

**MATERIAL SAFETY DATA SHEET**

MSDS have been prepared in according to regulation of safety data sheets on hazardous substances and mixtures (13.12.2014-29204 official newspaper)

**Product:** Kapeksdet NonElectric Detonators

**MSDS Number** : GBF-019  
**Date of Issue** : 04.01.2017  
**Rev. Number** : 01  
**Rev. Date** : 31.10.2018  
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**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identification** : Kapeksdet NonElectric Detonators  
**Trade name** : Kapeksdet LP, Kapeksdet MS, Kapeksdet SD, Kapeksdet DUAL  
**Usage of Product** : Kapeksdet electric detonator systems has been designed for use in underground mines, quarries and open field mining areas without explosion risk of methane or coal powder. NonElectric detonators system consists of the following components;

- Down through hole detonators: Kapeksdet LP, Kapeksdet MS
- Surface connection detonators: Kapeksdet SD
- Kapeksdet MS (In-hole) and Kapeksdet SD (surface) detonators formed by a combination of the capsule on both sides - Kapeksdet DUAL

**Name of Producer** : Kapeks Uretim Patlayıcı Maddeler Tic. Ltd. Sti.  
Isci Blokları Mah. Mevlana Bulv. Ege Plaza Is Merkezi  
No:182B Kat:22 No:100 Cankaya/Ankara/TURKEY

**Phone** : +90 312 473 74 88  
**Fax** : +90 312 473 61 51  
**E-mail** : kapeks@kapeks.com.tr

**Emergency Phone Number** : +90 312 473 74 88 +90 376 518 26 53  
**National Poison Information Center** : 114  
**Emergency Health Services** : 112

**2. HAZARDS IDENTIFICATION****Classification of the Mixture**

Regulation on the Classification Packaging and Labelling of Dangerous Substances;  
E;R2: Explosives, shock, friction, fire or explosion risk in contact with other sources of ignition  
Regulation on Classification, Labelling and Packaging of substances and mixtures;  
Explosive 1.1- H201: Explosive; mass explosion damage

**Labelling Elements**

**Warning Sign:** Danger

**Hazard Statement;**

H201 : Explosive; mass explosion damage

**Precautionary Statements Precaution;**

P210 : Keep away from heat / sparks / flames / hot surfaces.- Smoking isn't allowed

P230 : Keep wet

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P240 : Put the container and outside packaging on the ground and connect  
P250 : Do not expose to grinding / shock / friction  
P280 : Wear protective gloves / protective clothing / eye protection / face protection

**Precautionary Statements Intervention;**

P370+P380 : In case of fire evacuate the area  
P372 : In case of fire risk of explosion  
P373 : If fire reaches explosives DO NOT FIRE RESPONSE

**Precautionary Statements Storage;**

P401 : Store in appropriate storage conditions

**Precautionary Statements Disposal;**

P501 : Dispose the contents and container according to the procedure with the expert control

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance	%(w/w)	CAS No	EC No	CPL- Classification	CLP-Classification
PETN	-	78-11-5	201-084-3	E;R3	Unstable Explosive-H200
Lead Azide	-	13424-46-9	13424-46-9	E;R3 Cat.1-R61 Cat.3-R62 Xn;R20/22 R33 N;R50/53	Unstable Explosive-H200 Reproductive Sys. Tox. Cat. 1 A-H360 Df Acute Tox. 4-H332 Acute Tox. 4-H302 Stot Re. 2-H373 Acute aquatic 1-H400 Chronic aquatic 1-H410
Lead oxide (II, IV)	-	1314-41-6	215-235-6	-	Reproductive Sys. Tox. Cat. 1 A-H360 Df Acute Tox. 4-H332 Acute Tox. 4-H302 Stot Re. 2-H373 Acute aquatic 1-H400 Chronic aquatic 1-H410
Silicon	-	7440-21-3	7440-21-3	-	Flammable solid cat. 2-H228
Iron	-	7439-89-6	231-096-4	-	Flammable solid cat. 2-H228 Self-heating cat. 1- H251

