SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier
Detonators, Class 1.4 Explosive
GHS Product Identifier
Detonators, Class 1.4 Explosive
Chemical Name
Not applicable
Trade name
Non-electric detonators, electric detonators,
detonating fuzes, EFI detonators, EBW detonators
CAS No.
Mixture
EINECS No.
Mixture
REACH Registration No.
Not applicable

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified use(s)
As Directed by Manufacturer Only
Uses advised against
Users are recommended to seek further advice.

1.3 Details of the supplier of the safety data sheet
Company Identification
Owen Oil Tools LP
Address
12001 County Road 1000 / P.O. Box 765 / Godley, TX 76044 USA
Telephone
(817) 551-0660
E-Mail (competent person)
info@ocsresponds.com

1.4 Emergency Telephone Number – ChemTel Inc.
Emergency Phone No. (800) 255-3924 , (813) 248-0585

SPECIAL NOTICE – EXPLOSIVE MATERIALS
PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES

The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.

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 to 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 the manufacturer before use.
SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Regulation (EC) No. 1272/2008 (CLP) - Explosive 4, Acute toxicity 3, STOT-repeat exposure 3, Environment Chronic 2 (2.1/4, 3.1/3, 3.9/2, 4.1/2)


2.2 Label elements

2.2.1 Label elements According to Regulation (EC) No. 1272/2008 (CLP)

GHS Product Identifier (EU)

Hazard pictogram(s)          Signal word(s)          DANGER

Hazard statement(s)           H204: Fire or projection hazard.
H301: Toxic if swallowed.
H360Df: May damage fertility or the unborn child.
H373: May cause damage to organs through prolonged or repeated exposure.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)   P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat, sparks, open flame, hot surfaces - No smoking.
P250: Do not subject to grinding/shock/.../friction.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P501: Dispose of contents/container to: Send to a licensed recycler, reclaimer or incinerator.


Hazard Symbol

Risk Phrases                   R2: Risk of explosion by shock, friction, fire or other sources of ignition.
R25: Toxic if swallowed.
R33: Danger of cumulative effects.
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R61: May cause harm to the unborn child.
R62: Possible risk of impaired fertility.

Safety Phrases                 S2: Keep out of the reach of children.
S16: Keep away from sources of ignition - No smoking.
S34: Avoid shock or friction.
S35: This material and its container must be disposed of in a safe way.
S36/39: Wear suitable protective clothing and eye/face protection.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S53: Avoid exposure - obtain special instructions before use.
S56: Dispose of this material and its container to hazardous or special waste collection point.
S60: This material and its container must be disposed of as hazardous waste.
S61: Avoid release to the environment. Refer to special instructions/Safety Data Sheets.
### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**EC Classification No. 1272/2008/EC**

