



SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS, Australian WorkSafe, Japanese Standard JIS Z 7250:2000, and EU REACH

Regulations 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: **CASES – PRIMED RIMFIRE or CENTERFIRE**
CAS Number: Mixture – Metal Alloy
Synonyms: Centerfire Primed Brass, Centerfire Primed Shellcase, Centerfire Rifle Primed Case, Centerfire Pistol Primed Case, Centerfire Rifle Primed Shellcase, Centerfire Pistol Primed Shellcase, Centerfire Rifle Primed Brass, Centerfire Pistol Primed Brass
Rimfire Primed Brass, Rimfire Primed Shellcase, Rimfire Rifle Primed Case, Rimfire Pistol Primed Case, Rimfire Rifle Primed Shellcase, Rimfire Pistol Primed Shellcase, Rimfire Rifle Primed Brass, Rimfire Pistol Primed Brass
Product Use: Primed shellcases for ammunition or power tool loads
U.N. Number: UN 0055
U.N. Dangerous Goods Class: Explosive, 1.4S
Manufacturer: FSAAP
Manufacturers' Address: 5730 N 6, Fort Smith, AR 7204 www.fsaap.com
Emergency Telephone Number: US/Canada: 1-800-255-3924
Outside US/Canada: 800-255-3924
SDS Control Group: 631-930-5314 (Technical Information Only)

FSAAP SDS No.: 00071.0002 Issue Date: 10/31/2019 Revision Date: 7/1/2022

Revision No.: 3

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW : EXPLOSIVE. KEEP AWAY FROM HEAT. DO NOT SUBJECT TO MECHANICAL SHOCK. PARTICLES FROM FIRING MAY BE HARMFUL IF INHALED. DO NOT TAKE INTERNALLY.

US DOT SYMBOLS



CANADA (WHMIS) SYMBOLS

This Product is not subject to WHMIS
Class 6 Explosive

GHS HAZARD SYMBOLS



GHS Classifications:

Carcinogenicity Category 1A
Reproductive Toxicity Category 1A
Explosive Division 1.4
STOT RE Category 1
Aquatic Environment, Chronic II

Signal Word:

Danger

Hazard Statements :

H204: Fire or projection hazard
H350: May cause cancer
H360: May damage fertility or the unborn child
H362: May cause harm to breast-fed children
H372: Causes damage to nervous system, kidney, and hematopoietic system through prolonged or repeated exposure
H411: Toxic to aquatic life with long lasting effects

Target organs:

Nervous, renal and hematopoietic systems

Precautionary Statements:

P102: Keep out of reach of children
P210: Keep away from heat/sparks/open flame/hot surfaces
P250: Do not subject to shock/friction
P260: Do not breathe dust/fume/gas/mist/vapors/spray
P264: Wash hands thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P271: Use only outdoors or in a well-ventilated area
P273: Avoid release to the environment
P280: Wear protective gloves/protective clothing/eye protection/face protection

GHS Pictograms:

Explosive; Pictogram: exploding bomb
Specific Target Organ Toxicity; Pictogram Code: GHS08
Environment; Pictogram Code: GHS09

EU Classifications:

Hazard Symbols	E, T, N
Risk Phrases	R2: Risk of explosion by shock, friction, fire or other sources of ignition R45 (Category 1): May cause cancer R48: Danger of serious damage to health by prolonged exposure R60/61 (Category 1): May impair fertility or cause harm to the unborn child R63: Possible risk of harm to the unborn child R64: May cause harm to breast-fed children R51/53: Toxic to aquatic organisms and many cause long-term adverse effects in the aquatic environment
Safety Phrases	S2: Keep out of reach of children S15: Keep away from heat S20/21: When using do not eat, drink or smoke S22: Do not breathe dust S39: Wear eye/face protection S51: Use only in well-ventilated areas S61: Avoid release to the environment

Health Hazards or Risks From Exposure

This product is composed of a metallic shellcase with primer which contains the various components completely sealed within. Therefore, under normal handling of this product, no exposure to any harmful materials will occur. When the product is fired, a small amount of particles may be generated which may be slightly irritating to the eyes and the respiratory tract. The particles may contain trace amounts of these harmful substances:

Lead: Ingestion of large amounts of lead can cause abdominal pain, constipation, cramps, nausea and/or vomiting. Chronic exposure to lead can cause kidney damage, anemia, reproductive effects, developmental effects and permanent nervous system damage in humans including changes in cognitive function. Occupational exposure to lead is associated with lung and stomach cancer. Lead is classified as a probable human carcinogen.

