chlorine dioxide; chlorites; chlorosulfonic acid; cyclopentadiene; diethylamine; 1,5-dinitronaphthalene; alkaline earth hydroxides (selten); hydrofluoric acid; fulminates; potassium tert-butoxide; methyl ethyl ketone peroxide; sodium tetrahydroborate; sodium oxide; nitramide; nitrates (rare); nitromethane; N-nitromethylamine; nitrotoluene; permanganic acid (rare); picrates; 2-propen-1-ol; 2-propyn-1-ol;mercury nitride; nitric acid + organic substances; trinitrotoluene

The substance will polymerize in contact with: 1-chloro-2,3-epoxypropane

The substance can react dangerously with: aluminium; organic substances; reducing agents nitric acid; acetonitrile; acetylides (rarely); acrolein/occlusion; acrylonitrile; aminoethanol; conc. ammonia; aniline; bromine pentafluoride; calcium hydride; p-chloronitrobenzene + sulphur trioxide (heat); chlorine trifluoride; hydrogen chloride + conc. sulphuric acid; 2-cyano-2-propanol; cyclopentanoneoxime (heat); 1,4-diazidobenzene; diethyl ether; p-dimethylaminobenzaldehyde; alkaline earth oxides; acetic acid; acetic anhydride/ occlusion; ethylene cyanohydrin; ethylenediamine; lithium silicide; highly flammable solvents; metal acetylides/- carbides; metals, dil. acid; 4-methylpyridine; sodium carbonate; sodium thiocyanate; p-nitroacetanilide (heat); p-nitroaniline (heat); p-nitroaniline sulphate (heat); p-nitroanilinesulphonic acid (heat);

GB

⁽Contd. on page 8)

Printing date 19.07.2022

Revision: 19.07.2022

(Contd. of page 7)

Trade name: SULPHURIC ACID 96%

m-nitrobenzenesulphonic acid; phosphorus red and white; phosphorus trioxide; propene oxide; mercury; tetramethylbenzene; 1,2,4,5-tetrazine; water + conc. acid; sugar

- \cdot 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials:

Substances specifically listed in section 10.3 as incompatible.

Water (except under controlled conditions), cyanides, sulphides, potassium chlorate, potassium perchlorate, bases, organic materials, potassium permanganate, halogens, acetylides, oxides and hydrides, metals (forms hydrogen gas), strong oxidising and reducing agents.

• 10.6 Hazardous decomposition products: Sulphur oxides (SOx)

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.
- · LD/LC50 values relevant for classification:

7664-93-9 Sulphuric acid

Oral LD50 >2000 mg/kg (rat)

- Primary irritant effect:
- · Skin corrosion/irritation
- Causes severe skin burns and eye damage.
- Serious eye damage/irritation Causes serious eye damage.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · Subacute to chronic toxicity:

Lungs may be affected by repeated or prolonged exposure to an aerosol of this substance.

Risk of tooth erosion upon repeated or prolonged exposure to an aerosol of this substance.

· Additional toxicological information:

Inhalation of an aerosol of this substance may cause lung oedema. The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential.

ROUTES OF EXPOSURE: The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

INHALATION RISK: Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly on spraying.

- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- · STOT-single exposure Based on available data, the classification criteria are not met.
- · STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity:
- 7664-93-9 Sulphuric acid
- EC50 >100 mg/kg (daphnia)
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential Product is not expected to bioaccumulate.
- 12.4 Mobility in soil No further relevant information available.

(Contd. on page 9)

Printing date 19.07.2022

Revision: 19.07.2022

Trade name: SULPHURIC ACID 96%

 \cdot Additional ecological information:

· General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach sewage water or drainage ditch undiluted or unneutralised.

· 12.5 Results of PBT and vPvB assessment

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

· 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Recommended Hierarchy of Controls:

- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Contact waste processors for recycling information.

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

· Uncleaned packaging:

· Recommendation:

Container remains hazardous when empty. Continue to observe all precuations.

Containers, even those that are "empty," may contain residues that can develop hazardous gases and vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Disposal must be made according to official regulations.

