1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier
SERIES 4000 ELECTRIC DETONATOR
Daveydet MI (medium intensity), delay, short delay and instantaneous;
Daveydet HI (High intensity) instantaneous; and Daveydet SR (seismic)
detonators.

1.2 Use of the Product:
Explosive initiation - industrial use
These detonators are not suitable for use in gassy mines. Daveydet P
detonators should be used in those conditions.

1.3 Details of the Supplier of the MSDS:
Name: EPC-UK EXPLOSIVES
Address: ROUGH CLOSE WORKS
          CARNFIELD HILL
          SOUTH NORMANTON
          ALFRETON
          DERBYSHIRE, DE55 2BE
Telephone Number: 01773 832253
Contact e-mail: info@epc-groupe.co.uk

1.4 Emergency Telephone Number: 01773 832253

2. HAZARD IDENTIFICATION

2.1 Classification of Mixture
Classification According to EC Regulation 1272/2008
Detonators are explosive articles.
without packaging electric detonators are classified H201 (explosive:
mass explosion hazard)

2.2 Label elements
According to EC Regulation 1272/2008

Hazard Pictogram

Signal word Danger
Hazard Statement H201 : explosive : mass explosion hazard
Precautionary statements P210 : keep away from heat / sparks / open flames / hot surfaces - no
smoking  
P250: do not subject to grinding / shock / friction  
P372: explosion risk in case of fire  
P401: store at a temperature between -10 and 50°C  
P501: dispose of contents / container according to the rules relating to the explosives  

2.3 Other Hazards  
Not applicable: the explosive material is not accessible in normal use  

3. COMPOSITION/INFORMATION ON THE INGREDIENTS  

3.1 Substances  
Metal casing enclosing:  
- Primary explosive ≤ 0.2g  
- And/or Secondary explosive ≤ 0.8g  
- And/or Delay composition  
- And a priming cap coated with a pyrotechnic paste  
A plastic plug is crimped on to the open end of the casing used for passing the electrical wires through  
Pyrotechnical substance TNT mass equivalent: 1 g equivalent TNT per detonator  

4. FIRST AID MEASURES  

4.1 Description of First Aid Measures  
General  
Protect yourself, notify emergency responders and take the victim to safety.  

4.2. Most Important Symptoms and Effects, Both Acute and Delayed  
Not applicable  

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed  
For injuries due to splinters, provide first aid then request medical advice if necessary.  
For explosions nearby, check hearing.  
Treat symptoms in all cases.
5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media: None

5.2 Special Hazards Arising from Product:
- Set up a safety perimeter.
- Do not personally intervene to stop a pyrotechnics fire.
- Whenever possible, measures should be taken to prevent the fire from spreading.
- After the fire has been extinguished, the site where it took place may only be entered after ascertaining that the entire area has cooled completely.

5.3 Advice for Firefighters: When intervening, wear special fire prevention equipment (respiratory device, helmet, etc.).

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:
Pyrotechnic materials spilled accidentally must be collected by authorised personnel, so that they can be disposed of and if necessary, destroyed (see waste handling, section 13). Avoid any impacts, friction, or anything that may lead to a spark or electrostatic discharge.
- Keep away from incompatible chemicals.
- If there is broken packaging around pyrotechnic items, transfer the items into a wood or cardboard container, taking care to avoid damaging them (impact, spark, heat, etc.).

6.2 Environmental Precautions: Not applicable

6.3. Methods and material for containment and cleaning up: Not applicable

6.4. Reference to other sections: Not applicable

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling:
- Handle with care, avoiding impacts, friction and exposure to heat, naked lights, electromagnetic radiation (including mobile phones), electrostatic charges, etc.
- Any use not covered in the technical instructions or by untrained personnel is prohibited.
- No smoking.

7.2 Conditions for safe storage, including any:
- Storage temperature: -10 °C to +50°C
- Protect from humidity. Generally storage of detonators must be licenced.
## MATERIAL SAFETY DATA SHEET

**EXP 07**

**DAVEYDET ELECTRIC DETONATORS**

<table>
<thead>
<tr>
<th>DATE</th>
<th>06/02/2017</th>
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<tbody>
<tr>
<td>AUTHORISED</td>
<td>A Kenny</td>
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<tr>
<td>PAGE</td>
<td>4 OF 7</td>
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<tr>
<td>ISSUE</td>
<td>7</td>
</tr>
<tr>
<td>Supersedes</td>
<td>6</td>
</tr>
</tbody>
</table>

### incompatibilities:

in accordance with the Explosives Regulations 2014

COMAH storage limits for Explosives depends on the classification:

<table>
<thead>
<tr>
<th>Class</th>
<th>Lower Tier</th>
<th>Upper Tier</th>
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<tbody>
<tr>
<td>Class 1.1</td>
<td>10 tonnes;</td>
<td>50 tonnes;</td>
</tr>
<tr>
<td>Class 1.4</td>
<td>50 tonnes;</td>
<td>200 tonnes</td>
</tr>
</tbody>
</table>

