

Material Safety Data Sheet EU Regulation: 1907/2006, Article 31

| | tion of the substance/mixture and of the company/undertaking | |
|---|--|--|
| 1.1 Product Identification | | |
| Product Name | Citric Acid Food Grade | |
| Biological Definition | Citric Acid Anhydrous | |
| INCI Name | Citric Acid | |
| CAS-No | 77-92-9 EC No. 201-069-1 EINECS No. 201-069-1 | |
| REACH registration number | 01-2119457026-42-0006 | |
| 1.2 Relevant identified uses of the substance or mixture and uses advised against | Application of the substance / the preparation: Intermediate Formulation Detergents and cleaning products Agricultural applications Personal care products Paper industry Construction products Polymers and plastics Oil industry Textile industry Paints and coatings Photography products Laboratory reagents Water treatment Treatment of metal surfaces Medical devices | |
| 1.3 | | |
| Details of the supplier of the s | Akoma International (UK) LTD | |
| Company Address | Unit 9A Sawley Park Nottingham Road Derby DE21 6AS Tel: +44 (0) 1332 613 967 United Kingdom | |
| Email | | |
| 1.3 Details of the supplier of the s | afety data sheet | |

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| SECTION 2: Hazards Ide | entification | |
|---|--|--|
| 2.1 | | |
| Classification of the substance of | | |
| | Eye Irrit. 2 H319 Causes serious eye irritation. | |
| 2.2 Label Elements | Label in accordance with Regulation (EC) No 1272/2008. | |
| | pelled according to the CLP regulation. | |
| Hazard pictograms: | GHS07 | |
| Signal Word | Warning | |
| Hazards Statement | H319 Causes serious eye irritation. | |
| Precautionary Statements | P264 Wash thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention. | |
| 2.3 Other Hazards | | |
| Results of PBT and vPvB assessment PBT | No PBT. | |
| vPvB | No vPvB. | |
| | | |
| SECTION 3: Composition | n of Ingredients | |
| 3.1 Substances | CAS Number. Description. 77-92-9 Citric Acid Anhydrous Identification number(s) EC number: 201-069-1 | |

| SECTION 4: First Aid Measures | |
|-----------------------------------|--|
| 4.1 | |
| Description of First Aid Measures | |
| After inhalation | Move patient to fresh air, if symptoms persist consult a doctor. |
| After skin contact | Immediately rinse with water. |
| | If skin irritation continues, consult a doctor. |
| After eye contact | Rinse opened eye for several minutes under running water. Then consult a doctor. |
| After swallowing | Rinse out mouth and then drink plenty of water. |
| | Do not induce vomiting; call for medical help immediately. |
| 4.2 | |
| Most important symptoms & | Serious eye damage/eye irritation: Eye Irrit. 2 |
| effects (Acute & Delayed) | |
| 4.3 | |
| | No further relevant information available. |

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| Indication of any immediate | |
|------------------------------|--|
| medical attention or special | |
| treatment required | |

| SECTION 5: Fire Fighting Measures | |
|---|--|
| 5.1 Extinguishing material | Suitable extinguishing agents: |
| 5.2 Special hazards arising from the | CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Carbon dioxide (CO2) |
| substance Or mixture 5.3 | Carbon monoxide (CO) |
| Advice for fire-fighters | Protective equipment: Wear fully protective suit. Wear self-contained respiratory protective device. |

| 6.1 | | 339 | 0== (v===0 0 |
|----------------------------------|---|-----|--------------|
| Personal precautions, protective | Use personal protective equipment. | | TAA |
| equipment and emergency | Ensure adequate ventilation. | | 11111 |
| procedures | | | |
| 6.2 | | /// | |
| Environmental precautions | Do not allow to enter sewers/ surface or ground water. | | |
| 6.3 | | 10 | |
| Methods & material for | Send for recovery or disposal in suitable receptacles. | | |
| containment and cleaning up | Retrieve the product by mechanical means. | | |
| | Dispose contaminated material as waste according to item 13. | | |
| 6.4 | | | |
| References 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. | | 7 |