<table>
<thead>
<tr>
<th>Hazardous ingredient(s)</th>
<th>%W/W</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>REACH Registration No.</th>
<th>Hazard pictogram(s) and Hazard statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclotetramethylene-tetranitramine (HMX)</td>
<td></td>
<td>2691-41-0</td>
<td>220-260-0</td>
<td>NA</td>
<td>2.1/1, 3.1/3(oral), H201, H301</td>
</tr>
<tr>
<td>Cyclotrimethylene-trinitramine (RDX)</td>
<td></td>
<td>121-82-4</td>
<td>204-500-1</td>
<td>NA</td>
<td>2.1/1; H201</td>
</tr>
<tr>
<td>Hexanitrostilbene (HNS)</td>
<td></td>
<td>20062-22-0</td>
<td>NA</td>
<td>NA</td>
<td>2.1/1, 3.1/4(oral); H201, H302</td>
</tr>
<tr>
<td>Pentaerythritol Tetranitrate (PETN)</td>
<td></td>
<td>78-11-5</td>
<td>201-084-3</td>
<td>NA</td>
<td>2.1; H200</td>
</tr>
<tr>
<td>2,6-bis(picrylamino)-3,5-dinitropyridine (PYX)</td>
<td></td>
<td>38082-89-2</td>
<td>NA</td>
<td>NA</td>
<td>2.1/1; H201</td>
</tr>
<tr>
<td>Aluminum</td>
<td></td>
<td>7429-90-5</td>
<td>231-072-3</td>
<td>NA</td>
<td>2.12/2, 2.10/1</td>
</tr>
<tr>
<td>Charcoal</td>
<td></td>
<td>7440-44-0</td>
<td>231-143-3</td>
<td>NA</td>
<td>None</td>
</tr>
<tr>
<td>Copper</td>
<td></td>
<td>7440-50-8</td>
<td>231-159-6</td>
<td>NA</td>
<td>4.1/1; H410</td>
</tr>
<tr>
<td>Graphite</td>
<td></td>
<td>7782-42-5</td>
<td>231-955-3</td>
<td>NA</td>
<td>3.3/3, 3.2/3; H319, H335</td>
</tr>
<tr>
<td>Iron</td>
<td></td>
<td>7439-89-6</td>
<td>231-096-4</td>
<td>NA</td>
<td>None</td>
</tr>
<tr>
<td>Lead Azide</td>
<td></td>
<td>13424-46-9</td>
<td>236-542-1</td>
<td>NA</td>
<td>2.1, 3.4/1A, 3.1/4*, 3.9/2, 4.1/1</td>
</tr>
<tr>
<td>Lead Styphnate</td>
<td></td>
<td>15245-44-0</td>
<td>239-290-0</td>
<td>NA</td>
<td>2.1/3.4/1A, 3.1/4*, 3.9/2*, 4.1/1</td>
</tr>
<tr>
<td>Potassium Nitrate</td>
<td></td>
<td>7757-79-1</td>
<td>231-818-8</td>
<td>NA</td>
<td>2.14/3; H272</td>
</tr>
<tr>
<td>Sulfur</td>
<td></td>
<td>7704-34-9</td>
<td>231-722-6</td>
<td>NA</td>
<td>2.7/2; H228</td>
</tr>
</tbody>
</table>
| TACOT (2,2',2'',4,4',4'',6,6',6''-nonanitro-m-
  terphenyl)                                   |      | 25243-36-1 | None   | NA                     | 2.1; H200                                 |

WHMIS Classification (Canada): Exempt under WHMIS.

2.3 Other hazards GHS Classification (USA): Hazardous under OSHA Hazard Communication Standard –HMIS: Health-2, Flammability-3 Reactivity – 3

2.4 Additional Information None
### EC Classification No. 67/548/EEC

<table>
<thead>
<tr>
<th>Hazardous ingredient(s)</th>
<th>%W/W</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>REACH Registration No.</th>
<th>Hazard pictogram(s) and Risk (R) Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclotetramethylene- tetranitramine (HMX)</td>
<td>2691-41-0</td>
<td>220-260-0</td>
<td>NA</td>
<td>E, Xn, R2, R25</td>
<td></td>
</tr>
<tr>
<td>Cyclotrimethylene- trinitramine (RDX)</td>
<td>121-82-4</td>
<td>204-500-1</td>
<td>NA</td>
<td>E, Xn, R2, R22</td>
<td></td>
</tr>
<tr>
<td>Hexanitrostilbene (HNS)</td>
<td>20062-22-0</td>
<td>NA</td>
<td>NA</td>
<td>E, Xn, R2, R22</td>
<td></td>
</tr>
<tr>
<td>Pentaerythritol Tetranitrate (PETN)</td>
<td>78-11-5</td>
<td>201-084-3</td>
<td>NA</td>
<td>E+; R3</td>
<td></td>
</tr>
<tr>
<td>2,6-bis(picrylamino)-3,5- dinitropyridine (PYX)</td>
<td>38082-89-2</td>
<td>NA</td>
<td>NA</td>
<td>E; R2</td>
<td></td>
</tr>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>231-072-3</td>
<td>NA</td>
<td>F; R15, R17</td>
<td></td>
</tr>
<tr>
<td>Charcoal</td>
<td>7440-44-0</td>
<td>231-143-3</td>
<td>NA</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>231-159-6</td>
<td>NA</td>
<td>R50/53</td>
<td></td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>231-955-3</td>
<td>NA</td>
<td>Xn; R36/37</td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td>7439-89-6</td>
<td>231-096-4</td>
<td>NA</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Lead Azide</td>
<td>13424-46-9</td>
<td>236-542-1</td>
<td>NA</td>
<td>E+, T, N; R3, R20/22, R33, R50/53, R61, R62</td>
<td></td>
</tr>
<tr>
<td>Lead Styphnate</td>
<td>15245-44-0</td>
<td>239-290-0</td>
<td>NA</td>
<td>E+; T, N; R3, R20/22, R33, R61, R62</td>
<td></td>
</tr>
<tr>
<td>Potassium Nitrate</td>
<td>7757-79-1</td>
<td>231-818-8</td>
<td>NA</td>
<td>O; R8</td>
<td></td>
</tr>
<tr>
<td>Sulfur</td>
<td>7704-34-9</td>
<td>231-722-6</td>
<td>NA</td>
<td>F; R11</td>
<td></td>
</tr>
<tr>
<td>TACOT (2,2',2'',4,4'',6,6'',6''- nonanitro-m-terphenyl)</td>
<td>25243-36-1</td>
<td>257-218-6</td>
<td>NA</td>
<td>E+, R3, R20, R22 (Estimate &gt;PETN)</td>
<td></td>
</tr>
</tbody>
</table>