• Recommended cleansing agents: Water, if necessary together with cleansing agents.

| SECTION 14: Transport information | | |
|--|--------------------------------|-------|
| · 14.1 UN-Number · ADR, IMDG, IATA | 1830 | |
| · 14.2 UN proper shipping name | | |
| · ADR | 1830 SULPHURIC ACID | |
| · IMDG, IATA | SULPHURIC ACID | |
| · 14.3 Transport hazard class(es) | | |
| · ADR, IMDG, IATA | | |
| a a construction of the second s | | |
| · Class | 8 Corrosive substances. | |
| · Label | 8 | |
| · 14.4 Packing group | | |
| · ADR, IMDĞ, IATA | II | |
| · 14.5 Environmental hazards: | | |
| · Marine pollutant: | No | |
| · 14.6 Special precautions for user | Warning: Corrosive substances. | |
| · Hazard identification number (Kemler code): | 80 | |
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GB

(Contd. of page 8)

Printing date 19.07.2022

Revision: 19.07.2022

Trade name: SULPHURIC ACID 96%

| | (Contd. of pag |
|--|--------------------------------|
| · EMS Number: | F-A,S-B |
| • 14.7 Transport in bulk according to A Marpol and the IBC Code | Annex II of Not applicable. |
| · Transport/Additional information: | |
| · ADR | |
| Limited quantities (LQ) | 1 L |
| · Tunnel restriction code | E |
| · IMDG | |
| · Limited quantities (LQ) | 11tr |
| · UN "Model Regulation": | UN1830, SULPHURIC ACID, 8, II |

SECTION 15: Regulatory information

• 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

• 15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H314 Causes severe skin burns and eye damage.

- · Department issuing SDS: Product safety department.
- · Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- DNEL: Derived No-Effect Level (UK REACH)
- PNEC: Predicted No-Effect Concentration (UK REACH)
- LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Skin Corr. 1A: Skin corrosion/irritation Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Annex: Exposure scenario

- · Sector of Use SU5 Manufacture of textiles, leather, fur
- · Product category
- PC1 Adhesives, sealants
- PC2 Adsorbents
- PC3 Air care products
- PC4 Anti-Freeze and de-icing products
- PC7 Base metals and alloys
- PC8 Biocidal products
- PC9a Coatings and paints, thinners, paint removers
- PC9b Fillers, putties, plasters, modelling clay
- PC9c Finger paints
- PC11 Explosives

(Contd. on page 11)

Printing date 19.07.2022

Revision: 19.07.2022

Trade name: SULPHURIC ACID 96%

| | (Contd. of page 10) |
|--|---------------------|
| PC12 Fertilisers | |
| PC13 Fuels | |
| PC14 Metal surface treatment products | |
| PC15 Non-metal-surface treatment products | |
| PC16 Heat transfer fluids | |
| PC17 Hydraulic fluids | |
| PC18 Ink and toners | |
| PC19 Intermediate | |
| PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents | |
| PC21 Laboratory chemicals | |
| PC23 Leather treatment products | |
| PC24 Lubricants, greases, release products | |
| PC25 Metal working fluids | |
| PC26 Paper and board treatment products | |
| PC27 Plant protection products | |
| PC28 Perfumes, fragrances | |
| PC29 Pharmaceuticals | |
| PC30 Photo-chemicals | |
| PC31 Polishes and wax blends | |
| PC32 Polymer preparations and compounds | |
| PC33 Semiconductors | |
| PC34 Textile dyes, and impregnating products | |
| PC35 Washing and cleaning products (including solvent based products) | |
| PC36 Water softeners | |
| PC37 Water treatment chemicals | |
| | |
| PC38 Welding and soldering products, flux products PC39 Cosmetics, personal care products | |
| | |
| PC40 Extraction agents PC42: Electrolytes for batteries | |
| PC42: Electrolytes for batteries | |
| PC 0: Other: Electrolytes | |
| PC 0: Other: Electrical batteries and accumulators | |
| PC 0: Other: Maintenance of sulphuric acid containing batteries | |
| Article category | |
| AC1 Vehicles | |
| AC3 Electrical batteries and accumulators | |
| Description of the activities / processes covered in the Exposure Scenario | |
| See section 1 of the annex to the Safety Data Sheet. | |
| Conditions of use | |
| Duration and frequency 5 workdays/week. | |
| Physical parameters Physical parameters | |
| Physical state Fluid | |
| Concentration of the substance in the mixture The substance is main component. | |
| Used amount per time or activity According to directions for use. | _ |
| Other operational conditions Observe the general safety regulations when handling chemic | |
| Other operational conditions affecting environmental exposure High temperatures prome | ote emission. |
| Other operational conditions affecting worker exposure | |
| Avoid contact with eyes. | |
| Avoid contact with the skin. | |
| Avoid direct contact with the chemical /product / preparation by organisational measures. | |
| Do not breathe gas/fume/vapour/aerosol. | |
| Keep away from food, drink and animal feedingstuffs. | |
| Handle and open container with care. | |
| Ensure adequate ventilation, especially in closed rooms. | |
| Observe first aid measures (for treatment of exposure due to accidents). | |
| Observe section 6 of the Safety Data Sheet (Accidental release measures). | |
| | |
| | |
| Keep locked up. Other operational conditions affecting consumer exposure Keep out of the reach of child | ren. |
| Other operational conditions affecting consumer exposure Keep out of the reach of child | |
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Printing date 19.07.2022

