Document Type:

Safety Data Sheet

Conforms to ISO 11014:2009

Title:

AXXIS™

1. Identification of the product and Company Identification

Product Name	AXXIS™	**Manufactured/ supplied by**
Shipping name	Detonator Assemblies Electronic Delay Detonators, for blasting	**BME** A member of Omnia Group (Pty) Ltd P.O. Box 70040 Bryanston South Africa 2021 Tel: 27 11 7098791 Fax:27 11 4633023
Synonyms	EDD; Electronic Delay Detonator	
Chemical Formula	Not applicable	
Emergency telephone number	**(+27) 11 706 3398**	

2. Composition/information on ingredients

Recommended Use : Electronic Initiation System for explosive charges.
Appearance : Aluminium shells closed at one end and connected to a predetermined length of wire in a tubular spool configuration with a connector at the other end. The spool is held together in a clear shrink wrap. Odourless.
The electronic detonator assemblies consist of 3 parts that are interconnected: an aluminium shell, a spool of wire and a connector. Enclosed within the aluminium alloy shell is a printed circuit board, a fuse head, a primary charge and a base charge. The primary charge and base charge consists of DDNP and PETN/RDX respectively. Refer to product data information for specific configuration.

Chemical Entity	**CAS No**	**PROPORTION**
Metal and plastic composition articles		Very High

Proportion (% weight per weight): Very High >60%, High 30-60%, Medium 10-29%, Low 1-9%, Very Low <1%

3. Hazards identification

Based on available information, this material is not classified as hazardous according to health criteria of international authorities.

Classified as Dangerous Goods under the UN Code for the Transport of Explosives by Road and Rail.

Class 1.1B Explosives
1.4S Explosive. When packed in approved 1.4S packaging
1.4B
Poisons Schedule None allocated
Additional Hazards Toxic fumes may be emitted on burning

4. First aid measures

The construction of the items prevents any chemical contamination.

Ingestion : Remove object, obtain medical attention. Physician to be made aware of the risk of detonation.
Eye contact : In cases of eye injury or contamination, it is a sensible precaution to seek medical advice.
Skin : Not applicable unless injury due to detonation. Obtain medical attention immediately.
Inhalation : If exposed to fumes from detonation, in a poorly ventilated area, remove victim from exposure and loosen clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.
Hearing : In the event of detonation in the vicinity, check hearing system by a specialist.
Notes to physician : Treat symptomatically. Detonator assemblies are explosive – handle with care.

5. Fire-fighting measures

Specific hazards : Explosives material. Avoid all ignition sources
Fire fighting : Explosive. Severe detonation hazard when exposed to heat. In case of fire where the actual product is not involved, carefully remove the product to a safe distance, otherwise evacuate area immediately and allow to burn. On burning may emit toxic fumes. Fire fighters should wear self-contained breathing apparatus if risk of exposure to vapour or products of detonation.

6. Accidental release measures

Personal Precautions : Avoid exposure to shock, friction and anything that could cause a spark. Keep away from open flames or sources of heat. Shut off all potential sources of ignition.
Environmental Precautions : Shut off all ignition sources. Collect and seal in properly labelled containers for collection. In the case of a transport accidents notify the Police, Explosives Inspectors and BME (Tel no. - 27 11 709 8777). Explosives should not be abandoned at any location for any reason.

7. Handling and storage

Handling : No smoking or open fire is allowed in the vicinity. Heat or flame may cause detonation. Handle with care, preferably by hand.
Storage : Store in clean, dry magazine suitably licensed for Class 1.1 explosives, safe from electric and magnetic risks in compliance with rules of compatibility of storage of product in original packaging. Do not store directly on ground. Do not store with explosives or flammable products. Recommended storage temperature range -5°C to +30°C.Do not subject materials to impact sparking or any type of heat.

8. Exposure controls/personal protection

National occupational exposure limits : No value assigned for this specific material.
Engineering Measures : When test firing, ensure adequate ventilation to maintain air concentration below Exposure Standard. Natural ventilation should be adequate under normal use conditions.
Personal protective equipment : Hearing protection is recommended during controlled firing of the product.
Eye protection by means of safety goggles are strongly advised when working with the product.
Always wash hands before smoking, eating, drinking or using the toilet. A respirator is not required under normal and intended conditions of product use.

9. Physical and chemical properties

Form/Colour/Odour : Copper or aluminium shells closed at one end and connected to a length of yellow insulated copper wire which is terminated by a white, yellow or green connector at the other end. The wire is arranged in a tubular spool configuration with the aluminium shell and connector housed in the cavity of the spool. Odourless.
Solubility : Insoluble in water.
Thermal Decomposition : Explosion in the event of rise in temperature.
Hazardous Decomposition : CO, CO_2, oxides of nitrogen.

10. Stability and reactivity

Stability : Good stability under normal conditions. Detonation can occur from impact, friction and excessive heating. Possible transmission of the explosion to all other detonators in the package.

11. Toxicological information

No adverse health effects if the product is handled in accordance with the Safety Data Sheet and the product label.

Ingestion : May cause irritation to gastro intestinal tract. Keep under observation for possible lead poisoning. Long term exposure to low concentrations of lead may result in altered haemoglobin breakdown, kidney damage, anaemia and central and peripheral nervous system.
Eye contact : Fumes from detonation or fire may cause eye irritation.
Skin contact : Only applicable in cases of detonation. Treat for shock, stop bleeding if applicable and obtain medical attention.
Inhalation : N/A

12. Ecological information

Avoid contaminating waterways

13. Disposal considerations

For small quantities	:	Follow destruction methods duly authorised by relevant authorities and internal Management procedures. Not to be thrown in sewers, natural environment or in refuse discharge. The operation of destroying pyrotechnical products by shooting or incineration must be carried out in a specially designated area by qualified personnel with the necessary safety measures in place. The procedures and instructions for the destruction of pyrotechnical products as well as the means of protecting personnel are to be defined by a safety study which fixes in particular maximum loadings according to the environment and the personnel to be protected. Explosive matters not to be mixed with priming devices at the time of destruction of the latter.
Large quantities	:	Should be returned to BME or be disposed of in conjunction with relevant authorities.
Waste Classification	:	Hazardous Waste.

14. Transport information

UN No	: UN 0030
Class/Division	: 1.1
Compatibility Group	: B
Classification Code	: 1.1B
Proper Shipping Name	: DETONATOR, ELECTRIC for blasting

(When packed in special approved packaging and appropriately marked):

UN No	: UN 0456
Class/Division	: 1.4
Compatibility Group	: S
Classification Code	: 1.4S
Proper Shipping Name	: DETONATOR, ELECTRIC for blasting

UN No	: UN 0361
Class/Division	: 1.4
Compatibility Group	: B
Classification Code	: 1.4B
Proper Shipping Name	: DETONATOR, ELECTRIC for blasting

15. Regulatory Information

Based on information available, this material is not hazardous, based on adherence to safe working procedures

16. Other information

History

Date of printing	:	18-03-2020
Date of issue	:	18-03-2020
Date of previous issue	:	27-08-2018
Recommended by	:	C Oussoren – LAB Supervisor
Authorised by	:	DH Voogt – General Manager – Production and Logistics

Remarks:

This SDS summarizes, at the date of issue, our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle the product in the workplace. As **BME** cannot control the use and handling of the product each user must review the SDS in the context of how the user intends to handle and use the product in the workplace.