| SECTION 7: Handling & Storage | |
|---------------------------------|--|
| 7.1 | |
| Precautions for safe-handling | Use only in well ventilated areas. |
| | Provide suction extractors if dust is formed. Do not inhale dust / smoke / mist. |
| | Avoid contact with the eyes and skin. |
| | Information about fire - and explosion protection: No special measures required. |
| 7.2 | |
| Conditions for safe storage, | Requirements to be met by storerooms and receptacles: |
| including any incompatibilities | Store in a cool and dry place. Provide ventilation for receptacles. Store only in the original receptacle. |
| | Information about storage in one common storage facility: Store away from oxidising agents. |
| | Further information about storage conditions: Keep container tightly sealed. |
| 7.3 | |
| Specific end use(s) | No further relevant information available. |

SECTION 8: Exposure Controls & Personal Protection

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| PNEC C | Ingredients with limit values that require monitoring at the workplace: Not required. 0.44 mg/L (Water (Freshwater)) 0.044 mg/L (Water (Marine Water)) >1000 mg/L (Sewage Treatment Plant (STP)) |
|--------------------------|--|
| PNEC C | 0.044 mg/L (Water (Marine Water)) |
| > | 9/ 1 1 |
| | >1000 mg/L (Sewage Treatment Plant (STP)) |
| 3 | |
| | 3.46 mg/kg sedim. dw (Sediment (Marine Water)) |
| 3 | 34.6 mg/kg sedim. dw (Sediment (Freshwater)) |
| 3 | 33.1 mg/kg soil dw (Soil) |
| Additional information T | The lists valid during the making were used as basis. |
| .2 | |
| xposure Controls | |
| | General protective and hygienic measures: Do not inhale dust / smoke / mist. Avoid contact with the eyes and skin. Wash hands before breaks and at the end of work. Do not eat, drink, smoke or sniff while working. |
| Hand Protection | Protective gloves. |
| | Material of gloves: Rubber, PVC or neoprene gloves recommended. |
| | Suitable respiratory protective device recommended. |
| Eye protection | Tightly sealed goggles (EN 166). |
| Body protection P | Protective work clothing. |

| SECTION 9: Physical & C | hemical Properties |
|---------------------------------------|---|
| 9.1 Physical & Chemical Properties | |
| Appearance | Powder, Crystalline. |
| Colour | White. |
| Odour | Odourless. |
| Odour threshold | Not determined |
| pH-value (100 g/l) | 1.7 |
| Melting point/Melting range | 153 °C |
| Boiling point/Boiling range | Decomposes before boiling |
| Flash point | Not applicable. |
| Flammability (solid, gaseous) | Product is not flammable. |
| Ignition temperature | Not applicable. |
| Decomposition temperature | Not determined. |
| Danger of explosion | Product does not present an explosion hazard. |
| Explosion limits | Lower Not determined. |
| | Upper Not determined. |
| Oxidising properties | None |
| Vapour pressure at 25 °C | 2.21*10-6 Pa |
| Density | Not determined. |
| Relative density at 20 °C | 1.665 |
| Vapour density | Not applicable. |
| Evaporation rate | Not applicable. |
| Solubility in / Miscibility with | 590 g/l |
| Water at 20 °C | |
| Alcohols | Partly soluble. |
| Partition coefficient (n- | -0.2 to -1.8 log Pow |
| octanol/water) | |