Copper: Inhalation of high concentrations of metallic copper dusts or fumes may cause nasal irritation and/or nausea, vomiting and stomach pain.

Antimony sulfide: Inhalation of high concentrations may cause dizziness, headache, and nausea. Workers chronically exposed to high concentrations of antimony sulfide have developed heart and blood effects.

Barium nitrate: Ingestion of large doses of soluble barium compounds can cause cyanosis, skeletal muscle paralysis, respiratory arrest, irregular heartbeat and hypertension.

It is unlikely that the amount of particles that someone would be exposed to from firing would be sufficient to cause any of these effects.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Consists of the following 2 components: A) Shellcase; and B) Primer – can be either Centerfire Primer or Rimfire Primer. All percent compositions specified below are based on the entire product.

Components	% By Weight	CAS Number	EINECS/ ELINCS #
Iron	0 - 97	7439-89-6	231-096-4
Copper	55 - 94	7440-50-8	231-159-6
Zinc	3 - 38	7440-66-6	231-175-3
For Centerfire Primer			
Lead styphnate	3 - 6	15245-44-0	239-290-0
Barium nitrate	3 - 4.5	10022-31-8	233-020-5
Antimony sulfide	1.3 – 2.5	1345-04-6	215-713-4
Lead thiocyanate	0 – 0.6	592-87-0	215-713-4
For Rimfire Primer			
Lead styphnate	1.2 – 2.4	15245-44-0	239-290-0
Barium nitrate	3 – 6	10022-31-8	233-020-5
Fibrous glass dust	0.9 - 2	65997-17-3	266-046-0

4. FIRST AID MEASURES

Eye Contact: Immediately flush out fume or particles with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If eye irritation develops, call a physician at once.

Skin Contact: Wash skin with plenty of soap and water.

Inhalation: If symptoms of lung irritation occur (coughing, wheezing or breathing difficulty), remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep affected person warm and at rest. Get medical attention.

Ingestion: If ingested, immediately call a physician.

Medical Conditions Aggravated By Exposure:
There are no medical conditions known to be aggravated by exposure to this product in its solid form. Exposure to lead can aggravate anemia, cardiovascular and respiratory disease.

Recommendations To Physcians:
Remove from exposure, if possible, and treat symptoms

5. FIRE FIGHTING MEASURES

PROPERTY	VALUE	PROPERTY	VALUE
Explosive	Yes	Flammable	Not applicable
Combustible	Not applicable	Pyrophoric	No
Flash Point (°C):	Not applicable	Burning Rate of Material:	Not applicable
Lower Explosive Limit:	Not applicable	Autoignition Temp.:	No data Upper
Explosive Limit:	Not applicable	Flammability Classification: (defined by 29 CFR 1910.1200)	Explosive

Unusal Fire and Explosion Hazards:
Extinguishing Media :
Special Firefighting Procedures:

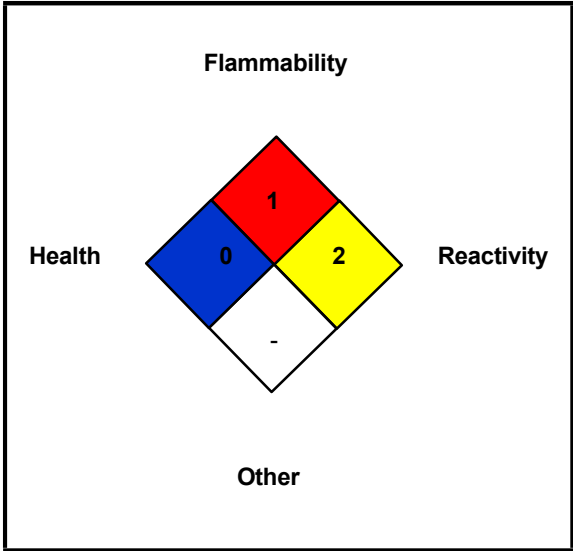
Possible projection hazard.
Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used.
Do not fight fire when fire reaches cargo. Cargo may explode.

Firefighters must wear self-contained breathing apparatus (SCBA) and full protective equipment. Structural firefighters' protective clothing will provide protection.


