

MATERIAL SAFETY DATA SHEET

Science Kir
& Boreal
Laboratories

MSDS No. SS 1085
Effective Date July 1, 1986

Science Kir & Boreal Laboratories Ltd.
177 East 10th Ave.
Toronto, Ontario M5T 1C6

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	SULFUR: ROLL, SUBLIMED PHD. PRECIPITATE	CHEMTREC 800-424-9300	Health	1
Chemical Synonyms	Sulfur Flower, Sulfur Flour, Roll	Day 716-296-6177 Night 716-334-4222	Fire	1
Formula	S		Reactivity	0
Unit(s) Size	100, 500 grams; 2.5 Kg.			
C.A.S. No.	7707-34-9			

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES

Principal Hazardous Component(s)	%	TLV Units
Sulfur: Roll-broken lumps;	100%	See Section V
Sublimed Powder (Flowers), Precipitated Powder (Flours)		
WARNING: BURNING SULFUR EMITS HIGHLY TOXIC FUMES-SULFUR DUST		
SUSPENDED IN AIR IGNITES EASILY-MAY CAUSE ALLERGIC REACTION.		

SECTION III PHYSICAL DATA

Melting Point (°F)	112.8-119.0°C (246°F)	Specific Gravity (H ₂ O=1)	20/4°C 1.92-2.07
Boiling Point (°F)	444.8°C (832°F)	Percent Volatile by Volume (%)	Negligible
Vapor Pressure (mm Hg)	@ 20°C < 0.0001	Evaporation Rate (=1)	Not applicable
Vapor Density (Air=1)	Not applicable		
Solubility in Water	Insoluble in water		
Appearance and Odor	Yellow powder or Roll's (broken lump); no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	405°F (C.C.)	Flammable Limits in Air % by Volume	Lower 35 Upper 1400
Extinguisher Media	Use water spray or fog.		

SPECIAL FIREFIGHTING PROCEDURES

In fire conditions wear self-contained breathing apparatus. Use water spray; avoid straight streams which will scatter molten sulfur and dust. Small fires may be extinguished with sand or additional sulfur.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Easily ignitable, combustible solid. Dust or vapor forms explosive mixtures with air. Ignition temperature, 450°F. Hazardous in contact with oxidizing materials, forming explosive fumes. Explosion Hazard: Moderately explosive dust, when exposed to flames. Dangerous when heated it emits highly toxic fumes of oxides of sulfur; can react with oxidizing materials.

D.O.T. OTHER REGULATED MATERIAL-C

SECTION V HEALTH HAZARD DATA

Threshold Limited Value

None established. The nuisance dust TLV should govern exposure to solid sulfur in the absence of other standards. ACGH (1979) is 10 mg/m³ (total dust) or 5mg/m³ (respirable dust).

Effects of Overexposure

Sulfur is essentially non-toxic either through ingestion, inhalation or skin contact. There are, however, some individuals who may be allergic and must not be permitted in the area of exposure. Sulfur is an eye irritant, but if prompt treatment is applied no lasting injury will result.

Emergency and First Aid Procedures

Good laboratory hygiene practices should be followed. Prolonged contact with the skin should be avoided and sulfur dust should be removed with thorough washing with mild soap and water. Soiled clothing should be laundered before reuse. CONTACT WITH EYES: Eyes should be irrigated with copious amounts of water or physiological saline for at least 15 minutes. Do NOT use boric acid. Remove any individual who show allergic reaction promptly from the exposure area where upon symptoms should disappear.

SECTION VI REACTIVITY DATA

Stability	Unstable	Stable	Conditions to Avoid
		X	Excessive temperature and heat.

Incompatibility (Materials to avoid) Reacts explosively with strong oxidizing agents such as nitrates and chlorates and will also react at moderate rates with alkalis.

Hazardous Decomposition Products

Burning sulfur produces toxic sulfur dioxide gas.

SECTION VII SPILL OR LEAK PROCEDURES

Provide ventilation in spill area (but do not stir up dust). Sweep up and place in a suitable container. Powdered sulfur should not be scattered nor allowed to accumulate on surfaces from spills or laboratory operations.

Waste Disposal Method

Dispose of in sanitary landfill after mixing 3 parts by weight of calcium carbonate to neutralize the slow generation of sulfuric acid.

SECTION VIII SPECIAL PROTECTION INFORMATION

None should be needed in normal laboratory handling, if dusty conditions prevail.

SECTION IX SPECIAL PRECAUTIONS

Store in a cool, dry, well-ventilated place away from fire, spark and oxidizing agents. All electric motors in sulfur working area should be of the explosive proof type.

Other Precautions

Read label on container before using. Wash thoroughly after handling. Wash contaminated cloths before re-use.

Rev. No. 1 Date 1/2/87 Approved [Signature] Chemical Safety Coordinator

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a