



SAFETY DATA SHEET

Section 1. Identification

| | |
|---|---|
| GHS product identifier | : SECONDARY IGNITER |
| Product Code | : EXP-7178-SEC |
| Print Date | : 05/30/2019 |
| Validation Date | : 05/30/2019 |
| Version | : 1 |
| Supplier's details | : Daniel Oilfield Tools, INC. 7676 North Freeway Ste 600 Houston, TX. 77037 (713) 459 2550 |
| Emergency telephone number (with hours of operation) | : (713) 459 2550 (8AM-11PM) |

Section 2. Hazards identification

| | |
|---|--|
| OSHA/HCS status | : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) |
| Classification of the substance or mixture | : EXPLOSIVES - DIVISION 1.4 |

GHS label elements
Hazard pictograms



| | |
|---------------------------------|--|
| Signal word | : Warning. |
| Hazard statements | : Fire or Projection Hazard. |
| Precautionary statements | : |
| Prevention | : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Do not subject to grinding, shock, friction, or any rough handling. Keep away from heat, sparks, open flames, or hot surfaces. NO SMOKING !!! |
| General | : Read Label before use. Keep out of the reach of children. If medical advice is needed, have medical container or label at hand. |

Section 2. Hazards identification

| | |
|--------------------------------|---|
| Response when | : Explosion risk in case of fire. In case of fire: Evacuate area. DO NOT fight fire when fire reaches explosives. IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. : Store in accordance with all local, regional, national and international regulations. |
| Storage regulations. | : Store locked up. |
| Disposal | : Dispose of contents and container in accordance with all local, regional, national |

and international regulations. Hazards not otherwise classified : None known.

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 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 WITH THE MANUFACTURER BEFORE USING THE EXPLOSIVE RELATED PRODUCT.

Section 3. Composition / Ingredients

SUBSTANCE : Mixture

| INGREDIENTS NAME | % OF SUBSTANCE | CAS # |
|------------------|----------------|-------------|
| PYRODEX | PROPRIETARY | 95327-46-1 |
| BINDER RESIN | PROPRIETARY | PROPRIETARY |

Section 4. First Aid Measures

INHALATION

: Remove the victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

EYE AND SKIN CONTACT

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 10 minutes. Check for and remove any contact lenses. Get medical attention. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

INGESTION

: Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation

: No known significant effects or critical hazards.

Ingestion

: No known significant effects or critical hazards.

Skin contact

: May cause an allergic skin reaction.

Eye contact

: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact

: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician

: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Section 4. First Aid Measures

Skin contact : Irritation,redness

Ingestion : No specific data.

Inhalation : No specific data.

Section 5. Firefighting Measures

Extinguishing media

Suitable extinguishing Media :Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None Known

Specific Hazards arising from the chemical :Explosive material with fire or projection hazard. Runoff to sewer may create fire or explosion hazard. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products :carbon dioxide,carbon monoxide,nitrogen oxides,halogenated compounds metal oxide/ oxides.

Special protective actions for fire-fighters :Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. First move people out of line-of-sight of the scene and away from windows. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fight fire from protected location or maximum possible distance. Do not fight fire when it reaches the material. Withdraw from fire and let it burn.

Special protective equipment for fire-fighters :Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full facepiece operated in positive pressure mode. Firefighters' protective clothing will only provide limited protection.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures : **For non-emergency personnel**

Accidental releases pose a serious fire or explosion hazard. Immediately contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions :Avoid dispersal of spilled material and runoff and contact with soil, waterways,drains
and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

**Methods and materials for containment
And cleaning up Large Spill** :Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Dike spill area and do not allow product to reach sewage system or surface or groundwater. Notify any reportable spill to authorities. (See section 12 for environmental risks and 13 for disposal information.) Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

Small Spill

: Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and Storage

Precautions for Safe Handling: Protective Measures

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid shock and friction. Avoid release to the environment. Use only with adequate ventilation. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or other ignition source. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

:Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any Incompatibilities

:Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure Control / Personal Protection

If OSHA permissible exposure levels are shown above they are the OSHA 1989 levels or are from subsequent OSHA regulatory actions. Although the 1989 levels have been vacated the 11th Circuit Court of Appeals, Baker Hughes recommends that these lower exposure levels be observed as reasonable worker protection.

Appropriate engineering controls

: Engineering controls may be required to control the primary or secondary risks associated with this product. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Use explosion-proof ventilation equipment.

Individual Protection Measures: Hygiene Measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

:Wear chemical safety goggles. When transferring material wear face-shield in addition to chemical safety goggles.

