Technical Data Sheet - Sodium Acetate

1	Chemical Name	Sodium Acetate Anhydrous
2	CAS No	127-09-3
3	Synonym (s)	Anhydrous sodium acetate
4	Chemical Formula	(CH3COONa)
5	Chemical Structure	
		CH ₃ ONa
6	Molecular Weight	82.0343gm/mol
7	Description	The sodium salt of acetic acid, a colorless, deliquescent, and hygroscopic salt that exists as a white, coarse solid with a slight acetic acid odor
8	Solubility	Soluble in water
9	Storage and Handling	Store it in a dry, cool, and well-ventilated area, keeping containers tightly closed and away from incompatible materials like oxidizing agents and acids.
10	Uses	General Applications:
		 pH Buffering: Sodium acetate acts as a buffer, helping to maintain a stable pH in various solutions and systems. Food Preservation: It's used as a shelf-life extending

- agent and pH-control agent in food production, preventing bacterial growth.
- Heating Pads and Hand Warmers:
 Sodium acetate is a key component in the reusable heating pads and hand warmers, where it's used in a supersaturated solution that releases heat when crystallized.
- Laboratory Reagent:
 It's a common reagent in various laboratory processes, including DNA isolation, protein purification, and other experiments where pH control is crucial.

Industrial Applications:

- Textile Industry: Used in dyeing processes, as a mordant to improve dye fixation, and to neutralize sulfuric acid waste streams.
- Concrete: Used as a sealant to reduce water damage to concrete structures.
- Surface Treatment: Can be used for cleaning metal surfaces and removing rust or scale.

Medical Applications:

- Electrolyte Replenisher:
 Administered intravenously to correct sodium levels in patients with hyponatremia (low sodium levels).
- Metabolic Acidosis: Used in

 ,	
	some cases to help correct metabolic acidosis.
	Other Applications:
	 Cell Culture Media: Used in the preparation of cell culture media. Plant Nutrition: Used as a source of nutrients for plants. Biotechnology: Used as a carbon source for culturing bacteria and increasing yields of DNA isolation by ethanol precipitation. Chemical Synthesis: Used as a base in several organic reactions.