



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (amended by Regulation (EU) No 2020/878)

Date last verification : 2022-04-22
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Indication of changes : §8.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Safety Data Sheet : 25261
Product code : 4535 649 70091
Product name: : HS1 BATTERY PACK M507A : LITHIUM METAL BATTERIES WITH CR123A PANASONIC CELLS
[5.04 G LITHIUM]

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : No information available.
Uses advised against : No information available.

1.3. Details of the supplier of the safety data sheet

Supplier : PANASONIC CORPORATION ENERGY COMPANY
1-1, Matsushita-cho
Moriguchi
570-8511 Osaka
Japan
Telephone : +81-6-6994-4409
Responsible for the compilation of
the SDS on behalf of the supplier/
manufacturer : hazcom@philips.com

1.4. Emergency telephone number

Emergency telephone number (regarding transport of DG) : +31 (0)497-598315

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.1. Classification according to Regulation (EC) No 1272/2008 [CLP]

This article doesn't contain hazardous substances or mixtures intended to be released under normal or reasonably foreseeable conditions of use.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

none

Remarks on labelling : As an article, this product presents negligible health and physical hazards under reasonably anticipated conditions of use. Accordingly, a Safety Data Sheet (SDS) is not required for this product under the standards cited above. This document is prepared as a courtesy to provide persons using this product with additional safety and regulatory information.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

SECTION 3: Composition / information on ingredients

3.2. Mixture

| CAS No. | EC No. | REACH No. | Concentration (%) | Classification according to Regulation (EC) No 1272/2008 [CLP] | SCL / M-factor / ATE |
|-----------------------|-----------|--------------------------------------|-------------------|--|----------------------|
| LITHIUM | | | | | |
| 7439-93-2 | 231-102-5 | 01-2120775463-48 01-2119966143-38 | | GHS02 GHS05 H260 Water-react. 1 H314 Skin Corr. 1B EUH014 | |
| MANGANESE DIOXIDE | | | | | |
| 1313-13-9 | 215-202-6 | 01-2119452801-43 01-2120115207-68 | | GHS07 H302 Acute Tox. 4 H332 Acute Tox. 4 | |
| PROPYLENE CARBONATE | | | | | |
| 108-32-7 | 203-572-1 | 01-2119537232-48 | | GHS07 H319 Eye Irrit. 2 | |
| DIMETHOXYETHANE, 1,2- | | | | | |
| 110-71-4 | 203-794-9 | 01-2119485981-24 01-2120803346-61 | | GHS02 GHS07 GHS08 H225 Flam. Liq. 2 H332 Acute Tox. 4 H360FD Repr. 1B EUH019 | |

Full text of H- and EUH-statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

- General information** : No special measures are necessary. When in doubt or if symptoms are observed, get medical advice.
- Following inhalation** : No special measures are necessary.
- Following skin contact** : No special measures are necessary.
- After eye contact** : No special measures are necessary.
- Following ingestion** : No special measures are necessary.
- Self-protection of the first aider** : No special measures are necessary.

4.2. Most important symptoms and effects, both acute and delayed

Adverse human health effects and symptoms / Organs affected:

not applicable

- Following inhalation** : not applicable
- Following skin contact** : not applicable
- After eye contact** : not applicable
- Following ingestion** : not applicable

Further information: SECTION 11: Toxicological information

4.3. Indication of any immediate medical attention and special treatment needed

- Notes for the doctor** : Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media** : Fire class D: - Dry extinguishing powder (NaCl; NaCO₃; Graphite). - Dry sand.
- Unsuitable extinguishing media** : Water. - Foam. - Wet chemical. - Carbon dioxide (CO₂).

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

- In case of fire may be liberated** : lithium oxide - manganese oxides - Carbon monoxide - Carbon dioxide (CO₂)

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Flame-retardant protective clothing. Protective clothing. (EN 469)

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protection equipment. Lithium batteries are highly flammable. Caution! Increased risk of explosion and fire. In case of fire: Evacuate area.

6.1.1. For non-emergency personnel

Protective equipment : Personal protection equipment: see section 8.

Emergency procedures : In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

6.1.2. For emergency responders

Personal protection equipment : Personal protection equipment: see section 8.

6.2. Environmental precautions

Collect spillage. Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Do not allow to enter into soil/subsoil. Ensure waste is collected and contained.

6.3. Methods and material for containment and cleaning up

6.3.1. For containment

Damaged batteries must not be placed in collection containers. Ideally, intermediate storage should take place in a sealed container, with the damaged battery or power pack best covered with sand or another non-combustible binding agent.

