



MATERIAL SAFETY DATA SHEET

SMALL ARMS PRIMERS

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SECTION #1 - PRODUCT IDENTIFICATION:

SMALL ARMS PRIMERS - PRODUCT FAMILY	
Small Pistol:	#100 and GM100M
Large Pistol:	#150 and GM150M
Large Pistol Magnum:	#155 and GM155M
Small Rifle:	#200 and GM200M
Small Rifle:	#205
Small Rifle Match:	#205M and GM205M
Large Rifle:	#210
Large Rifle Match:	#210M and GM210M
Large Rifle Magnum:	#215, 215D and GM215M
Shotshell:	#209A

SECTION #2 - CHEMICAL COMPOUNDS:

CHEMICAL COMPOUNDS			
COMPONENT	CAS NUMBER	TWA UNLESS OTHERWISE NOTED	
		OSHA PEL	ACGIH TLV
Primer - *Lead Styphnate (As Lead)	12403-82-6	.05 mg/m ³	.05 mg/m ³
*Barium Nitrate (As Barium)	7440-39-3	.5 mg/m ³	.5 mg/m ³
*Antimony Sulfide (As Antimony)	7440-36-0	.5 mg/m ³	.5 mg/m ³
*Aluminum	7429-90-5	15 mg/m ³ (5 mg/m ³ as respirable dust)	10 mg/m ³
Nitrocellulose	9004-70-0	Not Established	Not Established
*Nitroglycerine	55-63-0	.2 mg/m ³ STEL	.46 mg/m ³ (Skin)
Tetracene	109-27-3	Not Established	Not Established
Primer Cup/Battery Cup/Anvil - Brass (As Zinc and Copper)			
*Copper	7440-50-8	1 mg/m ³ Fume: .1 mg/m ³	1 mg/m ³ Fume: .2 mg/m ³
*Zinc (As Zinc Oxide)	7440-66-6 1314-13-2	10 mg/m ³ (5 mg/m ³ as respirable dust) Fume: 5 mg/m ³	10 mg/m ³ Fume: .2 mg/m ³
Primer Cup / Battery Cup/Anvil - Steel (As Iron) Brass Plated (As Zinc & Copper (See Above)	1309-37-1	10 mg/m ³ (As iron oxide fume)	5 mg/m ³ (As iron oxide dust and fume)
Primer Cup/Battery Cup/Anvil - *Nickel Plated Brass (As Nickel)	7440-02-0	1 mg/m ³	1 mg/m ³

* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR 372.

DEFINITIONS OF ACRONYMS

- OSHA PEL: Federal Occupational Safety and Health Administration's Permissible Exposure Limit. Some states and jurisdictions have limits other than those listed. Contact your local authorities for Permissible Exposure Limits in your jurisdiction.
- ACGIH TLV: American Conference of Governmental Industrial Hygienists' Threshold Limit Values.
- TWA: Time Weighted Average.
- STEL: Short Term Exposure Limit, the 15 minute exposure which should not be exceeded at any time during a workday.
- CEILING: The concentration which is not to be exceeded at any time during a workday.
- CAS: Chemical Abstracts Service number

SECTION #3 - PHYSICAL DATA

- Boiling Point: Not Applicable
Melting Point: Not Applicable
Vapor Pressure: Not Applicable
Density: 2.00 - 4.75 grams/cc (dry weight)
Solubility (Water): 40% (Barium Nitrate Only)
Evaporation Rate: Not Applicable
Percent Volatiles: Not Applicable
Vapor Density (Air= 1): Not Applicable

Appearance: Primers - Small nickel-plated brass, brass plated steel, or brass cup, with priming mix and anvil inside.

- Odor: None
Odor Threshold: None

SECTION #4 - FIRE FIGHTING & EXPLOSION DATA:

- Flash Point (F): Not Applicable
- Auto Ignition Temperature (F): Primers can ignite when heated over 250 degrees (may ignite independent of air).
- Upper Explosive Limits (Percent): Not Applicable
- Lower Explosive Limits (Percent): Not Applicable

Fire & Explosion Hazards:

Primers:

Primers may explode if subjected to mishandling. Explosions may be caused by friction and by percussion, such as hammering, pounding, dropping, or bullet impact. Heating by fire, static electricity, sparks, hot tobacco ashes, or other uses may also cause primers to explode.

If primers are loose or in bulk, having contact one with another, one primer exploding can, and usually will, cause a violent simultaneous explosion of all primers so situated.

