MATERIAL SAFETY DATA SHEET

ALDON CORPORATION
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MSDS No. SS 1085
Effective Date November 15, 1996

SECTION I NAME

24 HOUR EMERGENCY ASSISTANCE

CHEMTREC **800-424-9300**
Day 716-226-6177

Product	SULFUR: ROLL, SUBLIMED PWD. , PRECIPITATED
Chemical Synonyms	Sulfur Flower, Sulfur Flour, Roll
Formula	S
Unit Size	up to 2.5 Kg.
C.A.S. No.	7704-34-9

NFPA HAZARD RATING

	Health	Fire	Reactivity
HMIS *	1	1	0

LEAST	SLIGHT	MODERATE	HIGH	EXTREME
0	1	2	3	4

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Sulfur: Roll-Broken Lumps;	100%	See Section V.
Sublimed Powder (Flowers), Precipitated Powder (Flours)	100%	See Section V.

WARNING! FLAMMABLE SOLID! BURNING SULFUR EMITS HIGHLY TOXIC FUMES. SULFUR DUST SUSPENDED IN AIR IGNITES EASILY. MAY CAUSE ALLERGIC REACTION.

SECTION III PHYSICAL DATA

Melting Point (°F)	110°-119°C (230°-246°F)	Specific Gravity (H_2O = 1)	2.07 @ 21°C (70°F)
Boiling Point (°F)	444°C (831°F)	Percent Volatile by Volume (%)	Negligible.
Vapor Pressure (mm Hg)	0 @ 138°C (280°F)	Evaporation Rate (=1)	N/A.
Vapor Density (Air=1)	N/A		
Solubility in Water	Insoluble.		
Appearance & Odor	Yellow powder, crystals or rolls (broken lumps); Faint odor of rotten eggs.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

		Flammable Limits in Air % by Volume	Lower	Upper
Flash Point (Method Used)	207°C (405°F) (C.C.)		3.3	46.0
Extinguisher Media	Use water fog.			

SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a MIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Use water fog; avoid straight streams which will scatter molten sulfur and dust. Small fires may be extinguished with sand or additional sulfur. Fire can rekindle if not cooled below 154°C (310°F).

(1993 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.6, GUIDE PAGE NO. 32)

UNUSUAL FIRE AND EXPLOSION HAZARDS

Easily ignitible, combustible solid. Dust or vapor forms explosive mixtures with air. Hazardous in contact with oxidizing materials, forming explosive mixtures. Explosion Hazard: Moderate, in the form of dust, when exposed to flames. Dangerous when heated it emits highly toxic fumes of oxides of sulfur; can react with oxidizing materials.

Autoignition Temperature: 248°C (478°F).

D.O.T. **SULFUR, 4.1, UN 1350, PG III**

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

SECTION V HEALTH HAZARD DATA

SS 1085

Threshold Limited Value

None established. TLV: 10 mg/m^3 (total dust) or 5 mg/m^3 (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

Remove any individual who show allergic reaction promptly from the exposure area where upon symptoms should disappear. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get immediate medical attention. **SKIN:** Flush thoroughly with water, then wash with mild soap and water. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. **INGESTION:** If swallowed, if conscious, give two or more glasses of water to drink. Induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.

SECTION VI REACTIVITY DATA

Stability	**Unstable**		**Conditions to Avoid**	Heat, sparks, open flames and other heat sources.
	Stable	X		

Incompatibility (Materials to Avoid) Reacts violently with strong oxidizing agents. Corrosive to copper and copper alloys. Damp sulfur will corrode steel.

Hazardous Decomposition Products Sulfur dioxide.

Hazardous Polymerization		**Conditions to Avoid**
May Occur	**Will Not Occur**	Not applicable.
	X	

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled

Use non-sparking tools. Provide ventilation in spill area. Avoid creating dust. Sweep up and place in a suitable container for reclamation or disposal in an approved facility.

Waste Disposal Method Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only.

Dispose of in accordance with federal, state and local regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type) None should be needed in normal laboratory handling. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Ventilation				
Local Exhaust	Recommended.	**Special**	No.
Mechanical (General)	Recommended.	**Other**	No.

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

Other Protective Equipment Smock, apron, eye wash station, vent hood, fire extinguisher.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing

Keep container tightly closed when not in use.

Store in a cool, dry, well-ventilated area away from heat, sparks, flames and oxidizing agents. Avoid creating dust. All electric motors in sulfur working area should be of the explosive proof type. Wash thoroughly after handling.

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

Avoid contact with skin and eyes. Avoid breathing dust. Use with adequate ventilation. Use non-ferrous tools to reduce sparking. Remove and wash contaminated clothing before reuse.

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

Revision No. 8	Date 11/15/96	Approved Michael Raszeja	Chemical Safety Coordinator MR