



MATERIAL SAFETY DATA SHEET

Section I – Product Information			
Product Name or Identity:	Todd Hewitt Broth		
Manufacturer's Name:	Acumedia Manufacturers, Inc.	Emergency Phone No.	517/372-9200
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Section II – Hazardous Ingredients / Identity Information			
Hazardous Components: (Specific Chemical Identity: Common Names)	OSHA PEL (Permissible Exposure Limits)	ACGIH TLV (Threshold Limit Value)	Toxicity Data LD ₅₀
Sodium Chloride, NaCl, Common salt	N/A	N/A	ORL-RAT, 3000 mg/kg
Sodium Phosphate	N/A	N/A	ORL-RAT, 17000 mg/kg
Sodium Carbonate	N/A	N/A	ORL-RAT, 4090 mg/kg

Section III – Physical Characteristics	
Boiling Point: 1413°C (NaCl)	Specific Gravity (H ₂ O = 1): 2.16 (NaCl), 2.53 (Sodium Carbonate) 2.04 (Sodium Phosphate)
Vapor Pressure (mm Hg.): 1.0 @ 865°C (NaCl)	Melting Point: 804°C (NaCl), 240°C (Sodium Phosphate) 851°C (Sodium Carbonate)
Vapor Density (AIR = 1): 4.9 g/l (Sodium Phosphate)	Evaporation Rate (Butyl Acetate = 1): N/A
Solubility in Water: 35.7 g/100g at 0°C (NaCl), Soluble (Sodium Phosphate), 45 g/100 mL water (Sodium Carbonate)	
Appearance and Odor: Colorless crystals or white powder. Characteristic odor. (NaCl) White granular powder (Sodium Phosphate), White powder, odorless (Sodium Carbonate).	

Section IV – Fire and Explosion Hazard Data	
Flash Point (<i>Method Used</i>): Not applicable	Flammable Limits: LEL (Lower Explosive Limit) - N/A UEL (Upper Explosive Limit) - N/A
Extinguishing Media: Suitable extinguishing agents. CO ₂ , extinguishing powder, or water spray.	
Special Fire Fighting Procedures: Fight larger fires with water or alcohol resistant foam. Firefighters should wear protective equipment and self-contained breathing apparatus. As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.	
Unusual Fire and Explosion Hazards: During heating or in case of fire, poisonous gases are produced. This material, like most materials in powder form, is capable of creating a dust explosion.	

Section V – Reactivity Data			
Stability:	Unstable		Conditions to Avoid: Sensitive to light and moisture. Hygroscopic.
	Stable	X	
Incompatibility (<i>Materials to Avoid</i>): Reacts with acids, alkalis, oxidizing agents, Lithium, Fluorine, and Bromine trifluoride.			
Hazardous Decomposition or Byproducts: When heated to above 801°C it emits toxic fumes of chloride and sodium oxide. Carbon dioxide and Carbon monoxide may form when heated to decomposition. Sodium Carbonate reacts violently with acids to form carbon dioxide.			
Hazardous Polymerization:	May Occur		Conditions to Avoid: Heat, flame, ignition source, dusting, and incompatible materials.
	Will Not Occur	X	

Section VI – Health Hazard Data			
Route(s) of Entry:	Inhalation? Yes	Skin? Yes	Ingestion? Yes
Health Hazards: (Acute and Chronic)	Irritant. Irritating to eyes, respiratory system, and skin. May be irritating to mucous membranes and upper respiratory tract.		
Carcinogenicity:	NTP? No (National Toxicology Program)	IARC Monographs? No (International Agency for Research in Cancer)	OSHA Regulated? No
Signs and Symptoms of Exposure: Irritating effect to eye. Phosphates are slowly and incompletely absorbed when ingested. Symptoms may include vomiting, diarrhea, blood chemistry effects, cardiac effects and central nervous system. Sodium Phosphate is a corrosive material and can cause burns.			
Medical Conditions Generally Aggravated by Exposure: The toxicity of phosphates is their ability to sequester calcium. Chronic exposure of Sodium Phosphate may sequester calcium and cause calcium phosphate deposits in the kidneys. Persons with impaired kidney function may be more susceptible to the effects of the substance. Prolonged or repeated skin exposure may cause sensitization.			
Emergency / First Aid Procedures:	Ingestion: If swallowed, seek medical attention. Do not induce vomiting.		
	Inhalation: Supply fresh air or oxygen. Seek medical attention.		
	Eye Contact: Rinse opened eye for at least 15 minutes under running water. Seek medical attention.		
	Skin Contact: Wash with plenty of soap and water for 15 minutes. Seek medical attention.		

Section VII – Precautions for Safe Handling and Use
Accidental Release Measures: Remove all sources of ignition. Ventilate spill area. Wear suitable protective clothing. Wipe up with damp sponge or mop. Avoid inhalation, contact with eyes, skin, and clothing. Remove contaminated clothing.
Waste Disposal Method: Dispose in accordance with all applicable federal, state, and local environmental regulations.
Handling and Storing: Keep container tightly closed. Protect from moisture and physical damage. Store away from oxidizing agents. Containers of this material may be hazardous when empty since they retain product residues.
Other Precautions: Prevent formation of dust. Avoid prolonged or repeated exposure. Avoid contact with eyes, skin, and clothing. Ensure good ventilation / exhaustion at the workplace.

Section VIII – Control Measures		
Respiratory Protection (Specify Type): None required where adequate ventilation conditions exist. If airborne concentration is high, use an appropriate respirator or dust mask.		
Ventilation:	Local Exhaust: 50 – 100 CFM	Special: N/A
	Mechanical (General): N/A	Other: N/A
Protective Gloves: Proper disposable gloves		Eye Protection: Chemical resistant safety goggles
Other Protective Clothing or Equipment: Uniform, lab coat, or disposable lab wear.		
Work / Hygienic Practices: Follow the usual precautionary measures for handling chemicals / powder. Keep away from food and beverages. Immediately remove all soiled and contaminated clothing. Avoid contact with eyes, skin, and clothing.		

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