Isolate materials not yet involved in the fire. Move containers from fire area if possible; otherwise, cool with carefully applied water spray.

Prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas, if practical.

NFPA RATING SYSTEM



HMIS RATING SYSTEM

HEALTH HAZARD (BLUE)		0*
FLAMMABILITY HAZARD (RED)		1
PHYSICAL HAZARD (YELLOW)		2
PROTECTIVE EQUIPMENT		
EYES	PPE CODE	RESPIRATORY HEARING
	A	See Sect 8 See Sect 8

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

6. ACCIDENTAL RELEASE MEASURES

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC AT 800-424-9300.

Spill Response:

Accidental Release Procedures:

A spill of this material will normally not require emergency response team capabilities. If, however, a large spill occurs, call 1-888-289-1911 for technical assistance.
Spills of this material should be handled carefully. Do not subject materials to mechanical shock. Collect material and place in a designated, labeled waste container. See Section 13 for waste disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Conditions for Safe Storage:

Use appropriate personal protective equipment (see Section 8). Workers should wash hands thoroughly after handling. Eating, drinking and smoking should be prohibited in areas where this material is handled and stored.
Store in accordance with local regulations. Store in original containers in a cool, dry location away from Acids, Class A & B explosives, strong oxidizers, and caustics. Avoid mechanical impact or shock and electrical discharge.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

CAS #	CHEMICAL NAME	ACGIH TLV	OSHA PEL	INTERNATIONAL OELS
7439-89-6	Iron	None established	None established	None established
7440-50-8	Copper	0.2 mg/m (fume), 1 mg/m ₃ (d ³ usts and mists)	0.1 mg/m (fume) 1 mg/m ₃ (d ³ usts and mists)	Austria, Belgium, Canada: 0.2 mg/m (fumes), 1 mg/m ₃ (dusts) Denm ³ ark: 1.0 mg/m (dust and powder) Germany (MAK): 0.1 ³ mg/m ₃ (fume), 1 mg/m ₃ (dusts and mists)
7440-66-6	Zinc	None established	None established	None established
15245-44-0	Lead styphnate	None established	None established	None established
10022-31-8	Barium nitrate	0.5 mg/m ₃	0.5 mg/m ₃	Germany (MAK): 0.5 mg/m ₃ (I), Peak = II (2) Austria, Belgium, Denmark, Finland, Hungary, Netherlands, Poland, Switzerland, U.K.: 0.5 mg/m ₃
1345-04-6	Antimony sulfide	0.5 mg/m ₃	0.5 mg/m ₃	Austria, Belgium, Denmark, France, Finland, Germany, Hungary, Netherlands, Norway, Poland,

Engineering Controls:

Local exhaust ventilation is recommended if significant dusting occurs or fumes are generated. Otherwise, use general exhaust ventilation. Use explosion-proof ventilation.

Respiratory Protection:

Not normally needed. Maintain airborne contaminant concentrations below guidelines listed above. Use an appropriate approved air-purifying respirator equipped with HEPA cartridges/canisters where there is the potential for exceeding established occupational exposure limits.

Eye/Face Protection:

Use safety glasses.

Hand Protection:

Not normally needed.

Skin Protection:

Not normally needed.

Hearing Protection:

Not normally needed. During firing use hearing protection.

General Hygiene:

Do not eat, drink, or smoke while using this product. Wash hands thoroughly after use.

9. PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	VALUE	PROPERTY	VALUE
Appearance:	Red/gold metallic color (non-plated); silver colored (nickel plated) shellcase	Physical State:	Solid
Odor:	None	Odor Threshold:	None
Boiling Point (F):	Not applicable	Melting point:	Not applicable
Vapor Pressure (mm Hg):	Not applicable	Freezing point:	Not applicable
Vapor Density(air = 1):	Not applicable	Bulk Density	Not applicable
Specific gravity (g/cc):	Not applicable	Viscosity (cps):	Not applicable
pH:	Not applicable	Decomposition Temperature:	Unknown
Solubility in Water (20 C):	Insoluble	Evaporation Rate:	Not applicable
Volatiles, Percent by volume:	Not applicable	Octanol/water partition coefficient:	Not applicable

10. STABILITY AND REACTIVITY

Stability :

Stable under normal temperatures and pressure.

