Mirka Ltd
66850 Jeppo

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

1.1 Product identifier

Mirka Intelligent Battery BPA 10825 10.8V 2.5Ah

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

1.2.1 Relevant uses

Battery

1.2.2 Uses advised against

None known.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [GHS]

Carc. 1A: H350i May cause cancer by inhalation.
Repr. 1B: H360FD May damage fertility. May damage the unborn child.
Repr. 1B: H360D May damage the unborn child.
Skin Corr. 1A: H314 Causes severe skin burns and eye damage.
Eye Dam. 1: H318 Causes serious eye damage.
Skin Sens. 1: H317 May cause an allergic skin reaction.
STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure.
STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure.
Acute Tox. 4: H302 Harmful if swallowed.
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

This product is an article and therefore it does not require labelling according to GHS (CHAPTER 1.3/1.3.2.1.1)

2.3 Other hazards

Physico-chemical hazards	When cell is exposed to an external short-cicuit, it will cause heat generation and ignition. The chemicals are contained within a sealed housing. There is only a risk of exposure if the battery is subject to mechanical or electrical misuse. At temperatures over 125 °C risk of bursting and withdrawal of electrolyte liquid exists.
Human health dangers	The contained dangerous materials are not freely available with foreseeable use.
Environmental hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Other hazards	Mercury content: Hg < 0.1mg/kg Cadmium content: Cd < 1mg/kg Lead content: Pb < 10mg/kg Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is an article.

Range [%]	Substance
15 - 25	Graphite
	CAS: 7782-42-5
15 - 25	Lithium nickel dioxide
	CAS: 12031-65-1
10 - 20	Iron
	CAS: 7439-89-6
5 - 15	Lithium Manganese (III,IV) oxide
	CAS: 12057-17-9
1 - 10	Ethylene carbonate
	CAS: 96-49-1
1 - 10	Polyethylene
	CAS: 9002-88-4
1 - 10	Cobalt lithium dioxide
	CAS: 12190-79-3
1 - 10	Aluminium powder (pyrophoric)
	CAS: 7429-90-5
1 - 10	Lithium hexafluorophosphate
	CAS: 21324-40-3
1 - 10	Dimethyl carbonate
	CAS: 616-38-6
1 - 10	Copper
	CAS: 7440-50-8
0.1 - 1	Lithiumcarbonate
	CAS: 554-13-2
0.1 - 1	N-Methyl-2-pyrrolidone
	CAS: 872-50-4
0.1 - 1	Ethyl acetate
	CAS: 141-78-6
0.1 - 1	Carbon black
	CAS: 1333-86-4
0.1 - 1	Nickel
	CAS: 7440-02-0

Comment on component parts

The structural design of the cells prevents release of the hazardous media contained therein when the unit is used for its intended purpose.
SVHC (Candidate List of Substances of Very High Concern for authorisation) ≥ 0.1%
CAS 872-50-4 - N-Methyl-2-pyrrolidone
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Measures are only valid for damaged cells.
Undamaged. closed cells do not represent a danger to the health.

Inhalation
Remove the victim into fresh air and keep him calm.
In the event of symptoms seek medical treatment.

Skin contact
In case of contact with skin wash off immediately with soap and water.
Immediate medical treatment necessary, as untreated burns can result in slow-healing wounds.

Eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Consult a doctor immediately.

Ingestion
Consult a doctor immediately.
Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Product is caustic.
Allergic reactions

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to the doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media
Metal fire-ex powder.
Dry powder.
Sand.
Much water.

Extinguishing media that must not be used
Full water jet

5.2 Special hazards arising from the substance or mixture

Danger of electric shock during fire-fighting of batteries.
Bursting batteries can be forcibly projected from a fire.
Carbon monoxide (CO)
Carbon dioxide (CO2)
Hydrogen fluoride (HF).

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Cool containers at risk with water spray jet.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Not required under normal conditions.

6.2 Environmental precautions

Do not discharge leakages into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
Take up residues with absorbent material (e.g. acid binder).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

The data of the manufacturer concerning the loading and unloading parameters and the recommended temperature ranges are to be considered.
Do not use or test damaged cell.

Keep away from open flames, hot surfaces and sources of ignition.
Do not pierce or burn, even after use.
Handle with care - avoid shock, friction, impact.

7.2 Conditions for safe storage, including any incompatibilities

Prevent penetration into the ground.

Do not store together with food and animal food/diet.
Do not store with combustible materials.