### 3.3 Additional Information

- For full text of H phrases see section 16. For full text of R phrases see section 16. Non-Hazardous ingredients are not listed and make up the balance of the product.
SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation
Remove patient from exposure. Keep patient at rest and give oxygen if breathing difficult. If symptoms develop, obtain medical attention. Toxic if inhaled in quantity. Keep patient at rest and give oxygen if breathing difficult. Seek medical treatment. See Section 4.2 for blast injury information.

Skin Contact
Remove contaminated clothing immediately and drench affected skin with plenty of water, then wash with soap and water. If irritation (redness, rash, blistering) develops, get medical attention. See Section 4.2 for blast injury information.

Eye Contact
Particles may cause corneal injury. Remove any contact lenses. Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.

Eye Contact
Ingestion
May be toxic. If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting. Make victim drink plenty of water. Get immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Acute: Blast injuries may occur should product accidentally detonate or ignite. With all blast injuries, immediate medical treatment for trauma is essential for patient outcome. Blast trauma may take many forms, but will include skeletal and soft tissue injuries. These injuries may not be immediately apparent. FOR ANY ACCIDENT INVOLVING DETONATION OR IGNITION OF PRODUCT, EMERGENCY TREATMENT IS REQUIRED.

Delayed and chronic effects: Cardiac and vascular effects, neurological effects.

4.3 Indication of the immediate medical attention and special treatment needed

Treat symptomatically. Exposure involving nitrated organics may require significant intervention to prevent circulatory collapse.

SECTION 5: FIRE-FIGHTING MEASURES

Explosive Material. Flash Point = Not applicable. Explosive limit ranges = Not applicable.

5.1 Extinguishing media

Suitable Extinguishing Media
Extinguish preferably with dry chemical, foam or water spray.

Unsuitable Extinguishing Media
None known.

5.2 Special hazards arising from the substance or mixture

Explosion risk in case of fire. DO NOT fight fire when fire reaches explosives. Do not attempt to directly fight established or slow smoldering fires as an explosion is possible. In case of fire, evacuate area.

5.3 Advice for fire-fighters

In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Warn everybody – explosion hazard. Evacuate the area of non-essential personnel. Ensure full personal protection (including respiratory protection) during removal of spillages.

6.2 Environmental Precautions

Ventilation recommended.
6.3 Methods and material for containment and cleaning up
Warn everybody – explosion hazard. If safe to do so: Put on protective equipment before entering danger area. Transfer to a container for disposal or recovery.

6.4 Reference to other sections
See Also Section 7, 8, 13.

6.5 Additional Information
None

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid inhalation of high concentrations of vapors. Keep away from oxidizing agents. Keep away from fire, sparks and heated surfaces - no smoking.

7.2 Conditions for safe storage, including any incompatibilities
Protect from sunlight. Store in a well-ventilated place. Do not use or store near heat or open flame. Do not store and transport with oxidizers etc.
Storage Temperature
Consult the supplier.
Storage Life
Consult the supplier.
Incompatible materials
Oxidizing agents, flammable substances.