Primers may “dust.” Small particles of priming compound may separate from the primers in the form of dust, especially when they are subjected to shaking or jolting. Accumulation of this dust in loading machines and loading areas is extremely hazardous.

Extinguishing Media: Water

Special Fire Fighting Instructions:

Primers:

If primers are stored or suspected of being stored in an involved structure, interior fire fighting tactics should not be employed. Exterior fire fighting using large hose streams should be accomplished using unmanned nozzles or from behind substantial barricades or heavy equipment.

If 24 cases (120,000 primers) or less of primers are being transported or suspected of being transported in an involved vehicle, the area, for 300' in all directions, should be cordoned off and evacuated. If larger quantities are involved or suspected of being involved, increase cordoned-off area accordingly. Hose stream deployment within the cordoned-off area should be unmanned. Fire fighting efforts should be directed at protecting any exposures.

In all cases, full fire fighter personal protection gear, including face shield and SCBA should be utilized.

SECTION #5A - EXPOSURE & EFFECTS – INHALATION

ROUTE OF EXPOSURE & EFFECTS – INHALATION

Acute: Inhalation of gases and particulates produced while firing ammunition may result in mild throat, eye, upper respiratory and lung irritation. The irritant effects may lead to lung symptoms such as bronchitis. An over exposure to gases or particulates, as a result of lead in the particulates, may also cause: anemia; nervous system symptoms which may include irritability, headache, restlessness, fatigue, muscle weakness, muscle tremor, convulsions, loss of memory, visual and hearing disturbances, loss of coordination; gastrointestinal effects such as vomiting, colic, diarrhea or constipation; circulatory symptoms such as a drop in

blood pressure; reproductive effects including fertility problems, birth defects, miscarriages and possible kidney damage.

Chronic: Prolonged repeated over exposure to fired cartridge gases and particulates, as a result of lead in the particulates, may result in elevated blood lead levels and elevated zinc protoporphyrin levels. Symptoms of chronic overexposure to lead may include: anemia; lead lines on the gums; nervous system symptoms which may include irritability, headache, restlessness, fatigue, muscle weakness (i.e. wrist drop), muscle tremor, convulsions, loss of memory, visual and hearing disturbances, loss of coordination; gastrointestinal effects such as weight loss, vomiting, colic, diarrhea, constipation; circulatory symptoms such as a drop in blood pressure; reproductive effects including fertility problems, birth defects, miscarriages and possible kidney damage.

If acute or chronic symptoms should appear, contact a physician. Blood lead and zinc protoporphyrin levels are recommended and should be monitored as per OSHA 1910.1025.

First Aid: Remove person to fresh air. Seek medical attention.

SECTION #5B - EXPOSURE & EFFECTS - SKIN

ROUTES OF EXPOSURE & EFFECTS - SKIN

Acute: Elemental and inorganic lead compounds are not absorbed through the skin.

Chronic: Elemental and inorganic lead compounds are not absorbed through the skin.

First Aid: Wash exposed areas thoroughly with soap and water

SECTION #5C - EXPOSURE & EFFECTS - EYES

ROUTES OF EXPOSURE & EFFECTS - EYES

Acute: Contact with large volumes of smoke may cause minor eye irritation

Chronic: None reported

First Aid: Remove person to fresh air. If foreign body is suspected, wash eyes in fresh water for 15 minutes, contact physician.

SECTION #5D - EXPOSURE & EFFECTS - INGESTION

ROUTE OF EXPOSURE & EFFECTS - INGESTION

Acute: Acute ingestion of lead may occur from poor personal hygiene associated with the handling of lead bearing materials. The effects of lead ingestion would be similar to those listed under acute inhalation in addition to gastrointestinal irritation.

Chronic: Chronic ingestion of lead may occur from poor personal hygiene associated with the handling of lead bearing materials. The effects of lead ingestion would be similar to those listed under chronic inhalation.

Note: Wash hands thoroughly with soap and water before eating or smoking.

First Aid: Ingestion is not a likely route of exposure. In case of ingestion, contact physician.

SECTION #5E - EXPOSURE & EFFECTS -- CARCINOGENESIS DATA

N.T.P. No
I.A.R.C. Group 2B, possibly carcinogenic in humans
OSHA: No

SECTION #5F - EXPOSURE & EFFECTS - COMMENTS

Lead and barium are toxic metals that may be released during the firing of primers. Care should be taken in the cleaning of range facilities to minimize the exposure potential to lead and barium. Persons engaged in these activities should wear protective clothing with an appropriate respirator. Range operators should consult OSHA 1910.1025 for details pertaining to the handling of lead in the work environment.

