# MATERIAL SAFETY DATA SHEET



## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** **QUICKDRAW™ IMPACT INITIATOR #Q922**
**DATE:** **June 18, 2009**

| | |
|---|---|
| TRADE NAME: | QUICKDRAW™ IMPACT INITIATOR #Q922 |
| GENERAL USE: | Initiation Device |
| CHEMICAL FAMILY: | Lead Styphnate / Nitrate Blend with modifiers |

PRODUCT DESCRIPTION:
Small cylinder with initiating charge.

RockTek

| MANUFACTURER | DISTRIBUTOR |
|---|---|
| **Global Pyrotechnic Solutions Inc.(d/b/a:GPS,Inc.)** | **RockTek USA Ltd.** |
| ADDRESS (NUMBER, STREET, P.O. BOX) | ADDRESS (NUMBER, STREET, P.O. BOX) |
| 10476 Sunset Drive | 10476 Sunset Drive |
| (CITY, STATE AND ZIP CODE) COUNTRY | (CITY, STATE AND ZIP CODE) COUNTRY |
| Dittmer, MO 63023 USA | Dittmer, MO 63023 USA |
| TELEPHONE NUMBER FOR INFORMATION / Customer Service | TELEPHONE NUMBER FOR INFORMATION / Customer Service |
| 813-248-0573 | 813-248-0573 |

ChemTel INC.

**CHEMTEL 24-HOUR EMERGENCY TELEPHONE NUMBER**
North America Toll Free **1-800-255-3924**
International **813-248-0585**

ChemTel INC.

## SECTION 2 - HAZARDOUS INGREDIENTS

| Hazardous Components | % (by Weight) | CAS # | EINECS # | Hazard Symbol(s) | RISK PHRASES (Full Text Section 15) |
|---|---|---|---|---|---|
| **Iron** | **50-55** | **7439-89-6** | **231-096-4** | **None** | **None** |
| **Copper** | **20-40** | **7440-50-8** | **231-159-6** | **None** | **None** |
| **Zinc** | **1-20** | **7440-66-6** | **231-175-3** | **N** | **R17, 50/53** |
| **Lead Styphnate (normal)** | **1-5** | **15245-44-0** | **239-290-0** | **E,T,N** | **R3, 20/22, 33, 50/53, 61, 62** |
| **Barium Nitrate** | **1-5** | **10022-31-8** | **233-020-5** | **O** | **R8** |
| **Antimony Sulfide** | **0.5-2** | **1345-04-6** | **215-713-4** | **None** | **None** |

Notes: Ingredients, other than those mentioned above, as used in this product are not hazardous as defined under current U.S. Department of Labor regulations.

**Warning: Product has limited shelf life. Manufacturer's recommendation is a 2 year shelf life. DO NOT USE EXPIRED OR DETERIORATED PRODUCT!!**

## SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Product contains highly flammable and oxidizing substances, but does not represent a mass explosion hazard. Individual devices may deflagrate under fire conditions. Product contains lead compounds, which are noted for developmental toxicity and potential carcinogenicity. Post-use, product may generate irritating and potentially toxic dust and fumes; use of a dust mask or particulate respirator may be warranted under conditions of insufficient ventilation. Product contains zinc and lead compounds which pose potential hazards to the environment in large quantities; use care in disposing of spent product.

## POTENTIAL HEALTH EFFECTS

INHALATION:
Both pre- and post ignition ingredients are potential respiratory irritants and capable of producing long term health effects due primarily to the presence of zinc and lead in the product. Avoid inhalation by wearing appropriate respiratory protection when exposed to the chemical ingredients of the product above listed TLV's or when exposed to the post ignition by-products.

SKIN:
No exposure to chemical hazards anticipated with normal handling procedures.

EYES:
No exposure to chemical hazards anticipated with normal handling procedures.

INGESTION:
No exposure to chemical hazards anticipated with normal handling procedures. Contents of this product are toxic by ingestion and in the unlikely event this should occur immediate medical attention is advised.

CARCINOGENICITY:
NTP? Yes - Lead cpds. IARC MONOGRAPHS? Yes - Lead products (2B) OSHA REGULATED?
CALIFORNIA, Prop.65? - Yes, Antimony trioxide formed from product use, lead and lead compounds (lead styphnate)
ESIS? - No

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## *SECTION 4 - FIRST AID MEASURES*

INHALATION:
If post-usage fumes are inhaled, remove to fresh air, obtain medical attention if breathing remains difficult.

EYES:
Remove contact lenses, then wash for 15 minutes with clean potable water lifting upper and lower lids occasionally. Seek medical attention if irritation persists.

SKIN:
Wash with plenty of soap and water. Seek medical attention if delayed dermatitis develops.

INGESTION:
Contact medical authorities immediately. Give water to drink. DO NOT INDUCE VOMITING UNLESS DIRECTED BY PHYSICIAN.

## *SECTION 5 - FIRE FIGHTING MEASURES*

GENERAL HAZARDS:
Can explode under fire conditions. Individual devices will randomly explode with a small report noise much like a small firecracker. Will not mass explode if multiple devices are involved. Burning material may produce toxic vapors.