7.3 Specific end use(s)
Consult the supplier.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits (1)

<table>
<thead>
<tr>
<th>SUBSTANCE.</th>
<th>CAS No.</th>
<th>LTEL (8 hr TWA ppm)</th>
<th>LTEL (8 hr TWA mg/m³)</th>
<th>STEL (ppm)</th>
<th>STEL (mg/m³)</th>
<th>Note:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclotetramethylene-tetranitramine (HMX)</td>
<td>2691-41-0</td>
<td>NE</td>
<td>0.5 mg/m³</td>
<td>NE</td>
<td>NE</td>
<td>ACGIH Levels</td>
</tr>
<tr>
<td>Cyclotrimethylene-trinitramine (RDX)</td>
<td>121-82-4</td>
<td>NE</td>
<td>0.5 mg/m³</td>
<td>NE</td>
<td>NE</td>
<td>ACGIH Levels</td>
</tr>
<tr>
<td>Penterythritol Tetranitrate (PETN)</td>
<td>78-11-5</td>
<td>NE</td>
<td>1.5 mg/m³ (skin)</td>
<td>NE</td>
<td>NE</td>
<td>ACGIH Levels</td>
</tr>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>NE</td>
<td>10mg/m³</td>
<td>NE</td>
<td>NE</td>
<td>ACGIH Levels</td>
</tr>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>NE</td>
<td>0.2mg/m³ (fume), 1mg/m³ (dusts and mists)</td>
<td>NE</td>
<td>NE</td>
<td>ACGIH Levels</td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>NE</td>
<td>2 mg/m³</td>
<td>NE</td>
<td>NE</td>
<td>ACGIH Levels</td>
</tr>
<tr>
<td>Lead Azide</td>
<td>13424-46-9</td>
<td>NE</td>
<td>0.05 as Pb (2)</td>
<td>NE</td>
<td>NE</td>
<td>ACGIH Levels</td>
</tr>
<tr>
<td>Lead Styphnate</td>
<td>15245-44-0</td>
<td>NE</td>
<td>0.05 as Pb (2)</td>
<td>NE</td>
<td>NE</td>
<td>ACGIH Levels</td>
</tr>
</tbody>
</table>

(1) – Components not listed have no Occupational Exposure Limits within the US.
(2) – Listed under lead compounds.

OELs are not available for non-listed components.

8.1.2 Biological limit value

<table>
<thead>
<tr>
<th>Limit value type (country of origin)</th>
<th>SUBSTANCE.</th>
<th>CAS No.</th>
<th>Biological limit value</th>
<th>Note:</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
8.1.3 PNECs and DNELs

PNECs and DNELs - Not available.

8.2.2 Personal protection equipment

<table>
<thead>
<tr>
<th>Section</th>
<th>Protection Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respirators</td>
<td>Wear suitable respiratory protective equipment if exposure to levels above the occupational exposure limit is likely.</td>
</tr>
<tr>
<td>Eye Protection</td>
<td>Safety spectacles.</td>
</tr>
<tr>
<td>Gloves</td>
<td>Wear protective gloves.</td>
</tr>
<tr>
<td>Body protection</td>
<td>Wear suitable protective clothing and gloves.</td>
</tr>
</tbody>
</table>

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Metal shells containing explosives, with or without insulated metal leg wires.</td>
</tr>
<tr>
<td>Color</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Odor Threshold (ppm)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point (°C) / Freezing Point (°C)</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point (°C)</td>
<td>Explosive limit ranges</td>
</tr>
<tr>
<td>Auto Ignition Temperature (°C)</td>
<td>Decomposition Temperature (°C)</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Explosive</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density (Air=1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility (Water)</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition Coefficient (n-Octanol/water)</td>
<td>Not available</td>
</tr>
</tbody>
</table>

9.2 Other information

Volatile Organic Chemical (VOC) Content – Not available.

**SECTION 10: STABILITY AND REACTIVITY**

10.1 Reactivity

May react with incompatible materials. See Sections 7 and 10.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Can react violently if in contact with - Oxidizing agents, Flammable Agents

10.4 Conditions to avoid

Avoid contact with heat and ignition sources. Avoid shock, impact, friction and rough handling. Risk of explosion by shock, friction, fire or other sources of ignition.