Possibility of Hazardous Reactions:

Hazardous polymerization will not occur

Incompatible Materials:

Acids, Class A & B explosives, strong oxidizers, and caustics

Hazardous Decomposition Products:

Nitrogen oxides, carbon monoxide, lead oxides, carbon dioxide, lead dust/fume

Conditions to Avoid:

Will detonate with mechanical impact or shock; avoid physical damage (puncture) of containers. Avoid contact with incompatible materials.

11. TOXICOLOGICAL INFORMATION

Potential Routes of Entry: Inhalation, Skin, and by Ingestion.

The physical nature of this product makes absorption from any route unlikely. A small amount of inhalable particles may be created when cartridge is fired.

Effects Of Acute Exposure:

PRODUCT		SELECTED COMPONENTS					
		Lead styphnate	Lead thiocyanate	Copper	Antimony sulfide	Barium nitrate	Fibrous glass dust
Inhalation LC ₅₀	Particles generated from firing may be slightly toxic	No data	No data	No data	No data	No data	>20 mg/kg (mouse, intratracheal)
Skin Contact LD ₅₀	Skin absorption unlikely	No data	No data	375 mg/kg, sc (rabbit)	>139 mg/kg, sc	No data	No data
Ingestion LD ₅₀	Ingestion unlikely	No data	No data	3.5 mg/kg, ip (mouse)	209 mg/kg, ip (mouse)	355 g/kg, (rat)	No data

PRODUCT		SELECTED COMPONENTS					
		Lead styphnate	Lead thiocyanate	Copper	Antimony sulfide	Barium nitrate	Fibrous glass dust
Irritation	Particles generated from firing may be slightly irritating to the eyes	No data	No data	Respiratory irritant	Eye, skin and respiratory irritant	Eye and skin irritant	Eye, skin, and respiratory irritant
Sensitization	Sensitization to this Product has not been reported	No data	No data	No data	No data	No data	No data

Other Adverse Effects:

<u>Target Organ Toxicity:</u>	No reported target organ toxicity from this product. Lead has caused nervous system, kidney and hematopoietic system damage in humans and laboratory animals. Laboratory animals repeatedly exposed to antimony sulfide by inhalation developed degenerative liver and kidney effects.
<u>Reproductive Toxicity:</u>	This product is not known or reported to cause reproductive effects. Lead has been shown to reduce male reproductive function in humans and laboratory animals.
<u>Teratogenicity (Birth Defects):</u>	This product is not known or reported to cause developmental toxicity. Lead has been shown to affect fetal development including birth defects.
<u>Mutagenicity:</u>	This product is not known or reported to be mutagenic. Lead has been shown to be mutagenic in several <i>in vitro</i> assays.
<u>Carcinogenicity:</u>	IARC and US EPA list lead and lead compounds as probable human carcinogens (Group 2A) based on sufficient evidence from animal studies and limited evidence from human studies (epidemiology). NTP classifies lead and lead compounds as reasonably anticipated to be human carcinogens. NTP lists fibrous glass as an anticipated human carcinogen. IARC lists fibrous glass as possibly carcinogenic to humans, group 2B.

12. ECOLOGICAL INFORMATION

Environmental Effects:

PRODUCT: Product has not been tested for environmental properties.

COMPONENTS:

<u>Copper:</u>	Copper concentrations from 0.1 to 1.0 mg/l have been found to be not toxic for most fish. However, concentrations of 0.015 to 3.0 mg/l have been reported as toxic, particularly in soft water to many kinds of fish, crustacea, mollusks, insects, and plankton.
<u>Lead:</u>	LC 50 (48 hrs.) to bluegill is reported to be 2-5 mg/l. Lead is toxic to waterfowl.
<u>Zinc:</u>	The following concentrations of zinc have been reported as lethal to fish: 0.13 mg/l, for 12 – 24 hours to Rainbow trout fingerlings; 1.9 – 3.6 mg/l, 6 hr TLM (soft water, 30°C) to Bluegill Sunfish; 4 mg/l, 3 days (hard water) to Rainbow trout; 1 mg/l, 24 hours (soft water) to Sticklebacks. The presence of copper appears to have a synergistic effect on the toxicity of zinc towards fish.

Environmental Fate:

MOBILITY:	Released lead may migrate through soil.
PERSISTANCE/DEGRADABILITY:	Not biodegradable. Released lead may accumulate.
BIOACCUMULATION:	No data

13. DISPOSAL CONSIDERATIONS

Care must be taken to prevent environmental contamination from the use of this material. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding the treatment, storage and disposal for hazardous and nonhazardous wastes.