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| Viscosity | Dynamic: Not applicable. Kinematic: Not applicable. |
|-------------------|--|
| 9.2 | This is a spinor of the spinor |
| Other Information | No further relevant information available. |

| SECTION 10: Stability & Reactivity | |
|---|--|
| 10.1 Reactivity | No data available. |
| 10.2 Chemical stability | Thermal decomposition / conditions to be avoided: Keep away from heat and direct sunlight. |
| 10.3 Possibility of hazardous reactions | Reacts with alkali (lyes). |
| 10.4 Conditions to avoid | Strong oxidizing agents. |
| 10.5 Incompatible materials | Protect from moisture. Avoid strong oxidants, strong alkalis and strong acids. Sodium nitrite, potassium nitrite |
| 10.6 Hazardous decomposition products | Carbon dioxide Carbon monoxide |

| SECTION 11: Toxicological Information | |
|---------------------------------------|---|
| 11.1 Toxicological effects | |
| Acute Toxicity | Based on available data, the classification criteria are not met. LD/LC50 values: Oral LD50 5400 mg/Kg bw (Mouse) (OECD 401) Dermal LD50 >2000 mg/Kg bw (Rat) (OECD 402) |
| Skin irritation | Based on available data, the classification criteria are not met. |
| Eye damage or irritation | Causes serious eye irritation. |
| Respiratory or skin sensitivity | Based on available data, the classification criteria are not met. |
| 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

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| SECTION 13: Disposal Information | |
|---|--|
| 13.1 Waste treatment methods | Resonmand disming until harankadyra to reach sewage system. |
| Dio- accomolanve polenna | Uncleaned packaging: Readily biodegradable Recommendation: Disposal must be made according to official regulations. Does not accumulate in organisms. Packaging that may not be cleansed must be disposed of in the same manner as the product. |
| 12.4 Mobility in soil | pKa: 3.13, 4.76 and 6.4 at 25 °C |
| 12.5 Results of PBT & VPVB assessment | PBT: No PBT. vPvB: No vPvB. |
| 12.6 Other adverse effects | No further relevant information available. |

| SECTION 14: Transport Information | | |
|--|---|--|
| 14.1 Transport Information | | |
| UN Number ADR, ADN, IMDG, IATA | Not applicable. | |
| UN proper shipping name ADR, ADN, IMDG, IATA | Not Applicable. | |
| 1Transport hazard class(es) ADR, ADN, IMDG, IATA Class | Not Applicable. | |
| Packing group ADR, IMDG, IATA | Not Applicable. | |
| Environmental hazards Marine pollutant | Not Applicable. | |
| Special precautions for user | Not Applicable. | |
| Transport in bulk according to | Not Applicable. | |
| Annex II of MARPOL 73/78 and the IBC | | |
| Code | | |
| | | |
| SECTION 15: Regulatory | Information | |
| 15.1 Safety, health and environme | ental regulations/legislation specific for the substance or mixture | |
| This safety data sheet complies with | n the requirements of Regulation (EC) No. 1907/2006. | |
| 15.2 Chemical Safety Assessment | | |
| A Chemical Safety Assessment has | been carried out. | |

SECTION 16: Other Information

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| 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. | |
|--|--|
| Abbreviations & Acronyms: | |
| MSDS | Material Safety Data Sheet. |
| IATA | International Air Transport Association |
| CAS | Chemical Abstract Service. |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| IMDG | International Maritime code for Dangerous Goods. |
| ADR | Accord European sur le transport des merchandises Dangereuses par Route (European Agreement concerning the international Carriage of Dangerous goods by Road). |
| ADN | International Carriage of Dangerous Goods by Inland Waterways. |
| PNEC | Predicted No-Effect Concentration (REACH) |
| LC50 | Lethal concentration, 50 percent |
| LD50 | Lethal dose, 50 percent |
| Eye Irrit. 2 | Serious eye damage/eye irritation – Category 2 |

Q.C. REQUIREMENTS.

In-line with general product specification. Always satisfy suitability for specific application.

The data provided in this material safety data sheet is meant to represent typical data/analysis for this product and is correct to the best of our knowledge. The data was obtained from current and reliable sources, but is supplied without warranty, expressed or implied, regarding its correctness or accuracy. It is the user's responsibility to determine safe conditions for the use of this product, and to assume liability for loss, injury, damage or expense arising from improper use of this product. The information provided does not constitute a contract to supply to any specification, or for any given application, and buyers should seek to verify their requirements and product use.

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