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Antimony	-	7440-36-0	231-760-3	Not classified as dangerous	Carcinogenic cat. 2 H351
Potassium permanganate	-	7722-64-7	231-760-3	O;R8 Xn;R22 N;R50/53	Ox. Solid cat.2-H272 Acute Tox. cat.4-H302 Acute aquatic 1-H400 Chronic aquatic 1-H410
Tin oxide	-	18282-10-5	242-159-0	Not classified as dangerous	Chronic aquatic 4-H413
Barium peroxide (II)	-	1304-29-6	215-128-4	O;R28 Xn;R20/22	Ox. Solid cat.2-H272 Acute Tox. orally cat.4-H302 Acute Tox. Resp. cat.4-H332
Lead (II) trinitron resorcinol oxide	-	15245-44-0	239-290-0	E;R3 Toxic for reproduction Cat.1-R61 Toxic for reproduction Cat.3-R62 Xn;R20/22 R33 N;R50/53	Unstable Explosive -H200 Acute Tox.4-H302 Acute Tox.4-H332 Toxic for reproduction Cat.1 A-H360 Df Stot Re. 2-H373 Acute aquatic 1-H400 Chronic aquatic 1-H410
Octogen (HMX)	-	2691-41-0	220-260-0	T;R24 Xn;R22 E;R2	Explosive 1.1-H201 Acute Tox.4-H302 Acute Tox.3-H311
Aluminum Powder	-	7429-90-5	231-072-3	F;R15 R17	Pirofobik solid 1-H250 Flammable contact with water Gas generating 2-H261

#### 4. FIRST AID MEASURES

Do not need to first aid at normal conditions.

**Ingestion** : N/A

**Eye contact** : N/A

**Inhalation** : Person removed from the area immediately, get fresh air should be provided and medical intervention should be done.

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**First aid measures** : Standard washing agents.

**Clinical Recommendation** : Long-term exposure the explosion smoke might cause lead poisoning. Medical help should be taken.

**5. FIRE - FIGHTING MEASURES**

**Product Specific Hazards** : Explosives. Risk of explosion when exposed to fire. Relieve the environment in case of fire involving the capsule. DO NOT ATTEMPT TO FIGHTING.

**Hazardous Combustion Products** : Toxic gases containing lead is released during combustion. All personnel should be immediately removed from the environment is collected in a safe place.

**Instructions for Firefighters** : If capsules involc the fire, do not try to get detonators. All personnel should be immediately removed from the area. If capsules do not involve the fire, move them from a safe distancde and safe place from fire. Fire crews must wear appropriate safety clothing for breathing.

**Firefighting Media** : Permitted to use all standart fire-fighting equipment.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions** : Eliminate sources of ignition that could cause fire.

**Environmental precautions**: Try to stop the leak without being exposed to any dangers. Avoid contaminating sewers and drinking water. Inform the authorities in case of mix sewer or underground water.

**Cleaning and Disposal** : Damaged or unusable capsules should be kept in a special place in a box, trained person shoud done it. If there are any problems, consulted the manufacturer.

**7. HANDLING AND STORAGE**

**Transport;**

**Technical measures** : Class 1.1B explosives. It should be moved carefully. There is a risk of explosion.

**Precautions** : Fire source should not be in the storage area. flame, keep away from the shock and friction.

**Safe handling advice:** Eating and drinking is prohibited while working. Explosives should be transported by according to rule 87/12028. Explosive should be stored dry and ventilated area with legal permission.

**Storage** : Explosives should be stored by according to rule 87/12028. Explosive should be stored dry and ventilated area with legal permission.