6.3.2. For cleaning up

Damaged batteries must not be placed in collection containers. Ideally, intermediate storage should take place in a sealed container, with the damaged battery or power pack best covered with sand or another non-combustible binding agent.

6.3.3. Other information

Inform the relevant authorities if the product has entered sewers, waterways, soil or air and might have caused environmental pollution.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling : No special handling advices are necessary. High-energy batteries must be packed and secured in the transport container in such a way that the individual batteries do not slip inside the container. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Measures to prevent fire : Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. See SECTION 5: Firefighting measures and SECTION 10: Stability and reactivity.

Measures to prevent aerosol and dust generation : Not dust explosive.

Environmental precautions : Avoid release to the environment.

Advices on general occupational hygiene : When using do not eat, drink, smoke, sniff. Take off contaminated clothing. Wash hands before breaks and after work.

Further information : No information available.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions : Protect from sunlight. - Keep container dry. - Keep away from: ignition sources or heat sources. - Keep away from: Acids. - Keep away from: Alkalis. - Keep away from: Water.

storage temperature : No information available.

Requirements for storage rooms and vessels : No information available.

Storage class : M4

Materials to avoid : No information available.

Further information on storage conditions : No information available.

7.3. Specific end use(s)

Recommendation : not applicable

Industrial sector specific solutions : No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values

| | | European Union | | Germany | | Belgium | | Switzerland | |
|---------------------|-------------|------------------------------|--|------------------------------|---|-------------|--|-----------------------------|-----|
| Substance name | Limit value | | | | | | | mg/m ³ | ppm |
| LITHIUM | | | | | | | | (inhalable dust) | |
| | 8 hour(s) | | | | | | | 0.2 | |
| | 15 minutes | | | | | | | | |
| | C | | | | | | | | |
| MANGANESE DIOXIDE | | (manganese, inhalable dust) | | (manganese, inhalable dust) | | (manganese) | | (manganese, inhalable dust) | |
| | 8 hour(s) | 0.2 | | 0.2 | | 0.2 | | 0.5 | |
| | 15 minutes | | | 1.6 | | | | | |
| | C | | | | | | | | |
| MANGANESE DIOXIDE | | (manganese, respirable dust) | | (manganese, respirable dust) | | | | | |
| | 8 hour(s) | 0.05 | | 0.02 | | | | | |
| | 15 minutes | | | 0.16 | | | | | |
| | C | | | | | | | | |
| PROPYLENE CARBONATE | 8 hour(s) | | | 8.5 | 2 | | | 25.5 | 6 |
| | 15 minutes | | | 8.5 | 2 | | | 25.5 | 6 |
| | | | | | | | | | |
| | C | | | | | | | | |

| | | China | | Poland | | Russia | | Sweden | |
|-----------------------|-------------|-------|--|--------|--|-------------------|-----|------------------------------|-----|
| Substance name | Limit value | | | | | mg/m ³ | ppm | mg/m ³ | ppm |
| LITHIUM | | | | | | | | (inhalable dust) | |
| | 8 hour(s) | | | | | 0.02 | | | |
| | 15 minutes | | | | | | | 0.02 | |
| | C | | | | | | | | |
| MANGANESE DIOXIDE | | | | | | | | (manganese, inhalable dust) | |
| | 8 hour(s) | 0.15 | | | | | | 0.2 | |
| | 15 minutes | | | | | | | | |
| | C | | | | | | | | |
| MANGANESE DIOXIDE | | | | | | | | (manganese, respirable dust) | |
| | 8 hour(s) | | | | | | | 0.05 | |
| | 15 minutes | | | | | | | | |
| | C | | | | | | | | |
| PROPYLENE CARBONATE | 8 hour(s) | | | | | (Vapour) | | | |
| | 15 minutes | | | | | 7 | | | |
| | | | | | | | | | |
| | C | | | | | | | | |
| DIMETHOXYETHANE, 1,2- | | | | | | H (Vapour) | | | |
| | 8 hour(s) | | | 10 | | 10 | | | |
| | 15 minutes | | | | | 30 | | | |
| | C | | | | | | | | |

Source : SUVA, Dutch Health Council, 2006/15/EC, 2004/37/EC, LOLI DB, 2000/39/EC, GWBB/VLEP, Gestis, 91/322/EEC, 2017/164/EU, INRS (Fr), TRGS 905, TRGS 910, Austrian OEL Regulation, Dutch Social-Economic Council (SER), US OSHA, EU OSHA, TRGS 900, ACGIH®, 2009/161/EU

20 °C, 1013 mbar: European Union / China / South Korea

25 °C, 1013 mbar: United States / Canada / Japan

[x]: appraisal period x minutes

C: peak limitation

H: skin resorptive

S: Statutory threshold limit value

ALARA: As low as reasonably achievable (ALARA principle).

