

# SAFETY DATA SHEET

According to EC 1907/2006 (REACH)

## 1. Identification of the substance/mixture and of the company/undertaking

**MSDS** : 22606  
**Product code 12nc** : 9898 031 21381  
**Supplier** : PANASONIC INDUSTRIAL COMPANY

Two Panasonic Way  
07094 Secaucus  
New Jersey  
United States of America  
TEL:+1-877-726-2228  
FAX:+1-847-468-5750

**Tradename** : HS1 BATTERY PACK (M5070A) [5.04 G LITHIUM]  
**General description** : BATTERY  
**Use** : Various  
**Date last update** : 2011-01-04  
**Publicationdate** : 2005-06-17  
**General information** : dangerous.goods@philips.com  
**Emergency phonenumber** : +31 (0)497-598315

## 2. Hazards identification

### GHS Classification

Not classified according to GHS classification.

### EC Classification

Not classified according to EC classification.

## 3. Composition/information on ingredients

Component	CAS-no	EC-no	Catalogue-no	Percentage(%)	GHS-label EC-label
LITHIUM	7439-93-2	231-102-5	003-001-00-4		GHS02 GHS05 H260 Water-react. 1 H314 Skin corr. 1B EUH014 F,C;R: 14/15 34
MANGANESE DIOXIDE	1313-13-9	215-202-6	025-001-00-3		GHS07 GHS08 H302 Acute tox. 4 H332 Acute tox. 4 H361fd Repr. 2 Xn;R: 62 63 20/22 Repr.Cat. 3
LITHIUM TRIFLUOROMETHANESULPHONATE	33454-82-9	251-528-5			GHS07 H315 Skin irrit. 2 H319 Eye irrit. 2 H335 STOT SE 3 Xi;R: 36/37/38
PROPYLENE CARBONATE	108-32-7	203-572-1	607-194-00-1		GHS07 H319 Eye irrit. 2 Xi;R: 36
DIMETHOXYETHANE, 1,2-	110-71-4	203-794-9	603-031-00-3		GHS02 GHS07 GHS08 H225 Flam. liq. 2 H332 Acute tox. 4 H360FD Repr. 1B EUH019 F,T;R: 60 61 11 19 20 Repr.Cat. 2

## 4. First aid measures

<b>Skin</b>	: Not applicable.
<b>Ingestion</b>	: Not applicable.
<b>Inhalation</b>	: Not applicable.
<b>Eyes</b>	: Not applicable.
<b>Remarks first aid</b>	: none

## 5. Firefighting measures

<b>Fire-extinguisher</b>	: determined by surrounding
<b>Unsuitable fire-extinguisher</b>	: not traceable
<b>Special fire-fighting equipment</b>	: In the event of fire, wear protective clothing and use breathing apparatus that is independent of the ambient air.
<b>Hazardous decomposition products in fire</b>	: lithium oxide, manganese oxides, carbon monoxide, hydrogen fluoride, sulphur oxides

## 6. Accidental release measures

<b>Spillage procedure</b>	: not applicable
<b>Emergency procedure</b>	: not applicable

## 7. Handling and storage

<b>Local exhausting</b>	: Under normal circumstances not applicable.
<b>Storage conditions</b>	: Store product protected from proximity to other sources of heat, dry.
<b>Storage code (on behalf of PGS 15)</b>	: M4

## 8. Exposure controls/personal protection

### Exposure limits :

#### applicable to: **The Netherlands (20 °C; 1013 mbar)**

No TWA has been laid down.	LITHIUM
TWA(8 hours): 1 mg/m3	MANGANESE DIOXIDE(as manganese)
TWA(15 minutes): 3 mg/m3	MANGANESE DIOXIDE(as manganese)
No TWA has been laid down.	LITHIUM
	TRIFLUOROMETHANESULPHONATE
No TWA has been laid down.	PROPYLENE CARBONATE
No TWA has been laid down.	DIMETHOXYETHANE, 1,2-

