

MATERIAL SAFETY DATA SHEET

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Lithium Manganese Dioxide Batteries
January 26th, 2007
Rev: 1



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PRODUCT NAME: AGFAPhoto Lithium-Photo **TYPES:** all
TRADE NAME: AGFAPhoto Lithium Manganese Dioxide
CHEMICAL SYSTEM: Lithium Manganese Dioxide (CR)

I – MANUFACTURE INFORMATION

Manufactured for:
GBT German Battery Trading GmbH
An Gut Nazareth 18 A
52353 Düren / Germany

Telephone Numbers for Information:
+49(0)2421-392071

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Contact: AgfaPhoto Holding GmbH, www.agfaphoto.com

II – HAZARDOUS INGREDIENTS

IMPORTANT NOTE: The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

MATERIAL OR INGREDIENT	Wt. %	CAS No.	EEC No.	Index No.
Manganese Dioxide	65-75	1313-13-9	215-202-6	025-001-00-3
1,2-Dimethoxyethane	5-10	110-71-4	203-794-9	603-031-00-3
Propylene Carbonate	1-5	108-32-7	203-572-1	607-194-00-1
Lithium	1-5	7439-93-2	231-102-5	003-001-00-4

III – Fire and Explosion Hazard Data

Flash Point: NA Lower (LEL): NA

Flammable Limits in Air (%): NA Upper (UEL): NA

Extinguishing Media: Use water, foam or dry powder, as appropriate.

Auto-Ignition: NA

Special Fire Fighting Procedures: As with any fire, wear self-contained breathing apparatus to avoid inhalation of hazardous decomposition products (See section 2).
Dry chemical, alcohol foam, water or carbon dioxide. For incipient fires, carbon dioxide extinguishers are more effective than water.

Special Fire Explosion Hazards: Like any sealed container, battery cells may rupture when exposed to excessive heat; this could result in the release of flammable or corrosive materials.

IV – Health Hazard Data

Threshold Limit Value (TLV) and Source: NA

Effects of overexposure: None.

Emergency First Aid Procedures:

General advice: These chemicals and metals are contained in a sealed can. For consumer use, adequate hazard warnings are included on both the package and on the battery. Potential for exposure should not exist unless the battery leaks, is exposed to high temperatures or is mechanically, physically or electrically abused.

Skin and Eyes: In the event that battery ruptures, flush exposed skin with copious quantities of flowing lukewarm water for a minimum of 15 minutes. Get immediate attention for eyes. Wash skin with soap and water.

Ingestion: Not anticipated. Irritation to the internal/external mouth area may occur following exposure to a leaking battery. Rinse mouth and surrounding area with clear, tepid water for at least 15 minutes. Consult a physician immediately for treatment and to rule out involvement of the esophagus and other tissues.

Notes to Physician: Potential leakage of 1,2-dimethoxyethane, propylene carbonate and lithium trifluoromethane sulfonate.
1,2-dimethoxyethane readily evaporates.
Under certain misuse conditions and by abusively opening the battery, exposed lithium can react with water or moisture in the air causing potential thermal burns or fire hazard.

V – PRECAUTIONS FOR SAFE HANDLING AND USE

Storage: Store in a cool, dry place at room temperature. Storing unpackaged cells together could result in cell shorting and heat build-up.

Mechanical Containment: Containment of this battery in a manner that obstructs or defeats the safety vent or electrical disconnect mechanisms designed into this battery can result in fire and/or explosion and cause personal injury and device damage. This battery is not designed to be potted, enclosed in hermetic overpacking, or sealed by any means that prevents free operation of the designed safety mechanisms.

Handling: Avoid mechanical or electrical abuse. Batteries may explode, pyrolize or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries in accordance with equipment instructions. Replace all batteries in equipment at the same time. Do not carry batteries loose in pocket or bag. Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

Charging: This battery is manufactured in a charged state. It is not designed for recharging. Recharging can cause battery leakage or, in some cases, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

VI – SPECIAL PROTECTION INFORMATION

Respiratory equipment:	None required under normal use conditions.
Ventilation Requirements:	Not necessary under normal conditions.
Eye Protection:	None required under normal use conditions.
Hand Protection:	None required under normal use conditions. Use neoprene, natural rubber or butyl gloves when handling leaking batteries.
General Safety and hygiene measures:	Use only as directed.

VII – PHYSICAL and CHEMICAL PROPERTIES

Form and colour:	small cylindrical batteries. Contents dark in colour.
Odour:	not applicable
Change in physical state	
Melting point/melting range:	not available
Boiling point/boiling range:	not available
Flash point:	not applicable
Explosion limits:	not available
Ignition temperature:	not available
Vapour pressure:	not available
Specific gravity:	not available
% Volatiles:	not available
Solubility in water:	not applicable
Solubility in other solvents:	not applicable
PH value:	not applicable
Octanol/water partition coefficient (log POW):	not available
Viscosity:	not available

VIII – STABILITY and REACTIVITY

Thermal decomposition:	Batteries may burst and release hazardous decomposition products when exposed to a fire situation.
Substance(s) to avoid:	Strong oxidisers
Hazardous reactions:	contents incompatible with strong oxidising agents
Hazardous decomposition Products:	Thermal degradation may produce hazardous fumes of manganese and lithium; hydrofluoric acid; oxides of carbon and other toxic by-products.

IX – REGULATORY INFORMATION

In general, the transportation of primary lithium cells and batteries is regulated by the International Civil Aviation Organization, International Air Transport Association and International Maritime Dangerous Goods Code.

For air shipments, meet the requirements listed in special provision A45 of the International Air Transport Assoc. Dangerous Goods Regulations.

With limited exceptions, the transport of primary lithium batteries is prohibited aboard passenger aircraft. Refer to December 15, 2004 Federal Register (Hazardous Materials; Prohibition on the Transportation of Primary Lithium Batteries and Cells Aboard Passenger Aircraft; Final Rule) for additional rules that became effective on December 29, 2004.

By complying with the requirements specified above, Lithium Batteries are not otherwise regulated as Dangerous Goods.