Hand protection

:Chemical-resistant gloves.

Skin protection

:Wear long sleeves to prevent repeated or prolonged skin contact.

Respiratory protection

:Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must

be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and Chemical Properties

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

| | |
|---|--|
| APPEARANCE | : Solid (Pellets). |
| COLOR | : BLACK. |
| ODOR | : Mild. |
| ODOR THRESHOLD | : Not Available |
| PH | : Not Available. |
| BOILING POINT | : Not Available. |
| INITIAL BOILING POINT | : Not Available. |
| MELT POINT | : Not Available. |
| FLASH POINT | : Not Available. |
| BURNING TIME | : Not available. |
| BURN RATE | : Not Available. |
| EVAPORATION RATE | : Not Available. |
| FLAMMABILITY (SOLID,GAS) | : Not Available. |
| LOWER AND UPPER EXPLOSIVE (FLAMMABLE) LIMITS | : Not Available. |
| VAPOR PRESSURE | : Not Available. |
| VAPOR DENSITY | : Not Available. |
| RELATIVE DENSITY | : Not Available. |
| DENSITY | : Not Available. |
| SOLUBILITY IN WATER | : Not Available. |
| AUTO IGNITION | : >625 degrees F. |
| DECOMPOSITION TEMPERATURE | : Decomposition will not occur. |
| VISCOSITY | : Not Available. |
| VOC | : Not Available. |
| POUR POINT | : Not Available. |
| SELF IGNITING | : Product is not self-igniting. |
| IGNITION WARNING | : Risk of ignition by shock, friction, impact, fire, or other sources of heat. |

Section 10. Stability and Reactivity

| | |
|---|--|
| Reactivity | : This product presents only a small hazard in the event of ignition or initiation, the effects largely being confined to the package with no expected projection of fragments of appreciable size or range. |
| Chemical stability | : The product is stable. |
| Incompatible materials | : Not Available. |
| Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Avoid shock and friction. |
| Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological Information

PRIMARY IRRITANT EFFECT:

Acute Toxicity : Not Classified

| | |
|--------------------------|------------|
| POTASSIUM NITRATE | 7757-79-1 |
| LD50 Oral Rat | 3015 mg/kg |

| | |
|------------------------------------|------------|
| Silica, Crystalline, Quartz | 14808-60-7 |
| LD50 Oral Rat | 500 mg/kg |

Skin corrosion/Irritation : Not Classified.
Serious Eye Damage/Irritation : Not Classified.
Respiratory or Skin Sensitization : Not Classified.
Germ Cell mutagenicity : Not Classified.
Carcinogenicity : Not Classified.

| | |
|------------------------------------|--------------------------|
| Silica, Crystalline, Quartz | 14808-60-7 |
| IARC GROUP | 1- Carcinogenic to Human |

Reproductive Toxicity : Not Classified.
Specific Target Organ Toxicity (Single Exposure) : Not Classified.
Specific Target Organ Toxicity (Repeated Exposure) : Not Classified.
Aspiration Hazards : Not Classified.
Symptoms/Effects after Inhalation : May cause Respiratory Irritation.
Symptoms/Effects after Skin Contact : Causes Severe Burns.
Symptoms/Effects after eye Contact : Causes Serious Eye Damage.
Symptoms/Effects after ingestion : Harmful if Swallowed.
Chronic Symptoms : May cause Cancer.

Section 12. ecological Information

TOXICITY:

Aquatic toxicity : None
Degradability : No relevant information available
Bioaccumulative : No relevant information available
Soil mobility : No relevant information available
Other Adverse Effects : No relevant information available

Section 13. Disposal Consideration

Waste Treatment Methods : Must not be disposed together with household garbage. Do not allow product to reach sewage system. Must be specially treated adhering to official regulations. 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.

Product/Packaging Disposable Recommendations: Dispose in safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

Section 14. Transport Information

UN NUMBERS:

UN0479

PROPER SHIPPING NAME:

Substance, Explosive, n.o.s., (Pyrodex Pellet) UN 0479

CLASS AND LABELING:

EXPLOSIVE 1.4C

Transport Document Description

: UN 0479, Secondary Pellet, 1.4 , II

PHMSA EXPLOSIVES EX-NUMBERS

: **EX2019032383**

Hazard Label (DOT)

: 1.4C Explosive

Packaging Group

: II Medium Danger



DOT Quantity Limitations Passenger/Aircraft Rail (49 CFR 173.27) : Forbidden.

