



MATERIAL SAFETY DATA SHEET
(Directive 91/155/EEC)

Ref: MSDS-002
Date: 23/09/2005
Issue: 4
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METASTANNIC ACID (ACID TIN OXIDE)

1 PRODUCT AND COMPANY INFORMATION

- 1.1. Substance identification: METASTANNIC ACID (ACID TIN OXIDE)
- 1.2. Company identification: Keeling & Walker Limited,
Whieldon Road,
Stoke-on-Trent,
ST4 4JA, ENGLAND.
- 1.3. Emergency contact number: + 44 (0) 1782 744 136

2 COMPOSITION / INFORMATION ON INGREDIENTS

- 2.1. Hydrated tin oxide, chemical formula approximates to H_2SnO_3
Contains up to 2.5% nitric acid (HNO_3)
- 2.2. Synonyms: acid tin oxide, beta stannic acid, tin hydroxide oxide,
- 2.3. Chemical Abstract Number: CAS 13472-47-4
European Inventory Number: EINECS 236-745-5

3 HAZARDS IDENTIFICATION

- 3.1. Nitric acid is classified as Corrosive in the Approved Supply List of the Chemicals (Hazard Information and Packaging) Regulations 1993.
- 3.2. A preparation with a nitric acid content in the range 1 to 5% is classified as an Irritant under these Regulations.
- 3.3. Hazard symbol: Xi: IRRITANT (St. Andrews Cross on orange background)

4 FIRST AID MEASURES

- 4.1. Inhalation: Remove from exposure to fresh air
- 4.2. Ingestion: Drink copious amounts of water, induce vomiting
- 4.3. Eye contact: Flush eyes with copious amounts of water
- 4.4. Skin contact: Remove clothing and wash affected area with soap and water. Change work clothes daily

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5 FIRE-FIGHTING MEASURES

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|------|---|--|
| 5.1. | Suitable extinguishing media: | Any |
| 5.2. | Unsuitable extinguishing media: | None |
| 5.3. | Exposure hazards: | None known |
| 5.4. | Protective equipment for fire-fighters: | Use self-contained breathing apparatus |

6 ACCIDENTAL RELEASE MEASURES

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|------|----------------------------|--|
| 6.1. | Personal precautions: | Do not breath dust. Avoid contact with skin, eyes and clothing. Wear dust mask, gloves and goggles |
| 6.2. | Environmental precautions: | Dispose of material in accordance with Federal, State and Local regulations. Burial in an approved landfill is recommended |
| 6.3. | Neutralising chemicals: | Not required |
| 6.4. | Method of clean-up: | Vacuum cleaner or wet-sweeping. Do not generate dust. Place in sealed plastic bags for disposal |

7 HANDLING AND STORAGE

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|------|------------------------------|--|
| 7.1. | Precautions during handling: | Use local exhaust ventilation (or wear dust mask). Wear gloves and goggles |
| 7.2. | Storage: | Store in a well ventilated, dry area |
| 7.3. | Suitable packaging: | Polyethylene-lined sacks or casks |

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

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|------|----------------------|--|
| 8.1. | Inhalation: | Occupational Exposure Limits:
Tin oxide: 2mg m ⁻³ (as Sn) 8 hour time weighted average (TWA)
4mg m ⁻³ (as Sn) short term exposure limit (STEL) |
| 8.2. | Protective measures: | Use local exhaust ventilation (or wear dust mask) to maintain exposure below the Occupational Exposure Limits given above. Wear gloves, goggles and overalls |

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9 PHYSICAL AND CHEMICAL PROPERTIES

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|------|---------------------------|------------------------------------|
| 9.1. | Appearance: | White powder |
| 9.2. | Odour: | No odour |
| 9.3. | Specific gravity: | Approximately 5.0 to 5.4 |
| 9.4. | Solubility in water: | Practically insoluble |
| 9.5. | pH (50% slurry in water): | 0.5 to 2 |
| 9.6. | Flammability: | Non-flammable |
| 9.7. | Melting point: | Approximately 1630°C |
| 9.8. | Boiling point: | Sublimates between 1800 and 1900°C |
| 9.9. | Vapour pressure: | No information |

10 STABILITY AND REACTIVITY

- 10.1 Conditions to avoid: None known
- 10.2 Materials to avoid: Substances which may lead to the formation of volatile hydrides or halides of organic tin compounds
- 10.3 Hazardous decomposition products: None known

11 TOXICOLOGICAL INFORMATION

- 11.1 Inhalation: Chronic exposure to tin oxide dust may cause Stannosis (pneumoconiosis)
- 11.2 Ingestion: No information found
- 11.3 Skin contact: May cause dermatitis or similar skin irritation during prolonged exposure. This may increase in hot or humid weather
- 11.4 Eye contact: May be irritating to the eyes

12 ECOLOGICAL INFORMATION

- 12.1 Environmental effect: Practically insoluble in water, stable and inert under normal environmental conditions (note effect of nitric acid content on pH)

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13 DISPOSAL CONSIDERATIONS

- 13.1. Disposal of product: Approved waste landfill site, with reference to Federal, State and Local regulations
- 13.2. Disposal of packaging: Landfill or incineration

14 TRANSPORT INFORMATION

- 14.1 Special precautions: None

15 REGULATORY INFORMATION

- 15.1. Risk Phrases: R36 - Irritating to eyes
R38 - Irritating to skin
- 15.2. Safety Phrases: S22 - Do not breath dust
- 15.3. Classification Symbol: Xi - IRRITANT

16 OTHER INFORMATION

- 16.1. HMSO Publication: EH40 Occupational Exposure Limits

The information given is based on our present state of knowledge and does not represent a guarantee of any product characteristics