Remark Occupational exposure limit values

none

DNEL (Derived No Effect Level (DNEL-value))

| | | DNEL worker | | | |
|-----------------------|-----------------------|---------------|------------|-----------|------------|
| | | systemic | | local | |
| Substance name | Exposure route | long-term | short-term | long-term | short-term |
| LITHIUM | oral [mg/kg bw/day] | Not required. | | | |
| | Inhalation [mg/m³] 10 | 4.2 | | | |
| | dermal [mg/kg bw/day] | 12 | | | |
| MANGANESE DIOXIDE | oral [mg/kg bw/day] | Not required. | | | |
| | Inhalation [mg/m³] 10 | 0.2 | | | |
| | dermal [mg/kg bw/day] | 0.004 | | | |
| PROPYLENE CARBONATE | oral [mg/kg bw/day] | Not required. | | | |
| | Inhalation [mg/m³] 10 | 70.53 | | 20 | |
| | dermal [mg/kg bw/day] | 20 | | | |
| DIMETHOXYETHANE, 1,2- | oral [mg/kg bw/day] | Not required. | | | |
| | Inhalation [mg/m³] 10 | 3.1 | | | |
| | dermal [mg/kg bw/day] | 1.1 | | | |

PNEC (Predicted No Effect Concentration (PNEC-value))

| Substance name | aquatic, freshwater [mg/L] | aquatic, marine water [mg/L] | aquatic, intermittent release [mg/L] | sewage treatment plant [mg/L] | sediment, freshwater [mg/kg sediment dw] | sediment, marine water [mg/kg sediment dw] | soil [mg/kg soil dw] |
|-----------------------|----------------------------|------------------------------|--------------------------------------|-------------------------------|--|--|----------------------|
| LITHIUM | 1.65 | 0.165 | 1.65 | 22.94 | 6.6 | 0.66 | 0.26 |
| MANGANESE DIOXIDE | 0 | 0 | 0.001 | | 0.037 | 0.004 | 0.028 |
| PROPYLENE CARBONATE | 0.9 | 0.09 | 9 | 7400 | | | 0.81 |
| DIMETHOXYETHANE, 1,2- | 6.4 | 0.64 | 40 | 20 | 25.7 | 2.57 | 1.39 |

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Use explosion-proof machinery, apparatus, ventilation facilities, tools etc. Safe handling: see section 7

8.2.2. Personal protection equipment

Eye/face protection : Eye protection: not required.

Skin protection

Hand protection : Hand protection is not required.

Body protection : Body protection: not required.

Respiratory protection : Usually no personal respirative protection necessary.

8.2.3. Environmental exposure controls

See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--|
| Physical state | : solid |
| Appearance | : batteries and accumulators |
| Colour | : various |
| Odour | : odourless |
| Odour threshold | : No information available. |
| pH | : not applicable |
| Melting point/freezing point | : No information available. |
| Initial boiling point and boiling range | : No information available. |
| Flash point | : No information available. |
| Evaporation rate | : not applicable |
| flammability | : Lithium batteries are highly flammable. Caution! Increased risk of explosion and fire. |
| Upper/lower flammability or explosive limits | |
| Upper explosion limit | : not applicable |
| Lower explosion limit | : not applicable |
| Vapour pressure | : not applicable |
| Vapour density | : No information available. |
| Relative density | : No information available. |
| Solubility(ies) | |

| | |
|--|-----------------------------|
| Water | : not applicable |
| Partition coefficient n-octanol/water | |
| LITHIUM | : -0.77 - Source: ECHA |
| MANGANESE DIOXIDE | : <0 - Source: LOLI |
| DIMETHOXYETHANE, 1,2- | : -0.21 - Source: ECHA |
| Auto-ignition temperature | : not applicable |
| Decomposition temperature | : No information available. |
| Viscosity | : not applicable |
| Explosive properties: | : not applicable |
| Oxidising properties | : not applicable |

9.2. Other information

| | |
|--------------------------------|------------------|
| Critical temperature Tc | : not applicable |
| Fat solubility | : not applicable |

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is considered to be non-reactive under normal use conditions.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Strong mechanical impact. Further information on proper storage: see section 7.

