Classification
Electrolyte / Alkalinizing Agent

Prehospital Indications
Cardiac Arrest – Non-Traumatic: suspected hyperkalemia, patients with renal failure
Cardiac Dysrhythmia: suspected hyperkalemia causing bradycardia
Overdose / Poisoning / Ingestion: suspected tricyclic overdose with ECG changes
Traumatic Injury: suspected hyperkalemia in the setting of crush injury or potential for development of crush syndrome (administer prior to release of crushed tissue)

Other Common Indications
None

Adult Dose
50mEq (50mL) slow IV/IO push
For crush injury repeat x1 for persistent ECG abnormalities

Pediatric Dose
1mEq/kg (1mEq/mL) slow IV push, dose per MCG 1309
For crush injury, repeat x1 for persistent ECG abnormalities

Mechanism of Action
Increases blood and urinary pH by releasing a bicarbonate ion, which in turn neutralizes hydrogen ion concentration.

Pharmacokinetics
Onset is < 15 min (observed < 5 for tricyclic overdose); clinical effect in < 15 min; duration is 1-2 hr

Contraindications
Evidence of pulmonary edema
Hypernatremia or hypocalcemia

Interactions
Precipitates to form calcium carbonate (chalk) when used with calcium chloride or calcium gluconate.
Administer calcium chloride and sodium bicarbonate separately.
Can reduce potency of epinephrine, flush line after administration.

Adverse Effects
Extracellular alkalosis
Tissue damage if IV infiltrates
Pulmonary edema

Prehospital Considerations
- Multiple doses may be needed in TCA overdose when indicated