### 7.3 Specific end use(s)

Not applicable

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

### 8.1 Control Parameter:

Not affected

### 8.2 Exposure controls

Respiratory protection: Do not inhale the smoke after a fire has started.
- Hand protection: wearing gloves recommended
- Eye protection: wearing goggles recommended
- Hearing protection: close to an explosion, wearing hearing protection appropriate for the distance recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Basic physical and chemical properties

<table>
<thead>
<tr>
<th>(s) Explosive properties</th>
<th>Maximum no fire current</th>
<th>Medium intensity detonators</th>
<th>High intensity detonator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable - article</td>
<td>0.65 Amps</td>
<td>4.2 Amps</td>
<td></td>
</tr>
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</table>

### 9.2 Other information

Not applicable

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity:

Not applicable

### 10.2 Chemical Stability

Stable within the storage temperatures recommended in section 7 and within the item’s usage limitations (expiration date)

### 10.3 Possibility of Hazardous Reactions

Not applicable

### 10.4 Conditions to avoid

Avoid any exposure to high temperatures, impacts, friction, electrostatic discharges or stray currents

### 10.5 Incompatible materials

Acids and alkalis

### 10.6 Hazardous Decomposition Products:

Fumes contain lead.
Possible release of oxides of carbon and nitrogen.
11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
   (a) acute toxicity
   (b) skin corrosion / irritation
   (c) Serious eye damage / irritation
   (d) Respiratory or skin sensitisation
   (e) Germ Cell Mutagenicity
   (f) carcinogenicity
   (g) reproduction toxicity
   (h) STOT – single exposure
   (i) STOT – repeated exposure
   (j) aspiration hazard

No hazards identified for the item

12. ECOLOGICAL INFORMATION

12.1 Toxicity: No hazards identified for the item

12.2 Persistence and Degradability: No hazards identified for the item

12.3 Bioaccumulation potential: No hazards identified for the item

12.4 Mobility in soil No hazards identified for the item

12.5 Result of PBT and vPvB Assessment: No hazards identified for the item

12.6 Other Adverse Effects No hazards identified for the item
13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:
Product disposal
Do not place in waste bins, drains, or landfill. Processing and destruction require specific procedures and must be covered in a special study that takes into account the product's condition and treatment of the waste after destruction. This operation must be carried out by trained, authorised personnel in approved areas. All materials contaminated by pyrotechnic materials from the item should also be considered pyrotechnic waste. See the HSE/CBI-EIG Guidance

Container Disposal:
While packaging may often be destroyed by burning, great care must be taken to ensure there are no detonators remaining inside.

14. TRANSPORT INFORMATION

14.1 UN Number :
UN 0030
UN 0255
UN 0456

14.2 UN Proper Shipping Name :
Detonators, Electric, for Blasting
Detonators, Electric, for Blasting
Detonators, Electric, for Blasting

14.3 Transport Hazard Classes:
1.1B
1.4B
1.4S

14.4 Packing Group :
Not applicable
Not applicable
Not applicable

14.5 Environmental Hazards
Not applicable
Not applicable
Not applicable

14.6 Special Precautions for User
ADR Specifics (road) None
IATA specifics (Air) Forbidden
IMDG specifics (sea) None
Cargo aircraft only
None

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable
Not applicable
Not applicable

15. REGULATORY INFORMATION
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

UK Legislation: Carriage of Dangerous Goods Regulations 2009, as amended – implementing ADR  
Classification (Hazard Information and Packaging for Supply) Regs 2009, as amended.  
Control of Substances Hazardous to Health regs 2002, as amended  
The Explosives regulation 2014, as amended  
Control of Major Accident Hazard Regulations 2015  
EC Regulations  
Registration Evaluation, Authorisation and Restriction of Chemicals Regulations 2006, as amended  
Classification Labelling and Packaging Regulations 2008, as amended

15.2 Chemical Safety Assessment  
Not applicable

16. OTHER INFORMATION

(a) Changes

<table>
<thead>
<tr>
<th>Issue</th>
<th>Issue Date</th>
<th>Changes</th>
</tr>
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<tbody>
<tr>
<td>7</td>
<td>06/02/2017</td>
<td>Re-written</td>
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</tbody>
</table>

(b) Abbreviations and acronyms
(c) References
(d) Evaluation method for mixtures: Not applicable
(e) Meaning of Hazard Phrases and Precautionary statements

   **Meanings of Hazard Phrases**
   H201: explosive: mass explosion hazard
   
   **Meanings of Precautionary Statements**
   P210: keep away from heat / sparks / open flames / hot surfaces - no smoking
   P250: do not subject to grinding / shock / friction
   P372: explosion risk in case of fire
   P401: store at a temperature between -10 and 50°C
   P501: dispose of contents / container according to the rules relating to the explosives

(f) Advice on training
   Users of detonators and other explosives should undergo suitable training, e.g. shot firer’s course.
   Contact EPC-UK for availability of courses

Notice: FOR FURTHER INFORMATION CONTACT  
EPC-UK EXPLOSIVES EXPLOSIVE ENGINEERING DEPARTMENT

For further information contact the Technical Service Dept at  
EPC-UK Explosives Venture Crescent Alfreton  Derbyshire  DE55 7RA  
Tel 01773 832253  Fax 01773 837683