

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB. No. 1218-0072



IDENTITY (As Used on Label and List)

FC07 Sonic A & B Flash Powder ("B")

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the spaces must be marked to indicate that.

Section I

Manufacturer's Name Theatre Effects	Emergency Telephone Number 301-491-1387
Address (Number, Street, City, State, and ZIP Code) 642 Frederick Street	Telephone Number for Information 301-791-7646
Hagerstown, Maryland 21740-6815	Date Prepared 11/6/00
	Signature of Preparer (optional)

Section II -- Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity: Common name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Aluminum Metal/Powder (Aluminum Metallic Powder • Pyro Powder)	None	8-hr TWA* 10 mg/m³		--

*Current ACGIH (1983) TLV; STEL is 20 mg/m³. Aluminum pyro powder has an 8-hr TWA of 5 mg/m³. No specific

OSHA PEL; "nuisance dust" may be applicable.

NOTE: Processing and finishing of aluminum metal can generate respirable particulate, i.e., grinding, buffing. (See also NFPA, No. 65)

Section III -- Physical/Chemical Characteristics

Boiling Point 2467°C	Specific Gravity (H ₂ O = 1) 2.7
Vapor Pressure (mm Hg.) 2080°C, mm Hg --- 100 1284°C, mm Hg --- 1	Melting Point 660°C
Vapor Density (AIR = 1) 4.8	Evaporation Rate (Butyl Acetate = 1) N/A
Solubility in Water Negligible (less than 0.1%)	
Appearance and Odor Silvery-white odorless metallic powder	

Section IV -- Fire and Explosion Hazard Data

Flash point (Method used) N/A	Flammable Limits Dust cloud explosion*	LEL >0.04 oz/ft³	UEL N/A
Extinguishing Media Special mixtures of dry chemical; clean, dry sand; mat. Do not use water, CCl₄ or helon!			
Special Fire Fighting Procedures Firefighters should wear self contained breathing apparatus and protective clothing. Move exposed containers from fire area if it can be done without risk. Keep exposed containers cool.			
Unusual Fire and Explosion Hazards When exposed to heat or ignition sources, powdered AL can be a severe fire and explosion hazard. Particle size, coating and dispersion in air determine reactivity. Ring small fires with dry extinguishing material using nonsparking shovels. Do not create dust clouds. Eliminate drafts. Self-extinguishment can result as a hard crust of oxide is formed. At high temperatures molten aluminum can be ignited and burn.			

(Reproduce locally)

*100% of dust goes through a 44 mm sieve; this dust cloud ignited by a 0.05 J spark.

OSHA 174, Sept. 1985

Section V -- REACTIVITY DATA

Stability	Unstable		Conditions to Avoid	Moisture, friction, sources of ignition
	Stable	X		
Incompatibility (<i>Materials to Avoid</i>) Strong acids, caustics, strong oxidizing agents, strong bases, combustible materials, water				
Hazardous Decomposition or Byproducts Aluminum oxide and nitride form on high temperature reaction with air.				
Hazardous Polymerization	May Occur		Conditions to Avoid	N/A
	Will Not Occur	X		

Section VI -- Health Hazard Data

Route(s) of Entry:	Inhalation?	None indicated	Skin?	None indicated	Ingestion?	None indicated
Health Hazards (<i>Acute and Chronic</i>) Aluminum powder can be irritating in the eyes and respiratory system. Chronic inhalation of massive levels of fine powder reported to cause pulmonary fibrosis and emphysema. It has been proposed that stamped foil powder is fibrogenic while granular powder is not.						
Carcinogenicity:	NTP?	No	ARC Monographs?	No	OSHA Regulated?	No
Signs and Symptoms of Exposure Dust may irritate nose and throat						
Medical Conditions Generally Aggravated by Exposure None identified						
Emergency and First Aid Procedures Eyes: Flush well with water to remove particulate. Obtain medical attention if irritation persists. Skin: For cuts, abrasive irritation or thermal burns, obtain medical attention. Inhalation: Remove to fresh air. Obtain medical attention for coughing and breathing difficulty. Ingestion: Obtain medical attention.						

Section VII -- Precautions for Safe Handling and Use

Steps to Be taken in Case Material is Released or Spilled	Shut off ignition sources; no flares, smoking, or flames in area. Do not touch spilled material. Do not put any water on leak or spills. Use clean shovel or conductive, nonsparking scoops and clean soft natural bristle brushes, and place in closed, pressure-vented, dry metal containers. Do not get water into container. Mix dry sand with scrap. Tightly seal.
Waste Disposal Method	Dispose in accordance with all applicable federal, state and local environmental regulations.
Precautions to be Taken in Handling and Storing	Store in sealed containers in a dry, low risk area away from sources of heat or ignition, oxidizing agents, combustibles, acids, alkalis, halogens, carbon disulfide and halogenated hydrocarbons. Protect containers from physical damage; exclude moisture and humid air. Use nonsparking tools and equipment. Meet electrical code requirements.
Other Precautions	No smoking

Section VIII -- Control Measures

Respiratory Protection (<i>Specify Type</i>)	None required w/adequate ventilation. If airborne concentration is high, dust/mist respirator recommended. If respirator capacity is exceeded, a self-contained breathing apparatus.	Special	None
Ventilation	Local Exhaust	X (and general exhaust) to meet TLV requirements	Other
	Mechanical (<i>General</i>)	X	None
Protective Gloves	Proper gloves recommended	Eye Protection	Safety glasses with sideshields recommended
Other Protective Clothing or Equipment	Use tight-weave, non-static generating, protective clothing (no metallic fasteners, cuffs or pockets) and nonsparking safety shoes when working with this powder.		
Work/Hygienic Practices	Good housekeeping needed to prevent fine or thin machining residues or dust accumulation. Avoid generation of airborne dust.		