Keep container tightly closed.
Store in a dry place.
Protect from heat/overheating.
Protect from sun.
Ensure battery terminals are protected during storage.
Protect from atmospheric moisture, water and contamination.
Storage at room temperature (approx. 20℃) at approx. 40% of the nominal capacity.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GHS)

not applicable

DNEL

Substance
Lithium hexafluorophosphate, CAS: 21324-40-3
Industrial, dermal, Long-term - systemic effects, 0.133 mg/kg bw/day
Industrial, inhalative, Long-term - systemic effects, 0.931 mg/m³
N-Methyl-2-pyrrolidone, CAS: 872-50-4
general population, oral, Long-term - systemic effects, 0.85 mg/kg bw/day

8.2 Exposure controls

Additional advice on system design	Measures apply only to the damaged product. Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
Eye protection	safety glasses (EN 166:2001)
Hand protection	0.7 mm Butyl rubber, >480 min (EN 374-1/-2/-3).
Skin protection	Protective clothing (EN 340)
Other	Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	Not required under normal conditions.
Thermal hazards	none
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid
Form	Battery 10.8 V; 2500 mAh; 27 Wh
Color	various
Odor	odourless
Odour threshold	not applicable
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not applicable
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not applicable
Density [g/cm³]	No information available.
Relative density	No information available.
Bulk density [kg/m³]	not applicable
Solubility in water	not applicable
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	not applicable
Kinematic viscosity	not applicable
Relative vapour density	not applicable
Evaporation speed	not applicable
Melting point [°C]	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature [°C]	No information available.
Particle characteristics	not applicable

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

The product is stable under standard conditions.

10.3 Possibility of hazardous reactions

When cell is exposed to an external short-cicuit, it will cause heat generation and ignition.
Avoid mechanical and electrical misuse.
Heating leads to a risk of bursting and of electrolyte fluid escaping.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Heating leads to a risk of bursting and of electrolyte fluid escaping.
Extreme risk of explosion by shock, friction, fire or other sources of ignition.

10.5 Incompatible materials

Water
Acids
Oxidizing agent
Reducing agent

10.6 Hazardous decomposition products

No decomposition if used and stored according to specifications.
In the event of fire: See SECTION 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

Product
ATE-mix, oral, 1770 mg/kg

Substance
Carbon black, CAS: 1333-86-4
LD50, oral, Rat, 11000 mg/kg (Lit.)
Dimethyl carbonate, CAS: 616-38-6
LD50, oral, Rat, > 5000 mg/kg (Lit.)
Iron, CAS: 7439-89-6
LD50, oral, Rat, > 5000 mg/kg
Graphite, CAS: 7782-42-5
LD50, oral, Human, > 15000 mg/kg (Lit.)
Lithiumcarbonate, CAS: 554-13-2
LD50, oral, Rat, 525 mg/kg
Lithium hexafluorophosphate, CAS: 21324-40-3
LD50, oral, Rat, > 50 - 300 mg/kg (Lit.)
ATE, oral, 100 mg/kg (category 3)
Ethyl acetate, CAS: 141-78-6
LD50, oral, Rat, 5620 mg/kg
Lithium Manganese (III,IV) oxide, CAS: 12057-17-9
ATE, oral, 500 mg/kg
Cobalt lithium dioxide, CAS: 12190-79-3
LD50, oral, Rat, > 5000 mg/kg
Nickel, CAS: 7440-02-0
LD50, oral, Rat, > 9000 mg/kg (IUCLID)
N-Methyl-2-pyrrolidone, CAS: 872-50-4
LD50, oral, Rat, 4150 mg/kg (OECD 401. Lit.)
Copper, CAS: 7440-50-8
LD50, oral, Rat, > 2500 mg/kg
Lithium nickel dioxide, CAS: 12031-65-1
LD50, oral, Rat, > 2000 mg/kg

Acute dermal toxicity

Product
Based on the available information, the classification criteria are not fulfilled.