10.5. Incompatible materials

none

10.6. Hazardous decomposition products

No known hazardous decomposition products. - Decomposition products in case of fire: see section 5.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

| | |
|----------------------------|------|
| Following ingestion | : No |
| Skin contact | : No |
| Inhalation | : No |

| Substances | Dose / Concentration | Value | Species | Exposure time | Method |
|-------------------------------|----------------------|----------------|---------|---------------|----------|
| MANGANESE DIOXIDE | | | | | |
| oral | LD50: | 3480 mg/kg | Rat | | |
| Inhalation (dust/mist) | LC50: | >1.5 mg/L | Rat | 4 hour(s) | |
| PROPYLENE CARBONATE | | | | | |
| oral | LD50: | >5000 mg/kg | Rat | | OECD 401 |
| dermal | LD50: | >2000 mg/kg | Rabbit | | OECD 402 |
| DIMETHOXYETHANE, 1,2- | | | | | |
| oral | LD50: | 5370 mg/kg | Rat | | OECD 401 |
| dermal | LD50: | >5000 mg/kg | Rabbit | | OECD 402 |
| Inhalation (vapour) | LC50: | >20 - <63 mg/L | Rat | 6 hour(s) | OECD 403 |

| | |
|--|------------------|
| Skin corrosion/irritation | : not applicable |
| Serious eye damage/eye irritation | : not applicable |
| Respiratory or skin sensitisation | : not applicable |
| Germ cell mutagenicity | : not applicable |
| Carcinogenicity | : not applicable |
| Reproductive toxicity | : not applicable |

STOT-single exposure : not applicable

STOT-repeated exposure : not applicable

Aspiration hazard : not applicable

Symptoms

Following inhalation : not applicable

Following skin contact : not applicable

After eye contact : not applicable

Following ingestion : not applicable

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

11.2.2. Other information

No information available.

SECTION 12: Ecological information

12.1. Toxicity

| Substance name | Acute (short-term) fish toxicity | Acute (short-term) toxicity to crustacea | Acute (short-term) toxicity to algae and cyanobacteria | Toxicity to other aquatic plants/organisms |
|-----------------------|--|--|---|--|
| LITHIUM | LC50: 109 mg/L 96 hour(s) Fish - Source: ECHA - Method: OECD 203 | EC50: 19.1 mg/L 48 hour(s) Daphnia - Source: ECHA - Method: OECD 202 | IC50: 41.62 mg/L 72 hour(s) Algae - Source: ECHA - Method: OECD 201 | |
| PROPYLENE CARBONATE | LC50: >1000 mg/L 96 hour(s) Fish - Source: ECHA | EC50: >1000 mg/L 48 hour(s) Daphnia - Source: ECHA | NOEC: 900 mg/L 72 hour(s) Algae - Source: ECHA - Method: OECD 201 | |
| DIMETHOXYETHANE, 1,2- | LC50: >5000 mg/L 96 hour(s) Fish - Source: ECHA - Method: OECD 203 | EC50: 4000 mg/L 48 hour(s) Daphnia - Source: ECHA - Method: OECD 202 | | |

12.2. Persistence and degradability

Biodegradation

PROPYLENE CARBONATE : Readily biodegradable (according to OECD criteria). - Source: ECHA - Method: OECD 301B

DIMETHOXYETHANE, 1,2- : none - Source: ECHA - Method: OECD 302B

Chemical oxygen demand (COD) : No information available.

Biochemical oxygen demand : No information available.

BOD5/COD ratio : No information available.

12.3. Bioaccumulative potential

Bioconcentration factor (BCF) : No information available.

Partition coefficient n-octanol/water

LITHIUM : -0.77 - Source: ECHA

MANGANESE DIOXIDE : <0 - Source: LOLI

DIMETHOXYETHANE, 1,2- : -0.21 - Source: ECHA

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

12.8. Additional ecotoxicological information

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Waste should not be disposed of by release to water, drainage, sewer, or the ground. Collect the waste separately. Disposal should be in accordance with applicable regional, national and local laws and regulations. Lithium batteries and lithium cells of less than 500 grams (e.g. mobile phone batteries, laptop batteries) can be collected together with the "normal" dry batteries and disposed of in a collection container specifically for these types of batteries. However, this only applies if the batteries have no visible damage and have not been degassed. See section: 6.3.1 and 6.3.2.

Other disposal recommendations : not applicable

SECTION 14: Transport information

14.1. UN number or ID number

UN 3090

14.2. UN proper shipping name

LITHIUM METAL BATTERIES

14.3. Transport hazard class(es)

9

14.4. Packing group

none

14.5. Environmental hazards

Marine pollutant : No

14.6. Special precautions for user

Hazard identification number (Kemler No.) : none

EmS (IMDG) : F-A, S-I

14.7. Maritime transport in bulk according to IMO instruments

No information available.

