MATERIAL SAFETY DATA SHEET

Science Kit
&Boreal Laboratories
777 East Park Drive
Tonawanda, NY 14150-6731
(716) 874-6000

Boreal Laboratories Ltd.
399 Vansickle Road
St. Catharines, Ontario L2S 3T4

MSDS No. ZZ 115
Effective Date July 1, 1986

SECTION I NAME

Product	ZINC SULFATE, HEPTAHYDRATE
Chemical Synonyms	Zinc Sulfate, Heptahydrate
Formula	$ZnSO_4 \cdot 7H_2O$
Unit(s) Size	100, 500 grams, 2.5 Kg.
C.A.S. No.	7446-20-0

24 HOUR EMERGENCY ASSISTANCE

CHEMTREC
800-424-9300
Day 716-226-6177
Night 716-334-4222

NFPA
HAZARD RATING

Health	1
Fire	0
Reactivity	1

LEAST 0 | SLIGHT 1 | MODERATE 2 | HIGH 3 | EXTREME 4

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES

Principal Hazardous Component(s)	%	TLV Units
Zinc Sulfate, Heptahydrate	100%	None established
WARNING! HARMFUL IF SWALLOWED		
AVOID CONTACT WITH EYES, SKIN, OR CLOTHING.		
AVOID BREATHING DUST. USE WITH ADEQUATE VENTILATION.		

SECTION III PHYSICAL DATA

Melting Point (°F)	212°F (100°C)	Specific Gravity ($H_2O = 1$)	1.957 (25/4°C)
Boiling Point (°F)	dec. above 500°C	Percent Volatile by Volume (%)	Non-volatile (NA)
Vapor Pressure (mm Hg)	Negligible as solid	Evaporation Rate (_____ = 1)	Non-volatile (NA)
Vapor Density (Air = 1)	9.95		
Solubility in Water	166 grams per 100 ml H_2O at 20°C.		
Appearance and Odor	White (colorless) crystals, granules, powder; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable (NA)	Flammable Limits in Air % by Volume	Lower	Upper
		NA	---------	---------
Extinguisher Media	Use any media suitable for extinguishing supporting fire.			

SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH-approved self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous decomposition products.

D.O.T. OTHER REGULATED MATERIAL-E

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA

Threshold Limited Value
None established. (ACGIH 1983-84).
Toxicity: Oral (Rat) LD_{50}: 2200 mg/Kg.

Effects of Overexposure
Prompt vomiting (usually within five to ten minutes) after swallowing. Pain in mouth, esophagus and stomach. Diarrhea with "colicky" abdominal pain.
EYES: May irritate eyes.
SKIN: Zinc sulfate in an open skin lesion or cut can cause an ulcer.

Emergency and First Aid Procedures
INGESTION: If swallowed, if conscious, give one or two glasses of water to drink. Call physician immediately.
SKIN: Flush with water, then wash with soap and water.
EYES: Immediately flush thoroughly with water for 15 minutes. Get immediate medical attention.

SECTION VI REACTIVITY DATA

Stability			Conditions to Avoid
	Unstable		
	Stable	x	Deliquescent. Excessive heat and moisture.

Incompatibility (Materials to avoid) None known.

Hazardous Decomposition Products Thermal decomposition or burning may produce oxides of sulfur (SO_x).

Hazardous Polymerization		Conditions to Avoid
May Occur	Will Not Occur	
	x	Not applicable.

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled
Small amounts: Dissolve in water and flush to sewer with copious amounts of water. Wash spill area with soap and water.

Waste Disposal Method
Large amounts: Dispose of in an approved chemical landfill or contract with a licensed waste disposal service.
Discharge, treatment, or disposal may be subject to federal, state, or local laws.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type) None should be needed in normal laboratory handling. If dusty conditions prevail, wear NIOSH-approved dust mask.

Ventilation				
	Local Exhaust	None needed	Special	No
	Mechanical (General)	Recommended	Other	No

Protective Gloves Rubber **Eye Protection** Chemical safety glasses.

Other Protective Equipment Goggles, smock, apron, eye wash station, ventilation hood, proper gloves.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing
Store in a cool, dry place.
Wash thoroughly after handling.
Keep container tightly closed when not in use.

Other Precautions Read label on container before using. Do not wear contact lenses when working with chemicals.
Efflorescent in dry air.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Rev. No.	Date	Approved	
No.1	1/12/87	Alexander Piccirilli	Chemical Safety AP Coordinator

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