

# MATERIAL SAFETY DATA SHEET

## Premium 800

### SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

**Product name:** 4R25 Dry Battery Premium 800  
**Company:** Adolf Nissen Elektrobau GmbH + Co. KG  
**Address:** Friedrichstädter Chaussee 4, 25832 Tönning/Germany  
**MSDS Date:** 4 June, 2016  
**EXPIRY Date:** 3 June, 2018

### SECTION 2 - INFORMATION ON INGREDIENTS

Product name: 4R25 Dry Battery Premium 800

Ingredient	Concentration	CAS No.	EC No.	By weight(%)
Manganese Dioxide	/	1313-13-9	215-202-6	40%
Acetylene Black	/	1333-86-4	215-609-9	10%
Zinc	/	1440-66-6	231-175-3	40%

### SECTION 3 - HAZARDS IDENTIFICATION

**Hazards Identification:** This substance is considered to be non-hazardous for transport.  
**Emergency Overview:** Avoid contact and inhalation of the internal materials. Emit toxic fumes under fire conditions.

### SECTION 4 - FIRST-AID MEASURES

**Skin Exposure:** If the internal battery materials of an opened battery cell come into contact with the skin, immediately flush with plenty of water.

**Eye Exposure:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**Inhalation Exposure:** If potential for exposure to nickel fumes or dusts occurs, remove immediately to fresh air and seek medical attention.

**Oral Exposure:** If swallowed, do not induce vomiting. Seek immediate medical attention.

## SECTION5 - FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:** Dry chemical carbon dioxide and appropriate foam.

**Firefighting:**

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific hazards: Emit toxic fumes under fire conditions.

## SECTION6 - ACCIDENTAL RELEASE MEASURES

**Procedures of Personal Precautions:**

Exercise appropriate precautions to minimize direct contact with skin and eyes.

**Methods for cleaning up :**

Sweep up with spade, place into a dry, clean, lidded container for disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

## SECTION7 - HANDLING AND STORAGE

**Handling:**

Wear appropriate protective clothing and safety gloves. Avoid contact and inhalation of the internal materials. Keep away from ignition sources, heat and flame.

Incompatibilities: strong oxidizing agents, corrosives and foods. Such batteries must be packed in inner packaging in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. No smoking at working site.

**Storage:**

Store in a cool, well-ventilated area. Keep away from ignition sources, heat and flame. Store in a tightly closed container.

Incompatibilities: strong oxidizing agents, corrosives and foods.

## SECTION8 - EXPOSURE CONTROL/PPE

**Engineering Controls:** Use ventilation equipment if available.

**Personal Protective Equipment:**

**Clothing:** Wear appropriate protective clothing.

**Hand:** Safety gloves.

**Other Protect:** No smoking, drinking and eating at working site. Wash thoroughly after handling.

## SECTION9 - PHYSICAL/CHEMICAL PROPERTIES

**Product type / Appearance:** Black plastic cemented shell, odourless

**Odour:** Odourless

**pH:** 8~9

**Melting Point:** >300°C

**Solubility:** Partial soluble in water

## SECTION10 - STABILITY AND REACTIVITY

**Stability:** Stable under normal temperatures and pressures.

**Materials to Avoid:** Strong oxidizing agents, corrosives.

**Condition to Avoid:** Avoid exposure to heat and open flame. Do not puncture, crush or incinerate. Prevent short circuits. Prevent movement which could lead to short circuits. Do not attempt to recharge this battery.

**Hazardous Polymerization:** Will not occur.

**Hazardous Decomposition Products:** When exposed to extreme heat/fire batteries may rupture leaking corrosive material and/or emit toxic fumes. Burning batteries may emit toxic fumes of zinc oxide and manganese oxide.

## SECTION11 - TOXICOLOGICAL INFORMATION

**Toxicity Data:** Not available.

**Irritation Data:** The internal battery materials may cause irritation to eyes and skin.

## SECTION12 - ECOLOGICAL INFORMATION

No data available

## SECTION13 DISPOSAL CONSIDERATIONS

**Appropriate Method of disposal of substance:**

Contact a licensed professional waste disposal service to dispose of this material. Do not incinerate.

## SECTION14 - TRANSPORT INFORMATION

4R25 Dry Batteries (Zinc Manganese Dioxide dry batteries) are considered to "dry" batteries and not subject to hazardous materials (dangerous goods) regulations for the purpose of transportation by the U.S. Department of Transportation (DOT), the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA) or the International Maritime Organization (IMO).

The only DOT requirement for shipping Zinc Manganese Dioxide dry batteries are contained in Special Provision 130 which states: "Batteries, dry, sealed, n.o.s" are hermetically sealed and generally utilize metals (other than lead) and/or carbon as electrodes. These batteries are typically used for portable power applications. The rechargeable (and some non-rechargeable) types have gelled alkaline electrolytes (rather than acidic) making it difficult for them to generate hydrogen or oxygen when overcharged and therefore, differentiating them from non-spillable batteries. A similar requirement is contained in 49 CFR 172.102 of the U.S. DOT hazardous materials regulations

**DOT**

Non-Hazardous for Air Transport: This substance is considered to be non-hazardous for transport.

The IATA Dangerous Goods Regulations contain a similar requirement in Special Provision A123 which states: "This entry applies to batteries, electric storage, not otherwise listed in Subsection 4.2 - List of Dangerous Goods. Examples of such batteries are: alkali-manganese, zinc-carbon, nickel-metal hydride and nickel-cadmium batteries. Any electrical battery or battery powered device, equipment or vehicle having the potential of a dangerous evolution of heat must be prepared for transports so as to prevent short-circuit and accidental activation".

**IATA**

Non-Hazardous for Air Transport: Non-hazardous for air transport.

By ocean the IMO regulates them under Special Provision 295-304. These Special Provisions have requirements which are similar to the requirements found in Special Provision 130 of the DOT

**IMO**

Non-Hazardous for Sea Transport: Non-hazardous for Sea transport.

**IMDG Code:** Not Regulated

**ADR/RID Class: None**

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

**UN Number:** None

**SECTION15 - REGULATORY INFORMATION****EU Classification and Labelling information:**

This material is not classified in the Annex I of Directive 67/548/EEC.

**SECTION16 - OTHER INFORMATION**

**Date:** 30 JUNE, 2016