14.8.

ADR / RID

The product may be transported as such, as it meets the criteria of special provision: 188

IMDG

The product may be transported as such, as it meets the criteria of special provision: 188

ICAO-TI / IATA-DGR

The product must be transported in accordance with the regulations of IATA PACKING INSTRUCTION 968 - SECTION IB (Meets the GENERAL REQUIREMENTS of IATA PACKING INSTRUCTION 968). If the package limits of SECTION IB are exceeded, the product must be transported in accordance with the regulations of SECTION IA; otherwise the product can be transported in accordance with the regulations of SECTION IB.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International regulations:

Minamata Convention on Mercury : not applicable

EU legislation

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]

LITHIUM

: O1, O2

DIMETHOXYETHANE, 1,2-

: P5a, P5b, P5c

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH:

| | |
|-----------------------|--|
| DIMETHOXYETHANE, 1,2- | |
|-----------------------|--|

This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH:

not applicable

Overall Assessment on CMR properties

according to Regulation (EC) No. 1907/2006 (REACH) : not applicable

Regulation (EC) No 850/2004 [POP-Regulation]

not applicable

Regulation (EC) No. 2037/2000 concerning materials, which cause damage to the ozone layer.

not applicable

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Observe employment restrictions under the Maternity Protection Directive 92/85/EEC or stricter national regulations, if applicable.

15.2. Chemical Safety Assessment

No information available.

SECTION 16: Other information

Additional information

Lithium batteries are highly flammable. Caution! Increased risk of explosion and fire.

Relevant H-phrases (Number and full text)

| | |
|--------|--|
| 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 and eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H360FD | May damage fertility. May damage the unborn child. |
| EUH014 | Reacts violently with water. |
| EUH019 | May form explosive peroxides. |

Abbreviations and acronyms

| | |
|-----------|---|
| ACGIH® | American Conference of Governmental Industrial Hygienists |
| ADR | Accord européen relatif au transport international des marchandises Dangereuses par Route |
| AICS | Australian Inventory of Chemical Substances |
| BuAc | n-Butyl acetate |
| CAS | Chemical Abstracts Service |
| CCID | New Zealand Chemical Classification and Information Database |
| DSL | Canada Domestic Substances List |
| ECHA-RAC | ECHA Committee for Risk Assessment |
| EFSA | European Food Safety Authority |
| EHSP | OECD Environment, Health, and Safety Publication |
| EmS | Emergency Schedule |
| EU-CLH | European Union Harmonised Classification and Labelling |
| GESTIS | Databases on hazardous substances of the German Social Accident Insurance |
| GHS | Globally Harmonised System of Classification and Labelling of Chemicals |
| GWBB-VLEP | Grenswaarden voor beroepsmatige blootstelling/Valeurs limites d'exposition professionnelle |
| HHS | U.S. Department of Health and Human Services |
| HSDB | Hazardous Substances Data Bank |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods |
| IMO | International Maritime Organization |
| INRS | French National Research and Safety Institute for the Prevention of Occupational Accidents and Diseases |
| JP-GHS | Japan GHS Basis for Classification Data |
| KHC | Known human carcinogens. |
| LEL | Lower explosion limit |
| LOLI | LOLI (List of Lists) Database |
| n.a. | not applicable |
| NDSL | Canada Non-domestic Substance List |
| NICNAS | Australia National Industrial Chemicals Notification and Assessment Scheme |
| NIER | South Korea National Institute of Environmental Research Evaluations |
| NLM | United States National Library of Medicine |
| NTP | National Toxicology Program |
| NZIoC | New Zealand Inventory of Chemicals |
| OECD | Organisation for Economic Co-operation and Development |
| OSHA | Occupational Safety & Health Administration |
| OUE | European Odour Unit |

| | |
|--------|--|
| RAHC | Reasonably Anticipated Human Carcinogen |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SCOEL | Scientific Committee on Occupational Exposure Limits (EU) |
| SIDS | OECD Screening Information Data Sets |
| SUVA | Swiss Accident Insurance Fund |
| TRGS | Technische Regeln für Gefahrstoffe |
| TSCA | The Toxic Substances Control Act Chemical Substance Inventory |
| TWA | Time Weighted Average |
| UEL | Upper explosion limit |
| UN | United Nations |
| US-EPA | United States Environmental Protection Agency |

Disclaimer: The information provided in this Safety Data Sheet is believed to be correct as of the date issued. Philips Electronics Nederland B.V. makes no warranty as to its contents, nor as to its fitness for any particular purpose or use.