

Material Safety Data Sheet

IDENTITY (As Used on Label and List) ESTES MODEL ROCKET ENGINE	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
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Section I

Manufacturer's Name ESTES INDUSTRIES	Emergency Telephone Number 1-719-372-6565
Address (Number, Street, City, State, and ZIP Code) 1295 H STREET PENROSE CO 81240	Telephone Number for Information 1-719-372-6565
	Date Prepared
	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)
POTASSIUM NITRATE			71.79%	
SULPHUR			13.45%	
CHARCOAL			13.81%	
DEXTRIN			0.95%	

NOTE: AVERAGE ENGINE INGREDIENTS

Section III — Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H ₂ O = 1)	N/A
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A
Solubility in Water			

Appearance and Odor

OUTER CASING KRAFT PAPER, INSIDE CHEMICAL BLACK - SULPHUR ODOR

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) AUTOIGNITION IS 540° F	Flammable Limits	LEL	UEL
Extinguishing Media WATER			
Special Fire Fighting Procedures SOAK SURROUNDING AREA WITH WATER TO PREVENT FIRE SPREAD. FOAM AND POWDER EXTINGUISHER			
INEFFECTIVE AS ENGINE PRODUCES OWN OXYGEN.			
Unusual Fire and Explosion Hazards MODEL ROCKET ENGINES MAY FLY LIKE ROCKET FOR SHORT DISTANCES WHEN IGNITED, BUT DO NOT EXPLODE.			

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	

Incompatibility (Materials to Avoid)

Hazardous Decomposition or Byproducts

SOME COMBUSTION PRODUCTS MAY BE CONSIDERED TOXIC.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? Skin? Ingestion?

Health Hazards (Acute and Chronic)

Carcinogenicity: NTP? IARC Monographs? OSHA Regulated?

Signs and Symptoms of Exposure

Medical Conditions
Generally Aggravated by Exposure

Emergency and First Aid Procedures

FOR MINOR BURNS USE FIRST AID OINTMENT. FOR SEVERE BURNS, CONSULT PHYSICIAN. IF PROPELLANT IS SWALLOWED, INDUCE VOMITING AND CONSULT A PHYSICIAN.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled

SOAK AREA WITH WATER, CLEAN-UP WITH WATER AND WET CLOTHS OR OTHER SUITABLE MATERIAL.

Waste Disposal Method

IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

Precautions to Be Taken in Handling and Storing

SOLID FLAMMABLE, STORE IN COOL DRY AREA, KEEP AWAY FROM HIGH TEMPERATURE AREAS.

Other Precautions

USE UNDER WELL VENTILATED CONDITIONS. ALWAYS FOLLOW HIA - NAR SAFETY CODES. DO NOT ALTER, DISMANTLE, OR UNWRAP MODEL ROCKET ENGINES OR THEIR INGREDIENTS IN ANY MANNER.

Section VIII — Control Measures

Respiratory Protection (Specify Type)

Ventilation YES	Local Exhaust	Special
	Mechanical (General)	Other

Protective Gloves Eye Protection
NOT REQUIRED **RECOMMENDED**

Other Protective Clothing or Equipment

Work/Hygienic Practices