0 EXPLANATORY NOTE

Air depolarised alkaline batteries are articles in agreement with the REACH regulation and their content is not destined to be liberated in normal or reasonably predictable conditions, so there is no obligation to generate a safety data sheet.

Nevertheless this safety data sheet is provided to facilitate the managing of the article, though its interpretation can induce to mistakes because it contains information of the substances that compose the battery, but there must be remembered that the above mentioned substances are not liberated in normal or reasonably predictable conditions.

1 IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product identifier

Product name: Primary Batteries AS2/AS3/AS6/AS8/AS10

Alternate names: Air Alkaline Batteries

Manufactured according to international standards IEC 60086 and ANSI C 18.1.

1.2 Relevant identified uses of the substance and uses advised against

Primary electric cell (primary energy source).

1.3 Gallagher Europe / part Numbers:

065073 / 063451 / 048588 / 008711 / 008704 / 007578 / 055661

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance

Incorrect handling of the batteries may lead to an accidental release of liquid, overheating or explosion and cause injury to people or damage to equipment. Especially if contact is made with the escaping liquid, which can cause injuries such as loss of sight

Improper use of batteries may result in the following risks:

- Contact with corrosive substances (leakage of electrolyte)
- Splashes and projections (sudden mechanical failure of the battery)

Each battery is made up of a plastic container that contains a number of chemical products and materials which might be potentially dangerous in the event of accidental release. The batteries have aeration holes that allow oxygen to enter in order to regenerate the manganese.

COMPONENT	CAS No.	EINECS No.	HAZARD SYMBOLS
Manganese dioxide (MnO_2)	1313-13-9	215-202-6	
Zinc (Zn)	7440-66-6	231-175-3	
Potassium hydroxide (KOH)	1310-58-3	215-181-3	

3 COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS No.	EINECS No.	CONTENT % (Weight)
Manganese dioxide (MnO_2)	1313-13-9	215-202-6	5-20
Zinc (Zn)	7440-66-6	231-175-3	25-50
Potassium hydroxide (KOH)	1310-58-3	215-181-3	8-15

HEAVY METALS	EINECS No.	CAS No.	% (Weight)
Mercury (Hg)	231-1106-7	7439-97-6	0
Cadmium (Cd)	231-152-8	7440-43-9	< 0.001
Lead (Pb)	231-100-4	7439-92-1	< 0.050

4 FIRST AID MEASURES

In the event that the battery suffers a leak, observe the following instructions:

Contact with the skin	The contents of a battery can cause skin irritation. Remove contaminated clothing and wash skin with copious amounts of water. Seek medical attention if irritation persists.
Contact with the eyes	The contents of an open battery can cause serious eye irritation and/or chemical burns. Immediately wash the eyes with plenty of water for at least 15 minutes, keeping the eyelids open without rubbing them until all traces of the chemical product have gone. Consult an ophthalmologist.
Ingestion	The battery may be harmful if swallowed. The contents of an open battery can result in burns to the mouth, esophagus and the gastrointestinal tract. Do not induce

	vomiting or take anything to eat or drink. If in doubt as to the measures to take, call the National Toxicology Institute (Madrid) Telephone: 915 620 420 or equivalent agency in the country where the incident has taken place.
Inhalation	The contents of an open battery may cause respiratory irritation.. Provide fresh air to the person and if irritation persists seek medical attention.
General Guidelines	Should loss of consciousness occur, never give anything to drink or induce vomiting.

5 FIREFIGHTING MEASURES

5.1 Extinguishing media

Any extinguishing media will be effective.

5.2 Special hazard arising from the sustance

The product is not flammable.

Use self-contained breathing equipment and a full protective suit when fighting the fire.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Under exceptional circumstances it is possible for liquid to escape through the aeration holes. Avoid direct contact with the eyes, the skin or clothing and make use of the personal protective equipment mentioned in Section 8.

6.2 Environmental precautions

1 Keep spill away from drains, surface and ground water.
2 Keep spill away from soil.

6.3 Methods and material for containment and cleaning up

Gather up batteries and remains of batteries and deposit them in a watertight non-metallic container. The waste matter produced must be treated in accordance with current legislation.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

- Keep batteries out of children's reach.
- Install the batteries correctly, respecting the polarity (+ and -)
- All batteries that are used simultaneously in the same appliance must be replaced at the same time in order to ensure that all of the batteries in the appliance share the same characteristics.
- Do not mix different types or makes of batteries
- Avoid subjecting the battery to electrical or mechanical abuse
- Do not attempt to recharge the batteries by heating them or using any other method.
- Do not dismantle the batteries.
- Do not throw batteries into a fire or incinerate.
- Do not expose batteries to high temperatures
- Avoid short-circuiting the batteries.
- Do not recharge primary batteries.
- Do not overdischarge the batteries.

- Remove the batteries from the appliance when they are dead.
- Do not solder the batteries.
- Always remove the batteries if the appliance is not going to be used for prolonged periods.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area. Elevated temperatures can result in shortened battery life.

Maximum weight per pallet: 1000 kg

Product non-stackable.

Once discharged, store the batteries so that the aeration holes are at the top, facing upward.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Each battery is made up of a plastic container that contains a number of chemical products and materials which might be potentially dangerous in the event of accidental release.

