



# Material Safety Data Sheet (MSDS-BP)

PRODUCT IDENTIFICATION	
Product Name	BLACK POWDER
Trade Names and Synonyms	N/A
Manufacturer/Distributor	GOEX, Inc. (Doyline, LA) & various international sources
Transportation Emergency	<b>800-255-3924 (24 hrs — CHEM • TEL)</b>

## PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES

The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.

### **WARNING**

**All explosives are dangerous** and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, **DO NOT USE IT** before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

HAZARDOUS COMPONENTS				
Material or Component	%	CAS No.	TLV	PEL
Potassium nitrate <sup>1</sup>	70-76	007757-79-1	NE	NE
Sodium nitrate <sup>1</sup>	70-74	007631-99-4	NE	NE
Charcoal	8-18	N/A	NE	NE
Sulfur	9-20	007704-34-9	NE	NE
Graphite <sup>2</sup>	Trace	007782-42-5	15 mppct (TWA)	2.5 mg/m <sup>3</sup>
N/A = Not assigned NE = Not established				

<sup>1</sup> Black Powder contains either potassium nitrate **or** sodium nitrate in the percentages indicated. Black powder **does not contain both**.

<sup>2</sup> Not contained in all grades of black powder.

PHYSICAL DATA	
Boiling Point	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Solubility in Water	Good
Specific Gravity	1.70 - 1.82 (mercury method) • 1.92 - 2.08 (pycnometer)
PH	6.0 - 8.0
Evaporation Rate	N/A
Appearance and Odor	Black granular powder. No odor detectable.

HAZARDOUS REACTIVITY	
Instability	Keep away from heat, sparks, and open flame. Avoid impact, friction, and static electricity.
Incompatibility	When dry, black powder is compatible with most metals; however, it is hygroscopic, and when wet, attracts all common metals except stainless steel.  Black powder must be tested for compatibility with any material not specified in the production/procurement package with which they may come in contact. Materials include other explosives, solvents, adhesives, metals, plastics, paints, cleaning compounds, floor and table coverings, packing materials, and other similar materials, situations, and equipment.
Hazardous decomposition	Detonation produces hazardous overpressures and fragments (if confined). Gases produced may be toxic if exposed in areas with inadequate ventilation.
Polymerization	Polymerization will not occur.

FIRE AND EXPLOSION DATA	
Flashpoint	Not applicable
Auto ignition temperature	Approx. 464°C (867°F)
Explosive temperature (5 sec)	Ignites @ approx. 427°C (801°F)
Extinguishing media	Water
Special fire fighting procedures	<b>ALL EXPLOSIVES: DO NOT FIGHT EXPLOSIVES FIRES.</b> Try to keep fire from reaching explosives. Isolate area. Guard against intruders.  Division 1.1 Explosives (heavily encased): Evacuate the area for 5000 feet (1 mile) if explosives are heavily encased.  Division 1.1 Explosives (not heavily encased): Evacuate the area for 2500 feet (½ mile) if explosives are not heavily encased.  Division 1.1 Explosives (all): Consult the <i>2000 Emergency Response Guidebook, Guide 112</i> for further details.
Unusual fire and explosion hazards	Black powder is a deflagrating explosive. It is very sensitive to flame and spark and can also be ignited by friction and impact. When ignited unconfined, it burns with explosive violence and will explode if ignited under even slight confinement.

<b>HEALTH HAZARDS</b>	
<b>General</b>	Black powder is a Division 1.1 Explosive, and detonation may cause severe physical injury, including death. All explosives are dangerous and must be handled carefully and used following approved safety procedures under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, and ordinances.
<b>Carcinogenicity</b>	None of the components of Black powder are listed as a carcinogen by NTP, IARC, or OSHA.

<b>FIRST AID</b>	
<b>Inhalation</b>	<i>Not a likely route of exposure.</i> If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably by mouth-to-mouth. If breathing is difficult, give oxygen. Seek prompt medical attention.
<b>Eye and skin contact</b>	<i>Not a likely route of exposure.</i> Flush eyes with water. Wash skin with soap and water.
<b>Ingestion</b>	<i>Not a likely route of exposure.</i> If ingested, induce vomiting immediately by giving two glasses of water and sticking finger down throat.
<b>Injury from detonation</b>	Seek prompt medical attention.

<b>SPILL OR LEAK PROCEDURES</b>	
<b>Spill/leak response</b>	Use appropriate personal protective equipment. Isolate area and remove sources of friction, impact, heat, low level electrical current, electrostatic or RF energy. Only competent, experienced persons should be involved in cleanup procedures.  Carefully pick up spills with non-sparking and non-static producing tools.
<b>Waste disposal</b>	Desensitize by diluting in water. Open train burning, by qualified personnel, may be used for disposal of small unconfined quantities. Dispose of in compliance with federal regulations under the authority of the <i>Resource Conservation and Recovery Act</i> (40 CFR Parts 260-271).

<b>SPECIAL PROTECTION INFORMATION</b>	
<b>Ventilation</b>	Use only with adequate ventilation.
<b>Respiratory</b>	None
<b>Eye</b>	None
<b>Gloves</b>	Impervious rubber gloves.
<b>Other</b>	Metal-free <i>and</i> non-static producing clothes

<b>SPECIAL PRECAUTIONS</b>	
<ul style="list-style-type: none"> <li>♦ Keep away from friction, impact, and heat. Do not consume food, drink, or tobacco in areas where they may become contaminated with these materials.</li> <li>♦ Contaminated equipment must be thoroughly water cleaned before attempting repairs.</li> <li>♦ Use only non-spark producing tools.</li> <li>♦ No smoking.</li> </ul>	

### STORAGE CONDITIONS

Store in a cool, dry place in accordance with the requirements of *Subpart K, ATF: Explosives Law and Regulations* (27 CFR 55.201-55.219).

### SHIPPING INFORMATION

<b>Proper shipping name</b>	Black powder	
<b>Hazard class</b>	1.1D	
<b>UN Number</b>	UN0027	
<b>DOT Label &amp; Placard</b>	DOT Label	EXPLOSIVE 1.1D
	DOT Placard	EXPLOSIVES 1.1
<b>Alternate shipping information</b>	Limited quantities of black powder may be transported as "Black powder for small arms", NA0027, class 4.1 pursuant to U.S. Department of Transportation authorization EX-8712212.	

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