10.5 Incompatible materials

Can react violently if in contact with - Oxidizing agents, Flammable Agents

10.6 Hazardous Decomposition Product(s)

Carbon monoxide, Carbon dioxide, Nitrogen oxides, Metal fumes and oxides. Thermal decomposition will evolve toxic, irritant and flammable vapors.
SECTION 11: TOXICOLOGICAL INFORMATION

### SUBSTANCE (3) CAS No. LD_{50} (Oral, Rat) LC_{50} (Inhalation, Rat) LD_{50} (Dermal, Rat)

<table>
<thead>
<tr>
<th>Substance (3)</th>
<th>CAS No.</th>
<th>LD_{50} (Oral, Rat)</th>
<th>LC_{50} (Inhalation, Rat)</th>
<th>LD_{50} (Dermal, Rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclotetramethylene-tetranitramine (HMX)</td>
<td>2691-41-0</td>
<td>1500 mg/kg (mouse)</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Cyclotrimethylene-trinitramine RDX)</td>
<td>121-82-4</td>
<td>59 mg/kg (mouse)</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Pentaerythritol Tetranitrate (PETN)</td>
<td>78-11-5</td>
<td>1660 mg/kg</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Iron</td>
<td>7439-89-6</td>
<td>30 g/kg</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Lead Styphnate</td>
<td>15245-44-0</td>
<td>650 mg/kg (4)</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Potassium Nitrate</td>
<td>7757-79-1</td>
<td>3540 mg/kg</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Sulfur</td>
<td>7704-34-9</td>
<td>NE</td>
<td>2,520 ppm/1 hour</td>
<td>NE</td>
</tr>
</tbody>
</table>

(3) – Components not listed have no available acute toxicity data.
(4) – References basic lead styphnate.

11.1 Information on toxicological effects

#### 11.1.2 Mixtures

**Acute toxicity**
- Toxic if swallowed. Ingestion may cause irritation of the gastrointestinal tract.

**Irritation**
- May cause irritation.

**Corrosivity**
- Not to be expected.

**Repeated dose toxicity**
- Expected to be similar to single exposures. **Repeat dose studies have shown the potential to cause neurotoxicity. Developmental impairment.** Methaemoglobinaemia

**Carcinogenicity**
- No data.

**Mutagenicity**
- No data.

**Toxicity for reproduction**
- Adverse reproductive effects.

11.2 Other information

### SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

- Harmful to aquatic life. Harmful to algae.

12.2 Persistence and degradability

- Moderately/partially biodegradable. Persistent.

12.3 Bioaccumulative potential

- Moderately/partially biodegradable.

12.4 Mobility in soil

- The product has moderate mobility in soil.

12.5 Results of PBT and vPvB assessment

- No data.

12.6 Other adverse effects

- No data. Consult the supplier.

### SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

- Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

13.2 Additional Information

- None
SECTION 14: TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Land transport (ADR/RID) (c)(d)</th>
<th>Land transport (Within USA) (c)(d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number(s) UN0455, UN 0456, UN0367, UN0410</td>
<td>UN number(s) UN0455, UN 0456, UN0367, UN0410</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td>Proper Shipping Name</td>
</tr>
<tr>
<td>Detonators, non-electric (0455)</td>
<td>Detonators, non-electric (0455)</td>
</tr>
<tr>
<td>Detonators, electric (0456)</td>
<td>Detonators, electric (0456)</td>
</tr>
<tr>
<td>Fuzes, detonating (0367)</td>
<td>Fuzes, detonating (0367)</td>
</tr>
<tr>
<td>Fuzes, detonating (0410)</td>
<td>Fuzes, detonating (0410)</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>Transport hazard class(es)</td>
</tr>
<tr>
<td>1.4S (0455, 0456, 0367)</td>
<td>1.4S (0455, 0456, 0367)</td>
</tr>
<tr>
<td>1.4D (0410)</td>
<td>1.4D (0410)</td>
</tr>
<tr>
<td>Packing Group II</td>
<td>Packing Group II</td>
</tr>
<tr>
<td>Hazard label(s) Explosive 1.4S or 1.4D</td>
<td>Hazard label(s) Explosive 1.4S or 1.4D</td>
</tr>
<tr>
<td>Environmental hazards None</td>
<td>Environmental hazards None</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Special precautions for user</td>
</tr>
<tr>
<td>Sea transport (IMDG) (c)(d)</td>
<td>Air transport (ICAO/IATA) (c)(d)</td>
</tr>
<tr>
<td>UN number(s) UN0455, UN 0456, UN0367, UN0410</td>
<td>UN number(s) UN0455, UN 0456, UN0367, UN0410</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
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<td>Detonators, non-electric (0455)</td>
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</tr>
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<tr>
<td>1.4D (0410)</td>
<td>1.4D (0410)</td>
</tr>
<tr>
<td>Packing Group II</td>
<td>Packing Group II</td>
</tr>
<tr>
<td>Marine Pollutant No</td>
<td>Environmental hazards None</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Special precautions for user</td>
</tr>
</tbody>
</table>