COMPONENT	PEL (OSHA)	TLV (ACGIH)
Manganese dioxide	5 mg/m³ maximum limit (of Mn)	0.2 mg/m³ TWA (of Mn)
Zinc	• 15 mg/m³ TWA (particulates / powder, not otherwise regulated) • 5 mg/m³ TWA (particulates / breathable fraction, not otherwise regulated)	• 10 mg/m³ TWA (particulates / powder, not otherwise regulated) • 3 mg/m³ TWA (particulates / breathable fraction, not otherwise regulated)
Potassium hydroxide	Not established	2 mg/m³ maximum limit

8.2 Exposure controls

8.2.2 Individual protection measures, such as personal protective equipment

Respiratory protection		Not necessary under normal conditions
	Hand protection	Not necessary under normal conditions *When handling open batteries or those leaking electrolyte, use rubber or neoprene safety gloves*
	Eye protection	Not necessary under normal conditions *When handling open batteries or those leaking electrolyte, use safety goggles with side protection*
Rest of the body		Not necessary under normal conditions
Health and Safety measures		Keep batteries out of children's reach.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Cylindrical or paralleliped plastic boxes
Odour:	Basic
pH:	Under normal conditions: Not applicable
	Internal product: pH 14
Boiling point/rate (ºC):	Not applicable
Melting point/rate (ºC):	MnO_2 breaks down at 553ºC
	Zn breaks down at 420ºC
	KOH breaks down at -35ºC
Flash point:	Not applicable
Flammability (solid, gas):	It is not flammable
Autoflammability:	Not applicable
Explosion risk	It is not explosive (hermitically sealed product, do not expose to heat sources).
Combustion agents:	Not applicable
Relative density:	3-05 g/cm3
Solubility:	
• Hydrosolubility	KOH: Completely
• Liposolubility	Not applicable
Distribution coefficient:	Not applicable
Vapour density:	Not applicable
Evaporation rate:	Not applicable
Open circuit voltage:	Multiples of 1.5 V based on number of elements connected in series.

10 STABILITY AND REACTIVITY

It is stable under normal conditions of use (see Section 7)

Circumstances and conditions to avoid:

Avoid short-circuiting. To achieve this, it is not advisable to mix batteries, bring the batteries into contact with jewellery, metal tables or any type of electrical conductor. Avoid crushing, perforating or dismantling.

11 TOXICOLOGICAL INFORMATION

A battery is not toxic under normal conditions. However, if it is opened, its components may cause problems.

KOH	**Contact with the skin:** severe burns and penetrating skin ulcers	Remove contaminated clothing and rinse skin with copious amounts of water or shower and seek medical assistance.
	Contact with the eyes: Caustic effect to the eyes. May cause corneal and conjunctival ulceration.	Rinse out with copious amounts of water for several minutes (remove contact lenses if possible) and seek medical assistance.
	Ingestion: Burns to the mouth and esophagus, may cause intestinal perforation.	Rinse mouth, do NOT induce vomiting, drink copious amounts of water and seek medical assistance.
	Inhalation: Irritation of the respiratory system.	Fresh air, rest, half upright position, artificial respiration if necessary and seek medical assistance.
Zinc	**Contact with the skin:** May cause irritation of the skin	Rinse and wash skin with soap and water.
	Contact with the eyes: May cause ocular irritation	Rinse out with copious amounts of water for several minutes (remove contact lenses if possible) and seek medical assistance.
	Ingestion: May cause stomach pains, nausea and vomiting.	Rinse mouth and seek medical assistance.
MnO_2	**Inhalation:** Coughing	Administer fresh air and rest.
	Ingestion: Abdominal pains and nausea	Rinse mouth and seek medical assistance.

12 ECOLOGICAL INFORMATION

Ecotoxicity	None known
Mobility	The density of the batteries is greater than water and they are not soluble in it.
Bioaccumulation potential	None known if used/disposed of correctly.
Persistence and biodegradability	Batteries left outdoors may begin to leak through the aeration holes.
Other adverse effects	None known if used/disposed of correctly.

13 DISPOSAL CONSIDERATIONS

Batteries, once used, must be managed according to the local legislation. Particularly, in Europe, they must be managed according to the Directive 2006/66/CE of the European Parliament and Council, of 6 of September of 2006, relative to the batteries and accumulators and to the residues of batteries and accumulator.

Nowadays, this residue is catalogued as **not dangerous** in the European List of residues (Code LER 16.06.04)

14 TRANSPORT INFORMATION

Transportation of dry batteries is not regulated by the main international regulatory organisations (ADR and IMDG). IATA, "Not Restricted per SP A123."

15 REGULATORY INFORMATION

This product is not regarded as hazardous as defined by EC directives for the classification and labelling of hazardous substances and preparations

16 OTHER INFORMATION

The R and S phrases indicated below have been defined for the battery, considering it as an article, not for its components.

R Phrases:

R22	Harmful if swallowed

S Phrases:

S2	Keep out of the reach of children
S5	Keep in moderate, not warm environments
S15	Keep away from heat
S59	Refer to manufacturer/supplier for information on recovery/recycling
S61	Avoid release to the environment. Refer to special instructions / Safety data sheets.

The information in this Safety Data Sheet is based on the present state of our knowledge. Its sole purpose is to provide a description of the safety requirements, it is not to be considered a guarantee of the product's properties.