**Nicotinamide Solutions**

**Section 1. Identification of Product and Company**

**1.1 Identification of substance or preparation:** Nicotinamide Solutions

 **Synonyms:** Niacinamide, Nicotinamide, Nicotinic acid amide, Pyridine-3-carboxylic acid amide, Vitamin B3, Vitamin PP

**1.2 Product Application:** This MSDS provides Health and Safety information from any Methanol (acidified) component of the following vials or kits:

|  |  |
| --- | --- |
| **Altus Science****Part Number** | **Product Name/Description/Range** |
| **(K) = Kit**A-2250(K), A-2022(K), A-2031(K), A-3508(K), A-3511,A-3595 | Total Organic Carbon (TOC) Calibration Standard,From 0.500mg/L C up to 50mg/L C from Nicotinamide |

**1.3 Company/Undertaking Identification:** Altus Science Limited

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**Section 2. Hazards Identification**

**2.1 Hazard Summary:**

**Physical hazards:** Not classified for physical hazards

**Health hazards:** Not classified for health hazards

**Environmental hazards:** Not classified for hazards to the environment

**2.2 Label elements:**

 **Contains:** Nicotinamide, Phosphoric acid, Water

 **Supplemental label information:** Not applicable

**2.3 Other hazards:** Not assigned

**Section 3. Composition/Information on Ingredients**

**3.1 Mixtures:**

**Chemical description:** Nicotinamide solution

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Compound Name** | **CAS-No.** | **EC No.** | **Concentration** | **CLP Classification - Reg No.** |
| Water | 7732-18-5 | 231-791-2 | ≥99.9865% | Not applicable  |
| Nicotinamide  | 98-92-0 | 202-713-4 | ≤ 20 | Skin irrit.2;H315, Eye irrit.2;H319, STOT SE3;H335 |
| Phoshoric acid | 7664-38-2 | 231-663-2 | 0.0045% | Skin Corr.1B;H314 |

**Section 4. First Aid Measures**

**4.1 Description of first aid measures:**

**Skin Contact:** wash with plenty of water

 **Eye Contact:** Flush eyes with water as a precaution. If irritation persists, seek medical advice

**Ingestion:** Rinse mouth with running water

**Inhalation:** Remove to fresh air

**4.2 Most important symptoms and effects, both acute and delayed:** Not available

**4.3 Indication of any immediate medical attention and special treatment needed:** Not available

**Section 5. Fire Fighting Measures**

**5.1 Extinguishing media:**

**Suitable Extinguishing Media:** This product does not represent a fire hazard since it contains a significant proportion of water

**Unsuitable Extinguishing Media:** None

**5.2 Special hazards arising from the substance or mixture:** None known

**5.3 Advice for fire-fighters:**

 **Special protective equipment for fire-fighters:** No special protective equipment required

**Special fire-fighting procedures:** Not applicable

**5.4 Further information:** No data available

**Section 6. Accidental Release Measures**

**6.1 Personal precautions, protective equipment and emergency procedures:**

 **For non-emergency personnel:** Not required

 **For emergency responders:** Use personal protection recommended in Section 8 of the MSDS

**6.2 Environmental precautions:** No special environmental precautions required

**6.3 Methods and materials for containment and clean up:**

 - Spills of the product could present a significant slip hazard depending on quantity and surface type

- Water contaminated with this product may be sent to a sanitary sewer treatment facility, or a permitted waste treatment facility, in accordance with any local agreements

 - Contain and recover by physical means

 - Clean small spills by diluting with sufficient quantities of water

**6.4 Reference to other sections:** Please refer to Section 8 for further information

**Section 7. Handling and Storage**

**7.1 Precautions for safe handling:** No special requirements

**7.2 Conditions for safe storage, including any incompatibilities:** No special storage required

**7.3 Specific end use(s):** For professional and industrial users only

**Section 8. Exposure Controls/Personal Protection**

**8.1 Control parameters**

 **Occupational exposure limits - UK EH40 Workplace Exposure Limits (WEL's):**

|  |  |  |
| --- | --- | --- |
| **Components** | **Type** | **Value** |
| Phosphoric acid (7664-38-2) | STEL | 2mg/m3 |
|  | TWA | 1mg/m3 |