DOT Quantity Limitations Cargo Aircraft only (49 CFR 175.75) : Forbidden.

DOT Vessel Stowage Location : The material may be stowed “on deck” or “under Deck” on a Cargo Vessel (up to 12 passengers)

DOT Vessel Stowage Other : Shade from Radiant Heat, Stowage Category “13” and, for on deck stowage, non metallic lining of closed cargo transport unit is required when not in effectively sealed, sift-proof packages; stowage category “10” permitted when effectively, sift proof-Packages.

Transport by Sea (IMDG) : UN-No (IMDG) 0479 FOR (1.4C)

PROPER SHIPPING NAME (IMDG) : Substance, Explosive, n.o.s., (PYRODEX PELLETT) UN 0479

Class (IMDG) : 1- EXPLOSIVES

AIR TRANSPORT (IATA)

UN - No (IATA) : **Forbidden.**

PROPER SHIPPING NAME (IATA) : Substance, Explosive, n.o.s., (PYRODEX PELLETT) UN 0479

Class (IATA) : 1- EXPLOSIVES

| | |
|---|---|
| PYRODEX (Granular and Pellets) | |
| All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory or are exempt | |
| SARA SECTION 311/312 Hazard Classes | Physical Hazards - Explosive |
| | Physical Hazards - Oxidizer (Solid, Liquid or Gas) |
| | Health Hazards - Carcinogenicity |
| | Health Hazards - Acute Toxicity (Any Route of Exposure) |
| | Health Hazards - Specific Target Organ Toxicity (Single or Repeated exposure) |

Section 15. Regulatory Information

SARA 302/304

Composition/information on ingredients :No products were found.

SARA 311/312

Classification : Sudden Release of pressure, Immediate (acute) health hazard
Delayed (Chronic) Health Hazard.

Composition/information on ingredients

| NAME | % | FIRE HAZARD | SUDDEN RELEASE OF PRESSURE | REACTIVE | IMMEDIATE (ACUTE) HEALTH HAZARD | DELAYED (CHRONIC) HEALTH HAZARD |
|-------------------|-------------|-------------|----------------------------|----------|---------------------------------|---------------------------------|
| POTASSIUM NITRATE | Proprietary | YES | NO | NO | YES | YES |

State Regulations

Massachusetts : This material is listed.
New York : This material is listed.
New Jersey : This material is listed.
Pennsylvania : This material is listed.

Canada inventory : This material is not listed in DSL but is listed in NSDL.

International regulations

International lists : **Australia inventory (AICS)** : This material is listed or exempted.
: **China inventory (IECSC)** : This material is listed or exempted.
: **Japan inventory (ENCS): Not determined.**
: **Japan inventory (ISHL): Not determined.**
: **Korea inventory** : This material is listed or exempted.
: **Malaysia Inventory (EHS Register)** : Not determined.
: **New Zealand Inventory of Chemicals (NZIoC)** : Not determined.
: **Philippines inventory (PICCS)** : This material is listed or exempted.
: **Taiwan inventory (CSNN)** : This material is listed or exempted.

Section 16. Other Information

| | |
|----------------------------|---|
| HEALTH | 2 |
| FLAMMABILITY | 0 |
| PHYSICAL HAZARDS | 0 |
| PERSONAL PROTECTION | D |

The Customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A):



THE INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET IS BASED UPON AVAILABLE DATA AND BELIEVED TO BE CORRECT, HOWEVER, AS SUCH HAS BEEN OBTAINED FROM VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT IS GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE, AND CAN BE RELIED UPON. DIAMONDBACK INDUSTRIES, INC. HAS NOT ATTEMPTED TO CONCEAL IN ANY MANNER THE DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO SUCH. FURTHER, DANIEL OILFIELD TOOLS, INC. CANNOT ANTICIPATE NOR CONTROL THE MANY SITUATIONS IN WHICH THE PRODUCT OR THIS INFORMATION MAY BE USED. THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY OF EACH USER OF THE PRODUCT TO DETERMINE AND COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE. THIS INFORMATION IS GIVEN SOLELY FOR THE

PURPOSES OF SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSLY PROHIBITED.

FOR FURTHER INFORMATION CONTACT:

Ghassan R. Azar
Manager of Ballistics Engineering
Daniel Oilfield Tools, Inc.
7676 North Freeway
Ste 600
Houston, Texas 77037
U.S.A
Telephone: (713) 459-2550

SDS PREPARED BY: Ghassan R. Azar Date: 31-MAY-2019