

MATERIAL SAFETY DATA SHEET

1. Identification

Product name	alkaline primary battery	
Type	LR20, LR14, LR6, LR03, 6LR61	
Manufacturer's name	Matsushita Battery Belgium N.V.	
address	Havenlaan 6, B-3980 Tessenderlo Belgium	
date prepared	15.05.2002	
telephone number	emergency telephone number	0032/(0)13 610 523
	telephone number for information	0032/(0)13 610 514
approved by	Sonia Vanderlinden	

2. Ingredients

Ingredient name	Cas#	%
1. Manganese dioxide	1313-13-9	25~45
2. Zinc	7440-66-6	10~20
3. Potassium hydroxide	1310-58-3	3~9
4. Zinc oxide	1314-13-2	0~1
5. Graphite	7782-42-5	1~4
6. Steel	7439-89-6	10~30

3. Physical and chemical characteristics.

Boiling point	NA
Vapor pressure (mmHg)	NA
Vapor density	NA
Specific gravity	NA
Melting point	NA
Evaporation rate (Butyl acetate =1)	NA
Solubility in water	NA
Appearance	Encased cylindrical or rectangular shape

4. Fire and explosion hazard data.

Flash point (Method used)	NA
Flammable limits	LEL: NA UEL: NA
Extinguishing media	Dry powder, carbon dioxide, foam, dry sand
Special fire fighting procedures	Fire fighters should wear self-contained breathing apparatus when any fire.
Unusual fire and explosion hazards	Cells exposed to excessive heat, may cause electrolyte leakage or explosion

5. Reactivity Data.

Stability	Stable
Incompatibility (materials to avoid)	NA
Hazardous decomposition of BY-products	Oxides or fumes of Mn , Zn
Hazardous polymerization	will not occur

6. Health hazard data.

Threshold limit value (TVL) and source	NA
Symptoms of exposure	None, unless battery ruptures
Emergency first aid procedure	If leakage from battery contacts the skin, flush immediately with water If leakage enter eye, flush immediately with copious quantities of water get medical attention for eyes

7. Precautions for safe handling and use.

Steps to be taken in case material is released or spilled	Avoid skin and eye contact
waste disposal method	Scientific evidence indicates that cells may be disposed with household trash Never attempt to burn batteries in fire Dispose in accordance with applicable regulations.
Precautions to be taken in handling and string	Store at room temperature and in dry place.
Transportation and shipment	These are "Batteries dry" and are not considered to be a "hazardous material" per U.S. DOT (department of transportation regulations) or a " dangerous goods" per IATA (International Air Transport Association Regulations)
Others	Follow equipment instructions to avoid leakage or explosion. Do not short-circuit and reverse insertion of (+) , (-) Do not dismantle ,heat or dispose in fire. Do not attempt to recharge. Do not overdischarge or mix use cells may cause electrolyte leakage.

8. Control Measure

Respiratory protection (specific type)	Self-contained breathing apparatus as any fire situation	
Ventilation	Local exhaust	NA
	Mechanical (general)	NA
	Specific	NA
	Others	NA
Protective gloves	NA	
Eye protection	NA	
Other protective clothing or equipment	NA	