Revision: 19.07.2022

Trade name: SULPHURIC ACID 96%

| | (Contd. of page 11) |
|---|---------------------|
| · Risk management measures | (|
| · Worker protection | |
| · Organisational protective measures | |
| Consider section 4 of the Safety Data Sheet (First aid measures). | |
| Deploy only trained chemical workers. | |
| Employment restrictions concerning juveniles must be observed. | TA 4 |
| Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust | |
| measures are insufficient to keep the solvent vapour concentration below the workplace | limit, wear an |
| adequate respiratory protective device. Handling procedures must be well documented. | |
| Make sure that the workplace is well-lit and organised. | |
| Provide emergency eye wash station and mark its location clearly. | |
| Provide Internal Plant Instruction. | |
| Provide washing facilities in the workplace. | |
| Read first aid measures for treatment prior to contact with the product. | |
| Allow access to authorised personnel only. | |
| Ensure that activities are executed by specialists or authorised personnel only. | |
| Keep away from food, beverages and animal feed. | |
| · Technical protective measures | |
| Ensure that suitable extractors are available on processing machines | |
| Do not refill residue into storage receptacles. | |
| Ensure good ventilation/exhaustion at the workplace. | |
| Open and handle receptacle with care. Prevent formation of aerosols. | |
| Restrict the quantity stored at the work place. | |
| Take note of emission threshold. | |
| Use only in well ventilated areas. | |
| Washing facilities / Water for cleaning eyes and skin should be available. | |
| · Personal protective measures | |
| Do not inhale gases / fumes / aerosols. | |
| Avoid contact with the skin. | |
| Avoid contact with the eyes. | |
| Tightly sealed goggles | |
| Protective gloves | |
| The glove material has to be impermeable and resistant to the product/ the substance/ the prepar | |
| Selection of the glove material on consideration of the penetration times, rates of diffusion and | the degradation |
| Acid resistant protective clothing | |
| Be sure to clean skin thoroughly after work and before breaks. Do not eat or drink while working. | |
| Ensure that washing facilities are available at the work place. | |
| Immediately remove all soiled and contaminated clothing | |
| · Measures for consumer protection | |
| Ensure adequate labelling. | |
| Keep locked up and out of the reach of children. | |
| · Environmental protection measures | |
| ·Water | |
| Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisat | ion is required. |
| • Soil Prevent contamination of soil. | |
| Disposal measures | |
| Ensure that waste is collected and contained. | |
| Disposal must be made according to official regulations. | votor or soil |
| Liquid product must not be disposed of with household waste. Do not allow to reach sewers / w Must not be disposed of with household waste. Do not allow to reach sewage system. | atel 01 8011. |
| Used, degraded or contaminated product may be classified as hazardous waste. Anyone classif | fving hazardous |
| waste and determining its fate must be qualified in accordance with state and international legis | |
| • Disposal procedures | |
| Must not be disposed together with household garbage. Do not allow product to reach sewage s | ystem. |
| Containers, even those that are "empty," may contain residues that can develop hazardous | |
| heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty container | ·s. |
| | (Contd. on page 13) |

- GB

Printing date 19.07.2022

Revision: 19.07.2022

Trade name: SULPHURIC ACID 96%

 \cdot Waste type Partially emptied and uncleaned packaging

- · Exposure estimation
- **Consumer** Not relevant for this Exposure Scenario.
- \cdot Guidance for downstream users

Prior to storing, handling or disposing of this product a safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision.

(Contd. of page 12)

GB