**8.2 Exposure controls:**

 **Biological Limit Values:** No biological exposure limits noted for the ingredient(s)

 **Recommended monitoring procedures:** Not available

 **Environmental exposure controls:** Not applicable

 **Appropriate engineering controls:** None recommended

**Personal protective equipment**:

**Eye/face protection:** Safety goggles

**Skin protection:** No special protective equipment required

**Body protection:** None required

**Respiratory protection:** Not required

**Section 9. Physical and Chemical Properties**

**9.1 Physical and Chemical Properties:**

|  |  |
| --- | --- |
| **Characteristic** | **Description** |
| **Appearance** | ***Physical State*** | Liquid |
| ***Colour*** | Colourless |
| **Odour** | None |
| **Odour Threshold** | Not available |
| **pH (Concentrated product)** | 3 |
| **Melting point/freezing point** | 0°C |
| **Initial boiling point and boiling range** | 100°C |
| **Flash point** | >100°C Pensky Martens (CC) |
| **Evaporation rate** | 1 (Water=1) |
| **Flammability (solid, gas)** | Not available |
| **Flammable Limit - lower** | Not available |
| **Flammable Limit - upper** | Not available |
| **Vapour pressure** | 18.7mm Hg at 21°C |
| **Vapour density** | 1 |
| **Relative density** | 1 |
| **Water solubility** | Completely soluble |
| **Partition coefficient (n-Octanol/water)** | Not available |
| **Auto-ignition temperature** | Not available |
| **Decomposition temperature** | Not available |
| **Viscosity** | Not available |
| **Explosive properties** | Not applicable |
| **Oxidizing properties** | Not applicable |

**9.2 Other safety information:** No relevant additional information available

**Section 10. Stability and Reactivity**

**10.1 Reactivity:** Not available

**10.2 Chemical Stability:** Material is stable under normal conditions

**10.3 Possibility of hazardous reactions:** Not applicable

**10.4 Conditions to avoid:** No special requirement

**10.5 Incompatible materials:** None known

**10.6 Hazardous decomposition products:** None known

**Section 11. Toxicological Information**

**11.1 Information on toxicological effects:**

|  |  |  |
| --- | --- | --- |
| **Product/Component** | **LD50 Oral** | **LD50 Dermal** |
| Nicotinamide Solutions (Mixture) | N/A | Rabbit:>5000mg/kg (Calculated data) |
| Phosphoric acid (7664-38-2) | Rat:>1530mg/kg | Rabbit:>2740mg/kg |
| Nicotinamide (98-92-0) | Rat:>3500mg/kg | Rabbit:>2000mg/kg |

 **Acute toxicity:** Not classified

 **Skin corrosion/irritation:** Not classified

 **Respiratory or skin sensitisation:** Not classified

 **Germ cell mutagenicity:** Not classified

 **Carcinogenicity:** Not classified

 **Reproductive toxicity:** Not classified

 **Information on likely routes of exposure:**

**Ingestion:** None known

**Inhalation:** None known

**Skin contact:** Prolonged or repeated contact may cause transient irritation

**Eye contact:** Prolonged or repeated contact may cause transient irritation

 **Signs and symptoms of Exposure:** Not available

 **Mixture versus substance information:** None known

 **Additional information:** Not available

**Section 12. Ecological Information**

**12.1 Toxicity:** No toxicity data noted for the ingredient(s)

**12.2 Persistence and degradability:** No data available

**12.3 Bio accumulative potential:** Not available

**12.4 Mobility in soil:** Not available

**12.5 Results of PBT and vPvB assessment:** Not available

**12.6 Other adverse effects:** Not available

**12.7 Summary:** The product is not classified as dangerous for the environment. The evaluation of the environmental hazards is based on the concentration limits set out in directive 1999/45/EC

**Section 13. Disposal Considerations**

**13.1 Waste treatment methods:**

 **Product - According to Controlled Waste Regulations:**

European Waste Code (EWC) recommendation: 16 03 06

 16 Wastes not otherwise specified in the list

 16 03 Off-specification batches and unused products

 16 03 04 Inorganic wastes

 Depending on the origin and state of waster, other EWC numbers may be applicable too

 **Contaminated packaging - According to Controlled Waste Regulations:**

 European Waste Code (EWC) recommendation: 15 01 02

 15 Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified

 15 01 Packaging (including separately collected municipal packaging waste)

15 01 02 Plastic packaging

15 01 06 Glass packaging

Depending on the origin and state of the waste, other EWC numbers may be applicable too

**Section 14. Transport Information**

**14.1 ADR:** Not regulated as dangerous goods

**14.2 RID:** Not regulated as dangerous goods

**14.3 ADN:** Not regulated as dangerous goods

**14.4 IATA:** Not regulated as dangerous goods

**14.5 IMDG:** Not regulated as dangerous goods

**14.6 Special precautions for user:** No data available

**Section 15. Regulatory Information**

**15.1 Safety, health and environment regulations/legislation specific for the substance or mixture:** No data available

**15.2 Chemical safety assessment:** No data available

**15.3** **Other regulations:** This product does not need to be labelled in accordance with EC directives or respective national laws.

**Section 16. Other Information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on present state of knowledge and is applicable to the product with regard to appropriate safety precautions. Altus Science Ltd shall not be held liable for any damage resulting from handling or from contact with the above product. Please refer to Terms and Conditions for further information of sale.

**Abbreviations**

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

RID - International Rule for Transport of Dangerous Substances by Railway

ADN - International Carriage of Dangerous Goods by Inland Navigation

IATA - International Air transport Association

IMDG - International Maritime Dangerous Goods Code

WEL - Workplace Exposure Limit

TWA - Time weighted Average

STEL - Short-term Exposure Limit

vPvB - Very persistent, very Bio accumulative

H314 – Causes severe skin burns and eye damage

H315 – Causes skin irritation

H319 – Causes serious eye irritation

H335 – May cause respiratory irritation