



MATERIAL SAFETY DATA SHEET

REF: 91/155/EEC AND AMENDMENTS WITH RESPECTIVE NATIONAL IMPLEMENTATIONS

POTASSIUM CITRATE

1.0 SUBSTANCE IDENTIFICATION

- 1.1 Commercial product name: Potassium Citrate
 - 1.2 Chemical characterisation: Tripotassium salt of 2-hydroxy 1,2,3-propanetricarboxylic acid, monohydrate
 - 1.3 Formula: $K_3C_6H_5O_7 \cdot H_2O$
 - 1.4 Molecular weight: 324.4
 - 1.5 CAS No: 866-84-2
 - 1.6 EINECS No.: 212-755-5
 - 1.7 **FOR USE IN FOOD (E 332)**
 - 1.8 Manufactured by: Archer Daniels Midland Company, 4666 Faries Parkway, Decatur, Illinois 62526, U.S.A.
 - 1.9 Supplied in the U.K. by: ADM Australia Pty Ltd, PO Box 281, Suite 1003, Level 10, 1 Newland Street, Bondi Junction, NSW 2022
 - 1.10 Australian Emergency Telephone Number: 0417 285396 (24 hours)
 - 1.11 U.S. Emergency Telephone Number (24 hours): +1 217 424 5200
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2.0 COMPOSITION

- 2.1 Totally 100% potassium citrate
- 2.2 Volatile matter 6% maximum after drying for 4 hours at 180°C
- 2.3 Potassium ion content typically 36%

3.0 HAZARDS IDENTIFICATION

- 3.1 **Potassium citrate is not classified as a Dangerous Substance within the definitions of EC Directive 67/584**
- 3.2 Contact with eyes (e.g. dust particles) may cause irritation.

4.0 FIRST AID MEASURES

- 4.1 Flush affected parts with plenty of water

5.0 FIRE FIGHTING MEASURES

- 5.1 All types of fire extinguisher are suitable
- 5.2 Firefighters wear protective clothing and NIOSH approved respirator

6.0 ACCIDENTAL RELEASE MEASURES

- 6.1 After spillage/leakage : Recover by vacuum, or broom and shovel. Flush area with water to remove final traces.

7.0 HANDLING AND STORAGE

7.1 Store in tightly closed containers, away from extreme heat and humidity. Maximum 25°C and 50% relative humidity.

7.2 Industrial Hygiene: Good ventilation required if process creates the formation of dust.

8.0 EXPOSURE CONTROLS / PERSONAL PROTECTION

- 8.1 Personal precautions: Avoid breathing dust.
Avoid contact with eyes.
- 8.2 Respiratory protection: Approved nuisance dust mask
- 8.3 Hand protection: Standard work gloves
- 8.4 Eye protection: Goggles or safety glasses

9.0 PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Appearance: Crystals
- 9.2 Colour: Colourless
- 9.3 Odour: Odourless
- 9.4 Molecular weight: 324.4
- 9.5 Change in physical state: Loss of water above 180°C, with decomposition
- 9.6 Specific gravity Bulk density: 1.97 920-1150 kg/m³ (typical range)
- 9.8 Vapour pressure: N/A - solid
- 9.9 Viscosity: N/A - solid
- 9.10 Solubility - in water (25°C) 64% w/w
- in ethanol (25°C) Insoluble
- 9.11 pH (5% solution) (25°C) 7 - 9
- 9.12 Flash point N/A
- 9.13 Explosive properties N/A
- 9.14 Flammability: Requires external heat to burn
- 9.12 Thermal decomposition: Above 230°C may evolve carbon monoxide
and carbon dioxide

10.0 STABILITY AND REACTIVITY

- 10.1 Shelf life : Potassium citrate is chemically stable if stored under cool, dry conditions; 25°C maximum and 50% relative humidity. It deliquesces in moist air. Physical properties may change on storage: re-test recommended periodically based on actual storage conditions.

- 10.4 Reactivity: Potassium citrate is a neutral salt with low activity.

11.0 TOXICOLOGICAL INFORMATION

- 11.1 LD₅₀ (dog): Intravenous 176 mg/kg

12.0 ECOLOGICAL INFORMATION

- 12.1 COD 425 ± 25mg O₂/g
- 12.2 DIN 38412 Part 25 (OECD 302B) Biodegradability 98% within 2* to 24 hours
- Ref.P.Creach: C.R.Acad.Sci. Paris 240 2551 (1955)

13.0 DISPOSAL CONSIDERATIONS

13.1 Potassium citrate is suitable for landfill or disposal to sewer **depending upon local regulations.**

14.0 TRANSPORT INFORMATION

14.1 No special considerations

15.0 REGULATORY INFORMATION

15.1 Potassium citrate is an EU permitted Food Additive (E 332). Conditions of use: Quantum Satis. The US Food and Drug Administration classifies potassium citrate as a GRAS (Generally Recognised As Safe) food ingredient.

15.2 According to the Joint Expert Committee on Food Additives of WHO/FAO potassium Citrate may be used without limitation according to Good Manufacturing Practices.

16.0 ADDITIONAL INFORMATION

16.1 See Product Data Sheet.