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**8. EXPOSURE CONTROLS / PERSONEL PROTECTION**

**Respiratory Protection** : N/A  
**Hand Protection** : N/A  
**Eye Protection** : Suitable safety goggles should be used  
**Skin Protection** : N/A

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Physical form** : Shock tube including explosives and connected detonators with rubber sleeve  
**Colour** : Aluminum shell and shock tube green or yellow depending on the type  
**Odor** : N/A  
**Boiling point / boiling range** : N/A  
**Melting point / melting range** : N/A  
**Flash point** : N/A  
**Flammability** : Explosive, keep away from sources of ignition  
**Ignition** : N/A  
**Explosive properties** : High, mass explosion damage  
**Vapour pressure** : N/A  
**Relative density** : N/A  
**Solubility** : Insoluble  
**Evaporation Rate** : N/A  
**Viscosity** : Solid

**10. STABILITY AND REACTIVITY**

**Stability** : Stable at normal conditions  
**Fire Sensitivity** : In case of fire danger for explosion  
**Conditions to Avoid** : Shock, friction, fire, sparks exposed to temperature

**11. TOXICOLOGICAL INFORMATION**

Using according to MSDS it should not affect staff in a negative way. If it is stored in a place where is not ventilated well may cause hemoglobin fall, anemia and effects on the nervous system.

**12. ECOLOGICAL INFORMATION**

It has not identified any toxicological risks arising from the capsule

**Decay period** : N/A

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**Bioaccumulation** : N/A  
**Ecotoxicity** : N/A

**13. DISPOSAL CONDITIONS**

**Waste Disposal** : Explosive waste must be disposed in blasting holes on mines or it must be disposed by burning in the explosives test site.

**Waste disposal for the others;**

Material : Burning or blasting in controlled area  
Mixture : Burning supervision of expert  
Contaminated packaging material with explosive : Burning according to procedure

**Disposal Methods;**

Burning : It should be burnt by expert person according to the waste disposal regulations  
Recycling : No  
Flush : According to the waste disposal regulations

**14. TRANSPORT INFORMATIONS**

**UN Name** : Nonelectric detonators for blasting  
**UN Number** : UN 0500  
**IMDG (sea) Code/Class** : 1.4 S  
**Packing Group** : -  
**RID/ADR (road/rail)** : 1.4 S  
**Packing Group** : -  
**IATA (Air)** : 1.4 S  
**Packing Group** : -

In transportation of explosive materials must be considered compliance with the requirement of Regulation No. 87/12028 or if needed international hazardous materials packaging agreements.

**15. REGULATORY INFORMATIONS**

Regulation on the compilation of safety data sheets of the Dangerous Substances and Preparations  
Regulation on Classification of Dangerous Substances and Preparations, Packaging and Labelling  
Regulation on Classification, Labelling and Packing of substances and mixtures  
Regulation on the Safety Data Sheets of Hazardous Substances and Mixtures  
Regulations on the Transport of Dangerous Materials by highway  
Regulation no 87/12028

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**16. OTHER INFORMATIONS****Risk Phrases;**

- R8 : Contact with combustible material may cause fire
- R15 : Easy to remove flammable gases in contact with water
- R17 : Flammable in air
- R20/22: Harmful by inhalation and ingestion
- R22 : Harmful if swallowed
- R24 : Toxic in contact with skin
- R33 : Danger of cumulative effects
- R50/53: 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

**Expressions harmfulness;**

- H200 : Unstable explosive
- H201 : Explosive, mass explosion damage
- H228 : Flammable solid
- H250 : May cause flash fire contact with air
- H251 : Self heats, flammable
- H261 : Release flammable gases contact with water
- H272 : Strengthen the fire, oxidizing
- H302 : Harmful if swallowed
- H311 : Toxic contact with skin
- H332 : Harmful if inhalation
- H351 : Suspected to cause cancer
- H360 : May cause damage to the unborn child or reproductive
- H373 : May cause damage to organs result of prolonged or repeated exposure
- H400 : Toxic in aquatic environments
- H410 : Toxic for aquatic environment in the long-lasting
- H413 : Negative effects aquatic environment in the long-lasting

**Key Information Sources;**

This material safety data sheet is prepared based on informations received from KAPEKS ÜRETİM LTD. ŞTİ.

Revision:

First Issue. This material safety data sheet is prepared regarding to the 13.12.2014 dated and 29204 number of Regulation on Safety Data Sheets of Hazardous Substances and Mixtures.



**KAPEKS**

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Prepared by:

Name Surname: Ayşe Merve Doğan

Contact Informations: [merve.dogan@kapeks.com.tr](mailto:merve.dogan@kapeks.com.tr)

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