Material Safety Data Sheet

SECTION I

PRODUCT NAME OR NUMBER (AS IT APPEARS ON LABEL):

KED-1019
Cobalt Shot

MANUFACTURER: Alpha Resources, Inc. TELEPHONE: 269-465-5559
P.O. Box 199
Stevensville, MI 49127

MANUFACTURER'S DUNNS NO. 08 383 8045

HAZARDOUS MATERIAL DESCRIPTION, PROPER SHIPPING NAME, HAZARD CLASSES, HAZARD ID NO: N/A
FORMULA: Cobalt, 100%

SECTION II - INGREDIENTS (LIST ALL INGREDIENTS)

CAS REGISTRY NO.	%W	%V	CHEMICAL NAMES	LISTED AS A CARCINOGEN IN NTP, IARC OR OSHA 1910(Z) SPECIFY
7440-48-4	100%	N/A	Cobalt	N

EINECS number: 231-158-0
EU number: 027-001-00-9

SECTION III – HAZARDS IDENTIFICATION

Hazard description:  Xn Harmful

Information pertaining to particular dangers for man and environment:
R 42/43 may cause sensitization by inhalation and skin contact.

SECTION IV FIRST AID MEASURES

After inhalation: Seek medical treatment in case of complaints.
After skin contact: Immediately wash with soap and water and rinse thoroughly.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: Seek immediate medical advice.

SECTION V FIRE FIGHTING MEASURES

Suitable extinguishing agents: CO_2,sand, extinguishing powder. Do not use water.
For safety reasons unsuitable extinguishing agents: Water
Special hazards caused by the material, its products of combustion or resulting gases:
In case of fire, the following can be released: Metal oxide
Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

SECTION VI ACCIDENTAL RELEASE MEASURES

Person-related safety precautions: Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection: Do not allow material to be released to the environment without proper government permits.

Measures for cleaning / collecting: Dispose contaminated material as waste according to item XIII.

Additional information:
See section VII for information on safe handling.
See section VIII for information on personal protection equipment.
See section XIII for disposal information.

SECTION VII HANDLING AND STORAGE

Handling

Information for safe handling: Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Prevent formation of dust.

Information about protection against explosions and fires: Dust can combine with air to form an explosive mixture.

Storage

Requirements to be met by storerooms and receptacles: Store in a cool location.

Information about storage in one common storage facility: Do not store together with oxidizing and acidic materials.

Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed containers.

SECTION VIII EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with limit values that require monitoring at the workplace: Cobalt, elemental and inorganic compounds, as Co

ACGIC TLV	0.02, confirmed animal carcinogen
Austria	Carcinogen
Belgium TWA	0.05
Denmark TWA	0.05
Finland TWA	0.05 (skin)
Germany	Carcinogen
Hungary TWA	0.2; 0.2-STEL
Japan OEL	0.05; 2B-Carcinogen
Korea TLV	0.02; Confirmed animal carcinogen
Netherlands MAC-TGG	0.05
Norway TWA	0.05
Poland TWA	0.05; 0.2-STEL
Russia	0.5-STEL
Sweden NGV	0.05
Switzerland MAK-W	0.1, Carcinogen
United Kingdom TWA	0.1
USA PEL	0.1 (dust and fume)

Additional information: No data

Personal protective equipment

General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.

Eye protection: Safety glasses

Body protection: Protective work clothing.

SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

General information

Form: Solid
Color: Grey
Odor: Odorless

Change in condition

Melting point/Melting range: 1495°C (2723°F)
Boiling point/Boiling range: 2900°C (5252°F)
Sublimation temperature/start: Not determined

Flash point: Not applicable

Flammability (solid, gaseous): Powder: highly flammable

Ignition temperature: Not determined

Danger of explosion: Product does not present an explosion hazard.

Explosion limits

Lower: Not determined
Upper: Not determined

Vapor pressure: Not determined

Density at 20°C (68°F): 8.92 g/cm^3

Solubility in / Miscibility with water: Insoluble / Not determined

X STABILITY AND REACTIVITY

Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.

Materials to be avoided: acids, oxidizing agents, air, interhalogens.

Dangerous reactions: Powder: may cause fire.

Dangerous products of decomposition: Toxic metal oxide fume

XI TOXILOGICAL INFORMATION

Acute toxicity

LD/LC50 values that are relevant to classification:

Oral	LD50	6170 mg/kg (rat)
Inhalative	LC50/30M	100 mg/m^3 (rbt)

Primary irritant effect
On the skin: Powder: irritant effect
On the eye: Powder: irritant effect

Sensitization: Sensitization possible through inhalation, sensitization possible through skin contact.

Other information (about experimental toxicology): Tumorogenic effects have been observed on tests with laboratory animals.

Subacute to chronic toxicity: Cobalt is n experimental neoplastigen and tumorigen. It is an experimental carcinogen of the connective tissue and lungs. Cobalt metal and inorganic compounds are classified as an animal carcinogen by the ACGIH. Ingestion may cause burning in the mouth, esophagus, and stomach. Inhalation of dusts and fumes may cause irritation of the respiratory tract and labored breathing and coughing. Sensitization, nausea, flushing of the face and ringing in the ears is also possible. Chronic ingestion may result in pericardial effusion, polycardial effusion, polycythemia, cardiac failure, vomiting, convulsions and thyroid enlargement.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
IARC-2B: Possibly carcinogenic to humans: limited evidence in humans in the absence of sufficient evidence in experimental animals.
ACGIH A3: Animal carcinogen Agent is carcinogenic in experimental animals at a relatively high dose, or by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) not considered relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

SUPPLEMENTAL INFORMATION

The data and information as stated was furnished by the manufacturer/vendor &/or supplier of this product. Alpha Resources, Inc. cannot warrant the accuracy of this information and shall not be responsible or liable for any damage that may result, should any of the information be erroneous.

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