Substance
Carbon black, CAS: 1333-86-4
LD50, dermal, Rabbit, > 3000 mg/kg (Lit.)
Dimethyl carbonate, CAS: 616-38-6
LD50, dermal, Rabbit, > 5000 mg/kg (Lit.)
Ethyl acetate, CAS: 141-78-6
LD50, dermal, mouse, 20000 mg/kg
Cobalt lithium dioxide, CAS: 12190-79-3

LD50, dermal, Rat, > 2000 mg/kg
N-Methyl-2-pyrrolidone, CAS: 872-50-4
LD50, dermal, Rat, > 5000 mg/kg (OECD 402. Lit.)
Copper, CAS: 7440-50-8
LD50, dermal, Rat, > 2000 mg/kg

Acute inhalational toxicity

Product
ATE-mix, inhalativ (dust), > 5 mg/l/4h

Substance
Carbon black, CAS: 1333-86-4
LC0, inhalative, Rat, 4.6 mg/m³/4h
LC0, inhalative, Rat, 229 mg/m³/6h
LC0, inhalative, Rat, 13 mg/m³/18h
Dimethyl carbonate, CAS: 616-38-6
LC50, inhalative, Rat, > 140 mg/l (Lit.)
Iron, CAS: 7439-89-6
LC50, inhalative, Rat, 5.05 mg/L/4h
Lithiumcarbonate, CAS: 554-13-2
LC50, inhalative, Rat, > 2.17 mg/l (4h)
Ethyl acetate, CAS: 141-78-6
LC50, inhalative, Rat, 50 mg/l (4 h)
Lithium Manganese (III,IV) oxide, CAS: 12057-17-9
ATE, inhalativ (dust), 1.5 mg/l, 4h
Cobalt lithium dioxide, CAS: 12190-79-3
LC50, inhalativ (dust), Rat, > 5.05 mg/l, 4h
N-Methyl-2-pyrrolidone, CAS: 872-50-4
LC50, inhalative, Rat, > 5.1 mg/l 4h (OECD 403. Lit.)
Copper, CAS: 7440-50-8
LC50, inhalative, Rat, > 5.11 mg/l 4h

Serious eye damage/irritation Risk of serious damage to eyes.
Calculation method

Substance
Carbon black, CAS: 1333-86-4
no adverse effect observed
Iron, CAS: 7439-89-6
non-irritating
Lithium hexafluorophosphate, CAS: 21324-40-3
IVIS, Eggs, 16 (20 sek.)
Ethyl acetate, CAS: 141-78-6
Harmonised classification: Eye Irrit. 2 H319
N-Methyl-2-pyrrolidone, CAS: 872-50-4
Eye, Rabbit, OECD 405, irritant

Skin corrosion/irritation Product is caustic.
Calculation method

Substance

Carbon black, CAS: 1333-86-4
no adverse effect observed
Iron, CAS: 7439-89-6
non-irritating
Lithium hexafluorophosphate, CAS: 21324-40-3
Mean Tissue Viability, dermal, Human, 6 %
Ethyl acetate, CAS: 141-78-6
no adverse effect observed
N-Methyl-2-pyrrolidone, CAS: 872-50-4
dermal, Rabbit, OECD 404, irritant

Respiratory or skin sensitisation

Sensitizing.
Calculation method

Substance
Carbon black, CAS: 1333-86-4
dermal, no adverse effect observed
Iron, CAS: 7439-89-6
non-sensitizing
Ethyl acetate, CAS: 141-78-6
dermal, non-sensitizing
N-Methyl-2-pyrrolidone, CAS: 872-50-4
mouse, OECD 429, non-sensitizing

Specific target organ toxicity — single exposure

Based on the available information, the classification criteria are not fulfilled.

Substance
Carbon black, CAS: 1333-86-4
inhalative, no adverse effect observed
Ethyl acetate, CAS: 141-78-6
Harmonised classification: STOT SE 3 H336
N-Methyl-2-pyrrolidone, CAS: 872-50-4
inhalative, irritant

Specific target organ toxicity — repeated exposure

Causes damage to organs through prolonged or repeated exposure.
Calculation method

Substance
Lithium hexafluorophosphate, CAS: 21324-40-3
NOAEL, oral, Human, 0.133 mg/kg bw/day
NOAEC, inhalative, Human, 2 mg/m³
N-Methyl-2-pyrrolidone, CAS: 872-50-4
NOAEL, dermal, Rabbit, 826 mg/kg bw/day (subacute), no adverse effect observed
NOAEL, oral, Rat, 169 mg/kg bw/day (subchronic), The effects observed are not sufficient for classification.
NOAEC, inhalative, Rat, 1000 mg/m³ (subchronic), The effects observed are not sufficient for classification.
Copper, CAS: 7440-50-8
NOAEL, oral, Rat, 16.7 mg/kg bw/day, no adverse effect observed

Mutagenicity

Based on the available information, the classification criteria are not fulfilled.