14. TRANSPORT INFORMATION

Regulatory Information for US DOT, IATA, IMO, and ADR:

Proper Shipping Name:	Cases, Cartridges, Empty with Primer
Hazard Class Number and Description:	Explosive 1.4S
UN Identification Number:	UN 0055
Packing Group:	PGII
DOT Label(s) Required:	Explosive 1.4
Marine Pollutant:	None of the ingredients are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

Additional Information:

North American Emergency Response Guidebook Number (2004): 114

U.S. DEPARTMENT OF TRANSPORTATION SHIPPING REGULATIONS: This product is classified as dangerous goods under 49 CFR 172.101. Note: May be reclassified domestically as an ORM-D if packaged as a consumer commodity per 49 CFR 173.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This product is classified as Dangerous Goods.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA): This product is classified as Dangerous Goods.

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION: This product is classified as Dangerous Goods.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This product is classified by the United Nations Economic Commission for Europe to be dangerous goods.

15. REGULATORY INFORMATION

US FEDERAL

TSCA	The components of this product are listed on the Toxic Substance Control Act inventory.				
CERCLA:	Antimony, R.Q.* = 5000 lbs.; Copper, R.Q. = 5000 lbs.; Zinc, R.Q. = 1000 lbs.; Lead, R.Q. = 10 lbs. (No reporting is required if diameter of the pieces of metal is equal to or exceeds 100 micrometers (0.004 inches)).				
SARA 313:	Antimony compounds, Barium compounds, Copper, Lead and Lead compounds, Zinc (fume or dust)				
SARA 311/312:	Health:	Acute – No Chronic - No	Fire: No	Reactivity: Yes	Release of Pressure: No
SARA 302 EHS List:	None of the components of this product are listed.				

*RQ = Reportable Quantity

STATE RIGHT-TO-KNOW STATUS

Component	California	New Jersey	Pennsylvania	Massachusetts	Michigan
Iron	Not listed	Not listed	Not listed	Not listed	Not listed
Copper	Not listed	X	X	X	X
Zinc	Not listed	X	Not listed	X	X
Lead styphnate	X	Not listed	Not listed	X	Not listed
Barium nitrate	Not listed	Not listed	X	X	Not listed
Antimony sulfide	Not listed	Not listed	Not listed	Not listed	Not listed
Lead thiocyanate	X	Not listed	Not listed	Not listed	Not listed
Fibrous glass dust	X	Not listed	Not listed	Not listed	Not listed

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65)

Warning! This product contains detectable amounts of a chemical known to the State of California to cause cancer and/or birth defects or other reproductive harm.

GHS CLASSIFICATION

Carcinogenicity Category 1A
Reproductive Toxicity Category 1A
Explosive Division 1.4
STOT RE Category 1
Aquatic Environment, Chronic II

EUROPEAN REGULATIONS

Hazard Classification
Danger Symbols: E, T, N

Risk Phrases: R2, R48, R60, R63, R51/53

Safety Phrases: S2, S15, S20/21, S22, S39, S51, S61

German WGK Classification: Not known.

CANADIAN REGULATIONS

DSL/NDSL Inventory: The components of this product are on the DSL

IDL: Antimony compounds, Barium nitrate, Copper, Fibrous glass, Lead compounds

CEPA PRIORITIES LIST: None of the components of this product are listed

WHMIS: This product is not subject to WHMIS. It is regulated as a Class 6 Explosive in Canada.

JAPANESE REGULATIONS

Existing National Inventory of Chemical Substances (ENCS): All components of this product are listed except fibrous glass dust.

Japanese Priority Assessment Chemical Substances: None of the components of this product are listed

OTHER INTERNATIONAL CHEMICAL INVENTORIES

Swiss Giftliste List of Toxic Substances: All Components Listed
Australian Inventory (AICS): All Components Listed

16. OTHER INFORMATION

REVISIONS: 03
DATE: 7/1/22
PREPARED BY: FSAAP
OTHER: Additional information available from: www.fsaap.com

NOTICE: THE INFORMATION IN THIS SDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. FSAAP BELIEVES THIS INFORMATION TO BE RELIABLE AND CURRENT AS OF THE DATE OF PUBLICATION, BUT MAKES NO WARRANTY THAT IT IS.