EXTINGUISHING MEDIA:
Water, Dry chemical, Foam or $CO_2$.

FIRE FIGHTING PROCEDURES:
SPECIAL FIRE FIGHTING PROCEDURES: Fires involving these devices may be fought safely, from a distance of not less than 25 feet, with hose apparatus by flooding packaging with water. Packaged multiple devices will not mass explode. Evacuate personnel to predetermined safe distance.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Can explode under fire conditions. Individual devices will randomly explode with a small report noise much like a small firecracker. Will not mass explode if multiple devices are involved. Burning material may produce toxic vapors.

HAZARDOUS COMBUSTION PRODUCTS:
Lead Compounds, Carbon Monoxide, Carbon Dioxide, Sulfur Compounds, Nitrous Oxides, Various complex oxides of metals, Nitrogen.

## *SECTION 6 - ACCIDENTAL RELEASE MEASURES*

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

In case of fire (local to devices / packaging), evacuate area for 100 feet or more if indicated by prevailing conditions (spreading fire) or by authorities having jurisdiction. Notify authorities immediately. If no fire danger is present and product is undamaged / uncontaminated, repackage product in original packaging or other clean DOT approved container. Ensure that a complete account of product has been made and is verified. Follow applicable Federal, State and local law spill reporting requirements.

## *SECTION 7 - HANDLING AND STORAGE*

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Keep away from heat, flame, ignition sources, strong shock. Do not attempt to disassemble. Store in cool, dry, well-ventilated location. Store in compliance with Federal, State, and local regulations in facility constructed for this purpose.

## *SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION*

| | NIOSH | | | | ACGIH | | OSHA | |
|---|---|---|---|---|---|---|---|---|
| HAZARDOUS COMPONENTS | TWA ppm | TWA mg/m3 | STEL ppm | STEL mg/m3 | TLV/TWA ppm | TWA mg/m3 | PEL ppm | PEL mg/m3 |
| Iron | | | | | | 5 as Fe | | 5 resp (Fe) |
| Copper | | 1 | | | 0.2(fume), 1.0(dust) mg/m$^3$ | | | 1.0 as Cu |
| Zinc | | 5 | | 15 Ceiling | | 2 resp | | 5 resp |
| Lead Styphnate (normal) | | 0.05 | | 100 IDLH | | 0.05 as Pb | | 0.05 as Pb |
| Barium Nitrate | | 0.5 as Ba | | 50 IDLH | | 0.5 as Ba | | 0.5 as Ba |
| Antimony Sulfide | | 0.05 as Sb | | | | 0.5 as Sb | | 0.5 as Sb |

### PERSONAL PROTECTION

RESPIRATORY PROTECTION:
VENTILATION:
None required for normal handling (outdoors). Dust mask or particle respirator may be needed for handling used product.

PROTECTIVE GLOVES:
None required for normal handling.

EYE PROTECTION:
Safety glasses required.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
None required for normal handling.

WORK / HYGIENIC PRACTICES:
Avoid breathing fumes from ignition. DO NOT EAT/DRINK/SMOKE WHILE HANDLING PRODUCT!!!

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## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| APPEARANCE AND ODOR<br>Small cylinder with initiating charge. | VAPOR PRESSURE<br>NA |
| pH<br>NA | SPECIFIC GRAVITY (WATER = 1)<br>NA |
| BOILING POINT / BOILING RANGE<br>NA | SOLUBILITY IN WATER<br>NA |
| FLASH POINT<br>NA | VISCOSITY<br>NA - Solid |
| FLAMMABLE LIMITS<br>LEL: NA UEL: NA | VAPOR DENSITY (AIR = 1)<br>NA |
| AUTOIGNITION TEMPERATURE<br>NE | EVAPORATION RATE (WATER = 1)<br>NA |

## SECTION 10 - STABILITY AND REACTIVITY

| | |
|---|---|
| STABILITY STABLE **X**<br>Stable under normal conditions. Individual devices may explode when subjected to fire, supersonic shock, or high-energy projectile impact. Multiple devices in confinement will not mass explode. | CONDITIONS TO AVOID:<br>Keep away from heat, flame, ignition sources, strong shock. Do not attempt to disassemble. |

INCOMPATIBILITY (MATERIALS TO AVOID):
Corrosives, Acids, Oxidizers

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:
As a result of explosion only: Lead Compounds, Carbon Monoxide, Carbon Dioxide, Sulfur Compounds, Nitrous Oxides, Various complex oxides of metals, Nitrogen.

| | |
|---|---|
| HAZARDOUS POLYMERIZATION:<br>Will not occur. | CONDITIONS TO AVOID:<br>None related to polymerization. |