Substance
Carbon black, CAS: 1333-86-4

no adverse effect observed
Iron, CAS: 7439-89-6
in vivo, negativ
in vitro, negativ
Ethyl acetate, CAS: 141-78-6
in vitro, negativ
N-Methyl-2-pyrrolidone, CAS: 872-50-4
in vivo, negativ
in vitro, OECD 471, negativ

Reproduction toxicity

May damage the unborn child.
May damage fertility.
Calculation method

Substance
N-Methyl-2-pyrrolidone, CAS: 872-50-4
NOAEL, oral, Rat, 350 mg/kg bw/day (chronic), OECD 416, positive
Copper, CAS: 7440-50-8
NOAEL, oral, Rat, 24 mg/kg (Effect on fertility), no adverse effect observed

Carcinogenicity

Can cause cancer.
Calculation method

Substance
N-Methyl-2-pyrrolidone, CAS: 872-50-4
NOAEL, oral, Rat, 678 mg/kg/day, Study, no adverse effect observed
NOAEC, inhalative, Rat, 400 mg/m³ (chronic), no adverse effect observed

Aspiration hazard

Based on the available information, the classification criteria are not fulfilled.

General remarks

none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Aluminium powder (pyrophoric), CAS: 7429-90-5
NOEC, (48h), Daphnia magna, > 100 mg/l (OECD 202)
NOEC, (72h), Selenastrum capricornutum, > 100 mg/l (OECD 201)
NOEC, (96h), Salmo trutta, > 100 mg/l (IUCLID)
Dimethyl carbonate, CAS: 616-38-6
LC50, (96h), Leuciscus idus, 1000 mg/l (Lit.)
Graphite, CAS: 7782-42-5
LC50, (96h), Danio rerio, > 100 mg/l (OECD 203)
EC50, (48h), Daphnia magna, > 100 mg/l (OECD 202)
EC50, (72h), Pseudokirchneriella subcapitata, > 100 mg/l (OECD 201)
Lithium hexafluorophosphate, CAS: 21324-40-3
EC50, (48h), Daphnia magna, > 100 mg/l (Lit.)
EC50, (72h), Pseudokirchneriella subcapitata, > 100 mg/l (Lit.)
EC50, (3h), Activated sludge, > 1000 mg/l (Lit.)
Ethyl acetate, CAS: 141-78-6
LC50, (96h), Pimephales promelas, 230 mg/l
LC50, (96h), Salmo gairdneri, 230 mg/l
EC50, (48h), Daphnia magna, 164 mg/l
EC50, (48h), Algae, 5600 mg/l
Nickel, CAS: 7440-02-0
LC50, (96h), Brachidanio rerio, > 100 mg/l (OECD 203)
EC50, (48h), Pseudomonas fluorescens, 250 mg/l (Lit.)
EC50, (48h), Daphnia magna, > 100 mg/l (OECD 202)
IC50, (72h), Selenastrum capricornutum, 100 mg/l (OECD 201)
N-Methyl-2-pyrrolidone, CAS: 872-50-4
LC50, (96h), Oncorhynchus mykiss, > 500 mg/l
EC50, (72h), Scenedesmus subspicatus, > 500 mg/l (DIN 38412 /9)
EC50, (24h), Daphnia magna, > 1000 mg/l (OECD 202)
NOEC, (21d), Daphnia magna, 12.5 mg/l (OECD 202)
Copper, CAS: 7440-50-8
LC50, (96h), Oncorhynchus mykiss, 0.15 mg/l
EC50, (48h), Daphnia magna, 0.03 - 0.05 mg/l

12.2 Persistence and degradability

Behaviour in environment compartments No information available.

Behaviour in sewage plant No information available.

Biological degradability The methods for determining the boilogical degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Accumulation in organisms is not expected.

12.4 Mobility in soil

Spillages may penetrate the soil causing ground water contamination.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with national regulations.

Product

For recycling, consult manufacturer.