#### applicable to: **Belgium (20 °C; 1013 mbar)**

TWA(8 hours): 0.2 mg/m3	MANGANESE DIOXIDE(as manganese)
-------------------------	---------------------------------

#### applicable to: **Germany (20 °C; 1013 mbar)**

TWA(8 hours): 0.5 mg/m3	MANGANESE DIOXIDE(as manganese, inhalable dust)
-------------------------	---

#### applicable to: **United States of America (25 °C; 1013 mbar)**

TWA(8 hours): 0.2 mg/m3	MANGANESE DIOXIDE(as manganese)
-------------------------	---------------------------------

#### applicable to: **Sweden (20 °C; 1013 mbar)**

TWA(8 hours): 0.2 mg/m3	MANGANESE DIOXIDE(as manganese, dust)
TWA(8 hours): 0.1 mg/m3	MANGANESE DIOXIDE(as manganese, respirable dust)

#### applicable to: **Switzerland (20 °C; 1013 mbar)**

TWA(8 hours): 0.5 mg/m3	MANGANESE DIOXIDE(as manganese, inhalable dust)
-------------------------	---

#### applicable to: **China (20 °C; 1013 mbar)**

TWA(8 hours): 0.15 mg/m3	MANGANESE DIOXIDE
--------------------------	-------------------

C=Ceiling; S=Skin

### Remarks exposure limits :

none

### Odour threshold (20°C; 1013 mbar) :

not traceable

### DNEL (Derived No Effect Level)

not traceable

**PNEC (Predicted No Effect Concentration)**

not traceable

**Advised personal protection :**

Hands : not applicable  
 Breakthrough time : not applicable  
 Eyes : not applicable  
 Inhalation : not applicable  
 Skin : none (when used normally)

**9. Physical and chemical properties**

**Physical state** : battery  
**Colour** : type dependent  
**Odour** : odourless  
**Vapor rate/range** : not applicable  
**Boiling point/range** : not traceable  
**Melting point/range** : not traceable  
**Flash point/range** : not applicable  
**Explosive limits** : not applicable  
**Dust explosions possible in air** : not applicable  
**Density** : not traceable  
**Vapour pressure** : not applicable  
**Solubility in water** : not applicable  
**Solubility in fat** : not applicable  
**pH** : not applicable  
**Viscosity** : not applicable  
**Autoignition temperature** : not applicable  
**Decomposition temperature** : not traceable  
**Electrostatic chagement** : not traceable

**10. Stability and reactivity**

**Conditions to avoid** : none  
**Reactions with water** : no  
**Hazardous reactions with** : none  
**Hazardous decomposition products at heating** : none

**11. Toxicological information****Symptoms**

**Skin** local : Not applicable.  
 general : Not applicable.  
**Ingestion** local : Not applicable.  
 general : Not applicable.  
**Inhalation** local : Not applicable.  
 general : Not applicable.  
**Eyes** local : Not applicable.  
**Remarks symptoms** : None

**Toxicity :**

LD-50: >3.478 g/kg (ORL-RAT), MANGANESE DIOXIDE **Source** : ChemDat (Merck)  
 LD-50: 29 g/kg (ORL-RAT), PROPYLENE CARBONATE **Source** : IUCLID  
 LD-50: 5.37 mg/kg (ORL-RAT), DIMETHOXYETHANE, 1,2- **Source** : ChemDat (Merck)  
 LD-50: 3.2 g/kg (ORL-MUS), DIMETHOXYETHANE, 1,2- **Source** : Sigma-Aldrich  
 LD-50: >5 g/kg (SKN-RAT), DIMETHOXYETHANE, 1,2- **Source** : ChemDat (Merck)

**Ames test** : negative PROPYLENE CARBONATE **Source** : IUCLID  
 negative DIMETHOXYETHANE, 1,2- **Source** : ChemDat (Merck)