## SECTION 11 - TOXICOLOGICAL INFORMATION

| Hazardous Components | CAS #<br>EINECS # | LD50 of Ingredient<br>(Specify Species and Route) | LC50 of Ingredient<br>(Specify Species) |
|---|---|---|---|
| **Iron** | **7439-89-6**<br>**231-096-4** | 30,000 mg/kg (oral, rat) | NE |
| **Copper** | **7440-50-8**<br>**231-159-6** | 413 mg/kg (oral, mouse) | NE |
| **Zinc** | **2691-41-0**<br>**231-175-3** | > 8,437 mg/kg (oral, rat) | 2,500 mg/m$^3$ (inhalation, mouse, as Zinc Oxide post-use product) |
| **Lead Styphnate (normal)** | **15245-44-0**<br>**239-290-0** | 650 mg/kg (intraperitoneal, rat) as lead oxide post-use product | NE |
| **Barium Nitrate** | **10022-31-8**<br>**233-020-5** | 355 mg/kg (oral, rat) | NE |
| **Antimony Sulfide** | **1345-04-6**<br>**215-713-4** | 7000 mg/kg (oral, rat)<br>209 mg/kg (intraperitoneal, rat) | NE |

## SECTION 12 - ECOLOGICAL INFORMATION

Zinc metal and lead styphnate present an aquatic toxicity risk for the environment. Avoid all discharge of this product to watercourses. Dispose only by a licensed disposal facility equipped to handle explosives wastes.

## SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:
Dispose of in accordance with Federal, State, and local regulations. If product becomes a waste, it is potentially regulated as a hazardous waste as defined under the Resource conservation and Recovery Act (RCRA) Title II, Subtitle C.

## SECTION 14 - TRANSPORT INFORMATION

PROPER SHIPPING NAME: Cases, cartridge, empty with primer, UN0055

DOT HAZARD CLASS / Pack Group: 1.4S
REFERENCE: 49CFR
UN / NA IDENTIFICATION NUMBER: UN 0055
LABEL: Explosive 1.4S
HAZARD SYMBOLS:


IATA HAZARD CLASS / Pack Group: 1.4S, PG II , 25Kg Passenger, 100Kg Cargo.
IMDG HAZARD CLASS: 1.4S
RID/ADR Dangerous Goods Code: 1.4S, PG II
UN TDG Class / Pack Group: UN 0368/PGII
Hazard Identification Number (HIN): 546

NOTES: These empty cartridge cases may be shipped unregulated domestically under 49 CFR 172.102 Special Provision 50.

Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

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## *SECTION 15 - REGULATORY INFORMATION*

TSCA (USA - Toxic Substance Control Act): Components are listed.
SARA TITLE III (USA - Superfund Amendments and Reauthorization Act):
Acute Health: Yes — Chronic Health: Yes
Fire: Yes — Sudden Release of Pressure: YES
Reactive: Yes

**313 REPORTABLE INGREDIENTS: This product contains Lead Styphnate (lead compounds), Zinc Metal, Barium Nitrate and Antimony Sulfide, which are subject to the reporting requirements of Section 313 of SARA Title III.**

CERCLA (USA - Comprehensive Response Compensation and Liability Act): **Zinc - 1000 lbs., Copper - 5000 lbs.**

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: **WARNING: This product contains reportable amounts of a chemical(s) (lead styphnate) known to the State of California to cause cancer and/or birth defects or other reproductive harm."**

State Right to Know Laws: **The components of this product are found on the Right to Know lists of the following states: Iron Metal - CA; Copper Metal - CA, NJ, PA, MN, MA; Zinc Metal - CA, FL , MA, NJ; Lead Styphnate (as lead compounds) - CA, MA; Barium Nitrate - MA, PA; Antimony Trisulfide - CA, NJ, PA, MN, MA.**

CPR (Canadian Controlled Products Regulations): **exempt under WHMIS regulations as explosive.**

IDL (Canadian Ingredient Disclosure List): **Antimony sulfide**

DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List): **Listed on CDSL**

EINECS (European Inventory of Existing Commercial Chemical Substances): **Ingredients referenced.**

WGK Water Quality Index: **3 - lead and zinc compounds**

| RISK PHRASES: | SYMBOL(S) REQUIRED FOR EU LABEL | SAFETY PHRASES: |
|---|---|---|
| **R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.**<br>**R17 Spontaneously flammable in air.**<br>**R20/22 Harmful by inhalation and if swallowed.**<br>**R33 Danger of cumulative effects.**<br>**R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**<br>**R61 May cause harm to the unborn child.**<br>**R62 Possible risk of impaired fertility.** |  **EXPLOSIVE**<br>  **OXIDIZER**<br>  **FLAMMABLE**<br>  **TOXIC**<br>  **DANGEROUS TO THE ENVIRONMENT** | **S1/2 Keep locked up and out of the reach of children.**<br>**S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).**<br>**S53 Avoid exposure — obtain special instructions before use.**<br>**S60 This material and its container must be disposed of as hazardous waste.**<br>**S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.** |

## *SECTION 16 - OTHER INFORMATION*

**Legend; NA=Not applicable, NE=Not established, NR=Not referenced.**

| | | | |
|---|---|---|---|
| HMIS HAZARD RATINGS | HEALTH: | **3** | 0 = INSIGNIFICANT |
| | FLAMMABILITY: | **3** | 1 = SLIGHT |
| | PHYSICAL HAZARD: | **2** | 2 = MODERATE |
| | PERSONAL PROTECTIVE EQUIPMENT: | **B** | 3 = HIGH<br>4 = EXTREME |

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