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID	3480 /3481
Inland navigation (ADN)	3480 /3481
Marine transport in accordance with IMDG	3480 /3481
Air transport in accordance with IATA	3480 /3481

14.2 UN proper shipping name

Transport by land according to ADR/RID	UN 3480 Lithium ion batteries / UN 3481 Lithium Ion batteries contained in equipment or Lithium Ion batteries packed with equipment (No dangerous goods, according ADR special regulations 188)
- Classification Code	M4
- ADR LQ	0 kg
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 2 (E)
Inland navigation (ADN)	UN 3480 Lithium ion batteries / UN 3481 Lithium Ion batteries contained in equipment or Lithium Ion batteries packed with equipment (No dangerous goods, according ADN special regulations 188)
- Classification Code	M4
Marine transport in accordance with IMDG	UN 3480 Lithium ion batteries / UN 3481 Lithium Ion batteries contained in equipment or Lithium Ion batteries packed with equipment (No dangerous goods, according IMDG Special regulations 188)
- EMS	F-A, S-I
- IMDG LQ	0 l
Air transport in accordance with IATA	UN 3480 Lithium ion batteries / UN 3481 Lithium Ion batteries contained in equipment or Lithium Ion batteries packed with equipment
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	9
Inland navigation (ADN)	9
Marine transport in accordance with IMDG	9
Air transport in accordance with IATA	9

14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

We further certify that the enclosed products have been tested and fulfilled the requirements and conditions in accordance with UN Recommendations (T1 – T8) on the Transport of Dangerous Goods Model Regulations and the Manual of Testes and Criteria that can be treated as “Non-Dangerous Goods”.
The structural design of the cells prevents release of the hazardous media contained therein when the unit is used for its intended purpose.

Test results of the UN Recommendation on the Transport of Dangerous Goods			
Manualof Test and Criteria (38.3 Lithium battery)		Test result	Remark
No	Test item		
T1	Altitude item	Pass	
T2	Thermal Test	Pass	
T3	Vibration	Pass	
T4	Shock	Pass	
T5	External Short Circuit	Pass	
T6	Impact	Pass	
T7	Overcharge	Pass	For pack and single cell bettery only
T8	Forced Discharge	Pass	

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable

SECTION 15: Regulatory information

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

TRANSPORT-REGULATIONS DOT-Classification, ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2022)

NATIONAL REGULATIONS (GHS): Globally Harmonized System of Classification and Labelling of Chemicals (GHS, Rev. 9), 2021.

- Observe employment restrictions for people none

- VOC (2010/75/CE) not applicable

15.2 Chemical safety assessment

not applicable

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H302 Harmful if swallowed.
H412 Harmful to aquatic life with long lasting effects.
H351 Suspected of causing cancer.
EUH066 Repeated exposure may cause skin dryness or cracking.
H336 May cause drowsiness or dizziness.
H335 May cause respiratory irritation.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H360D May damage the unborn child.
H225 Highly flammable liquid and vapour.
H318 Causes serious eye damage.
H314 Causes severe skin burns and eye damage.
H301 Toxic if swallowed.
H261 In contact with water releases flammable gases.
H250 Catches fire spontaneously if exposed to air.
H411 Toxic to aquatic life with long lasting effects.
H360FD May damage fertility. May damage the unborn child.
H413 May cause long lasting harmful effects to aquatic life.
H302+H332 Harmful if swallowed or if inhaled.
H350i May cause cancer by inhalation.
H372 Causes damage to organs through prolonged or repeated exposure.
H317 May cause an allergic skin reaction.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Carc. 1A: H350i May cause cancer by inhalation. (Calculation method)
Repr. 1B: H360FD May damage fertility. May damage the unborn child. (Calculation method)
Repr. 1B: H360D May damage the unborn child. (Calculation method)
Skin Corr. 1A: H314 Causes severe skin burns and eye damage. (Calculation method)
Eye Dam. 1: H318 Causes serious eye damage. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure. (Calculation method)
STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure. (Calculation method)
Acute Tox. 4: H302 Harmful if swallowed. (Calculation method)
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects. (Calculation method)

Modified position

SECTION 2 been added: H412 Harmful to aquatic life with long lasting effects.

SECTION 2 been added: Aquatic Chronic 3

SECTION 2 been added: H373 May cause damage to organs through prolonged or repeated exposure.

SECTION 2 been added: STOT RE 2

SECTION 2 been added: H360D May damage the unborn child.

SECTION 2 been added: Repr. 1B

SECTION 2 been added: H360FD May damage fertility. May damage the unborn child.

SECTION 2 deleted: Aquatic Chronic 1

SECTION 2 deleted: H410 Very toxic to aquatic life with long lasting effects.

SECTION 2 deleted: Aquatic Acute 1

SECTION 7 been added: Do not use or test damaged cell.

SECTION 7 been added: Handle with care - avoid shock, friction, impact.

SECTION 7 been added: Storage at room temperature (approx. 20℃) at approx. 40% of the nominal capacity.

SECTION 15 been added: No information available.

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