**12. Ecological information**

**Biological oxygen demand (5)** : 0.025 g/g PROPYLENE CARBONATE **Source** : IUCLID  
**Chemical oxygen demand** : 1.29 g/g PROPYLENE CARBONATE **Source** : IUCLID  
**Biological(5)/chemical oxygen demand ratio** : 0.019 PROPYLENE CARBONATE  
**Degradability** : not biodegradable MANGANESE DIOXIDE **Source** : ACROS  
 readily biodegradable PROPYLENE CARBONATE **Source** : IUCLID  
**Biochemical factor** : not traceable  
**Log Po/w** : <0 MANGANESE DIOXIDE **Source** : IUCLID  
 -0.49 LITHIUM TRIFLUOROMETHANESULPHONATE **Source** : Easi View

	-0.48 PROPYLENE CARBONATE	<b>Source</b> : IUCLID
	-0.21 DIMETHOXYETHANE, 1,2-	<b>Source</b> : ChemDat (Merck)
<b>Henry Constant</b>	: 9.92E-8 atm m3/mol LITHIUM TRIFLUOROMETHANESULPHONATE	<b>Source</b> : Easi View
	3.63E-4 atm m3/mol PROPYLENE CARBONATE	<b>Source</b> : Easi View

**Ecotoxicity :**

LC-50: 5300 mg/l/96H (Fish), PROPYLENE CARBONATE	<b>Source</b> : IUCLID
EC-50: >500 mg/l/48H (Daphnia), PROPYLENE CARBONATE	<b>Source</b> : IUCLID
IC-50: >500 mg/l/72H (Algae), PROPYLENE CARBONATE	<b>Source</b> : IUCLID
LC-50: >500 mg/l/96H (Fish), DIMETHOXYETHANE, 1,2-	<b>Source</b> : ACROS

**Remarks on ecotoxicity** : none

### 13. Disposal considerations

Remainder material has to be incinerated in\_a proper installation or dumped on an approved landfill, in accordance with local and national legislation.

### 14. Transport information

<b>ADR/RID</b>	<b>UN-number</b> : 3090 LITHIUM METAL BATTERIES
	<b>Hazard identification number</b> : none
	<b>Class</b> : 9
	<b>Packinggroup</b> : II
<b>IMO</b>	<b>UN-number</b> : 3090 LITHIUM METAL BATTERIES
	<b>Class</b> : 9
	<b>Packinggroup</b> : II
	<b>Marine pollutant</b> : no
<b>IATA/ICAO</b>	<b>UN-number</b> : 3090 LITHIUM METAL BATTERIES
	<b>Class</b> : 9
	<b>Packinggroup</b> : II
	<b>* Remarks</b> : The product must be transported in accordance with the regulations of IATA PACKING INSTRUCTION 968 - SECTION I.

### 15. Regulatory information

**GHS Labelling**

**GHS-Label** : not applicable

**\* Remarks on GHS-labelling** none

**Labelling according to EC directives**

**EC-Label** : not applicable

**Remarks on EC-labelling** none

### 16. Other information

**\* Remarks on MSDS** The presence of lithium-batteries gives an enlarged risk of fire.

**Overview relevant H-sentences from all components in section 3 :**

H225	Highly flammable liquid and vapour.
H260	In contact with water releases flammable gases which may ignite spontaneously.
H302	Harmful if swallowed.
H314	Causes severe skin burns.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H360FD	May damage fertility. May damage the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
EUH014	Reacts violently with water.
EUH019	May form explosive peroxides.

**Overview relevant R-sentences from all components in section 3 :**

11	Highly flammable.
14/15	Reacts violently with water, liberating extremely flammable gases.
19	May form explosive peroxides.

20	Harmful by inhalation.
20/22	Harmful by inhalation and if swallowed.
34	Causes burns.
36	Irritating to eyes.
36/37/38	Irritating to eyes, respiratory system and skin.
60	May impair fertility.
61	May cause harm to the unborn child.
62	Possible risk of impaired fertility.
63	Possible risk of harm to the unborn child.

---

\* Point to alterations with regard to the previous version.

The information provided in this Material Safety Data Sheet is correct to the best of the knowledge, information and belief of Philips Electronics Nederland B.V. at the date of its printing.