(c) – Consult with transport provider.
(d) – Check relevant regulations for Special Provisions.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
15.1.1 EU regulations

<table>
<thead>
<tr>
<th>Authorisations and/or restrictions on use</th>
<th>Consult the supplier.</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Union (EINECS/ELINCS)</td>
<td>All chemicals listed.</td>
</tr>
<tr>
<td>German WGK number</td>
<td>2</td>
</tr>
</tbody>
</table>

15.1.2 National regulations

USA

<table>
<thead>
<tr>
<th>TSCA (Toxic Substance Control Act)</th>
<th>All chemicals listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA 311/312 - Hazard Categories</td>
<td>Acute Health, Chronic Health, Fire, Reactive</td>
</tr>
</tbody>
</table>
SARA 302 - Extremely Hazardous Substances
SARA 313 - Toxic Chemicals
CERCLA (Comprehensive Environmental Response Compensation and Liability Act)
CAA (Clean Air Act 1990)
CWA (Clean Water Act)
State Right to Know Lists
Proposition 65 (California) - This product contains the following substance(s) known to the state of California to cause cancer and/or reproductive harm; Lead salts.

Canada

WHMIS Classification
Canada (DSL/NDSL)
Canada Ingredient Disclosure List (CIDL)

15.2 Chemical Safety Assessment

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

LEGEND

ACGI American Conference of Governmental Industrial Hygienists
AIICS Australian Inventory of Chemical Substances
ANSI American National Standards Institute
atm atmosphere (pressure unit)
BOD biological oxygen demand
CAS Chemical Abstracts Service
CC closed cup
CDTA Chemical Drug and Trafficking Act
COC Cleveland Open Cup
COD chemical oxygen demand
coeff. coefficient
CFR Code of Federal Regulations
CPR cardio-pulmonary resuscitation
DEA Drug Enforcement Agency
DOT Department of Transportation
DSCL Dangerous Substances Classification and Labeling
EEC European Economic Community
FDA Food and Drug Administration
HMIS Hazardous Materials Information System
IARC International Agency for Research on Cancer
IDLH immediate danger to life or health
kg kilogram

SDSCL

Sara

Superfund Amendments and Reauthorization Act
STEL short-term exposure limit
SUSDP Standard for the Uniform Scheduling of Drugs and Poisons (Australia)
TCC Tagliabue Closed Cup
TDG Transportation of Dangerous Goods
TPQ threshold planning quantity

Page: 10/12 Expiration Date: 6 June 2014
References: RTECS, CAS Registry, EINECS/ESIS, Casarett & Doull's Toxicology, Goldfranks's Toxicological Emergencies, Manufacturer Information

Risk Phrases and Safety Phrases
R2: Risk of explosion by shock, friction, fire or other sources of ignition.
R3: Extreme risk of explosion by shock, friction, fire or other sources of ignition.
R9: Explosive when mixed with combustible material.
R20/21: Harmful by inhalation and in contact with skin.
R22: Harmful if swallowed.
R25: Toxic if swallowed.
R33: Danger of cumulative effects.
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R61: May cause harm to the unborn child.
R62: Possible risk of impaired fertility.
S2: Keep out of the reach of children.
S13: Keep away from food, drink and animal feedingstuffs.
S16: Keep away from sources of ignition - No smoking.
S23: Do not breathe fumes.
S24/25: Avoid contact with skin and eyes.
S34: Avoid shock or friction.
S35: This material and its container must be disposed of in a safe way.
S36/39: Wear suitable protective clothing and eye/face protection.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Hazard statement(s) and Precautionary statement(s)
H204: Fire or projection hazard.
H272: May intensify fire; oxidizer.
H301: Toxic if swallowed.
H302: Harmful if swallowed.
H312: Harmful in contact with skin.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat, sparks, open flame, hot surfaces - No smoking.
P240: Ground/bond container and receiving equipment.
P250: Do not subject to grinding/shock/…/friction.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P270: Do not eat, drink or smoke when using this product.
P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P301 + P310: IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P305: IF IN EYES: Get immediate medical attention.
P501: Dispose of contents/container to: Send to a licensed recycler, reclaimed or incinerator.
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