Severe lead intoxication has been associated in the past with sterility, abortion, and stillbirth. Modern information confirming that lead poisoning affects birth rates or cause injury to the fetus in man is not conclusive.

SECTION #5G - AGGRAVATION OF PRE-EXISTING HEALTH CONDITIONS

AGGRAVATION TO PRE-EXISTING HEALTH CONDITIONS

Exposure to lead can aggravate pre-existing anemia, cardiovascular and respiratory diseases and conditions related to the gastrointestinal, reproductive, renal (kidney), and central nervous systems.

Reference: Industrial Toxicology, Safety and Health Applications in the workplace;
Williams/B.

SECTION #6 - REACTIVITY & POLYMERIZATION

Stability: Stable under normal use conditions

Conditions to Avoid: Vibration, heat (over 200 degrees F), moisture, concussion, electrostatic discharge, compression, open flame, and sparks.

Incompatible Materials: Acids, Alkalis, and other Corrosive Chemicals, Oils, Solvents, Water.

Hazardous Decomposition Materials: Oxides of Barium, Lead, Antimony, Nitrogen, Carbon, Sulfur and Antimony Fumes

Polymerization: Will not occur

SECTION #7 - SPILLS, LEAKS & DISPOSAL PROCEDURES

STEPS TO BE TAKEN - SPILLS:

Avoid conditions detailed in Section #6. Carefully pick up all primers and return them to original shipping containers.* If original containers are not available, carefully place all loose primers from broken shipping containers into water-filled container. Maintain water level above components at all times and secure container.

Waste Disposal Methods: Contact Manufacturer - Product Service (763) 323-3706

*NOTE: Do not sweep up primers into a bulk container (see information in Section #4 of Material Safety Data Sheet).

SECTION #8 - SPECIAL PROTECTIVE EQUIPMENT

Ventilation: Use in a well-ventilated area. Consult the current edition of ACGIH Industrial Ventilation Manual and/or NRA ventilation recommendations.

Protective Equipment:

Eyes: Protected eyewear conforming to ANSI Z-87 must be worn when performing any and all handloading operations. Additional protection, such as face shield and/or machine guards, are strongly recommended.

Gloves: Not generally required

Respirators: Not generally required

Hearing Protection: Not Applicable

SECTION #9 - SPECIAL PRECAUTIONS -- STORAGE & HANDLING

STORAGE:

Primers:

Primers should be stored in cabinets ruggedly constructed of lumber at least 1" nominal thickness.

Keep storage areas clean. Make sure the surrounding area is free of trash or other readily combustible materials.

The storage area should be free from any possible ignition sources or excessive heat. Do not store primers where they will be exposed to the direct rays of the sun. Avoid storage in areas where mechanical or electrical equipment is in operation.

Do not store primers in the same area with solvents, flammable gases, or highly combustible materials.

Store primers only in their original factory containers. Do not transfer the primers from approved container into one that is not approved.

DO NOT STORE PRIMERS WITH PROPELLANT POWDERS.

Observe all applicable local, state, and federal regulations regarding quantity and methods of storage.

HANDLING:**Primers:**

Primers should never be handled, used, or stored in bulk. Handle primers individually unless adequate safeguards are provided and used.

Care must always be exercised in any ammunition loading operation to avoid rough handling and undue force where a primer is involved. Do not use primer feeds for loading. Any malfunction of equipment must be cleared with extreme caution. The decapping of cases containing live primers should not be done.

Avoid build-up of static electricity on the person when handling primers or conducting handloading procedures. Loading equipment should be electrically grounded.

All loading equipment and adjacent areas must be kept scrupulously clean and free of primer dust and powder accumulations. Work areas and loading equipment must be cleaned by wiping with a damp cloth or sponge, which should be thoroughly rinsed after each use. Maintain work area free of bits of hard, abrasive material during loading operations.

An absolute minimum of primers should be maintained at the loading operation. Only one packing tray at a time should be removed from the primer storage.

Accidentally spilled primers should be picked up immediately as they may explode when stepped upon (see Section #7).

When a priming operation is completed, any remaining primers should be returned to the package in which they were originally contained.

Keep primers away from children, household pets, or persons not recognizing them as potentially hazardous.

Never have an open flame, sources of sparks, or hot particles in the vicinity of primers.

Do not smoke near primers.

SECTION #10 – TRANSPORTATION INFORMATION

This material is a US Department of Transportation Hazardous Material.

US DOT Proper Shipping Name:	Primers, cap type
Hazard Classification:	1.4S
UN Identification Number:	UN0044
Packing Group:	II

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