Safety Data Sheet

Regulation (EU) 2015/830 (REACH Annex II)

Applicant:	Leifheit AG
Address:	Leifheitstrasse 1
Attn.:	Mr. Detlef Bätza
Sample Description:	Li-ion cell (with wires and connector) / 3.7 Vd.c, 2000mAh, 7.4Wh
Model No.:	205050

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
TÜV SÜD Group
Building 12&13, Zhiheng Wisdomland Business Park,
Nantou Checkpoint road 2,
Shenzhen 518052, P. R. China
Tel.: (86) 755 88286998
Fax: (86) 755 88285299

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

1.1. Product identifier

Product form	:	Article
Product name	:	Li-ion cell (with wire and connector) / 3.7 Vd.c, 2000 mAh, 7.4Wh
Product code.	:	205050

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

1.2.1. Relevant identified uses

Main use category	:	No information available

1.2.2. Uses advised against

Restrictions on use	:	No information available

1.3. Details of the supplier of the safety data sheet

Supplier	:	Jiangsu Sunpower Co., Ltd.
Address	:	No. 8 of Xingyuan Road, Huangqiao Industrical Park, Taixing City, Jiangsu Province, P.R.China
Zip Code	:	215411
Tel	:	0523-87664668-801
Fax	:	0523-87223168
E-mail	:	andrew@jssanjie.com

1.4. Emergency telephone number

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to displayExtra classification(s) to display

No labelling applicable

Hazard pictograms (CLP)	:	None
Signal word (CLP)	:	None
Hazard statements (CLP)	:	Not applicable
Precautionary statements (CLP)	:	Not applicable
EU Specific Hazard Statements	:	None

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Zirconium oxide (ZrO2)	(CAS-No.) 1314-23-4 (EC-No.) 215-227-2	41	Not classified
Graphite	(CAS-No.) 7782-42-5 (EC-No.) 231-955-3	22	Not classified
Phosphate(1-), hexafluoro-, lithium	(CAS-No.) 21324-40-3 (EC-No.) 244-334-7	16	Not classified
Copper	(CAS-No.) 7440-50-8 (EC-No.) 231-159-6	11	Not classified
Aluminum	(CAS-No.) 7429-90-5 (EC-No.) 231-072-3 (EC Index-No.) 013-002-00-1	5	Flam. Sol. 1, H228 Water-react. 2, H261
1,1-Difluoroethylene polymer	(CAS-No.) 24937-79-9 (EC-No.) 607-458-6	1	Not classified
Polypropylene	(CAS-No.) 9003-07-0 (EC-No.) 618-352-4	1	Not classified
Sodium carboxymethyl cellulose	(CAS-No.) 9004-32-4 (EC-No.) 618-378-6	1	Not classified
2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene and ethenylbenzene	(CAS-No.) 25053-09-2 (EC-No.) 607-511-3	1	Not classified
Conductive agent	-	1	Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show directions for use or safety data sheet if possible).

First-aid measures after inhalation : Not an expected route of exposure.

First-aid measures after skin contact : Not expected to present a significant skin hazard under anticipated conditions of normal use. No special technical protective measures required.

First-aid measures after eye contact : Not an expected route of exposure.

First-aid measures after ingestion : Rinse mouth out with water. If you feel unwell, seek medical advice.

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

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : No information available.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Precautionary measures fire : Eliminate every possible source of ignition. Keep container tightly closed and away from heat, sparks and flame.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Other information : Ensure adequate ventilation, especially in confined areas. Evacuate personnel to a safe area. Avoid contact with skin, eyes and inhalation of vapors. Move containers from fire area if it can be done without personal risk. Cool tanks/drums with water spray/remove them into safety. Stay upwind.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition.Avoid contact with skin, eyes and inhalation of vapors.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Stop leak if safe to do so. Do not touch spilled material;Avoid breathing dust, mist or spray;Remove all sources of ignition

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Use a clean shovel to collect it in a properly sealed waste container with a label and completely sealed. Such containers shall be stored in suitable locations for the purpose of handling or disposing in accordance with national law

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Do not open, destroy, or incinerate batteries because the battery may explode, break, or vent during these processes. Do not short-circuit the battery, overcharge, forced discharge or thrown into the fire. Do not squeeze the battery or immerse the battery in the solution.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Prohibited high temperature storage. Store in a well-ventilated place. Store in a dry place. Keep container tightly closed. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Zirconium oxide (ZrO2) (1314-23-4)		
Lithuania	IPRV (mg/m³)	6 mg/m³

Graphite (7782-42-5)		
Austria	MAK (mg/m³)	5 mg/m³ (alveolar dust with <1% Quartz, respirable fraction)
Austria	MAK Short time value (mg/m³)	10 mg/m³ (alveolar dust with <1% Quartz, respirable fraction)
Belgium	Limit value (mg/m³)	2 mg/m³ (except fibers-alveolar fraction)
Bulgaria	OEL TWA (mg/m³)	5 mg/m³ (inhalable fraction)
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	4 mg/m³ (respirable dust) 10 mg/m³ (total dust)
Czech Republic	Expoziční limity (PEL) (mg/m³)	2 mg/m³ (dust)
Denmark	Grænseværdie (langvarig) (mg/m³)	2.5 mg/m³ (natural-respirable)
Estonia	OEL TWA (mg/m³)	5 mg/m³ (total dust)
Finland	HTP-arvo (8h) (mg/m³)	2 mg/m³
France	VME (mg/m³)	2 mg/m³ (alveolar fraction)
Greece	OEL TWA (mg/m³)	10 mg/m³ (inhalable fraction) 5 mg/m³ (respirable fraction)
Ireland	OEL (8 hours ref) (mg/m³)	2 mg/m³ (all forms except fibres; respirable fraction)
Ireland	OEL (15 min ref) (mg/m3)	6 mg/m³ (calculated-all forms except fibres; respirable fraction)
Latvia	OEL TWA (mg/m³)	2 mg/m³
Lithuania	IPRV (mg/m³)	5 mg/m³ (dust)
Poland	NDS (mg/m³)	4 mg/m³ (natural-inhalable fraction) 1 mg/m³ (natural-respirable fraction)

Graphite (7782-42-5)		
Portugal	OEL TWA (mg/m³)	2 mg/m³ (all forms except Graphite fibers-respirable fraction)
Romania	OEL TWA (mg/m³)	2 mg/m³ (Quartz <=5%-dust, respirable fraction)
Spain	VLA-ED (mg/m³)	2 mg/m³ (see UNE EN 481:1995 on workplace atmospheres-dust; respirable fraction)
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ (inhalable dust) 4 mg/m³ (respirable dust)
United Kingdom	WEL STEL (mg/m³)	30 mg/m³ (calculated-inhalable dust) 12 mg/m³ (calculated-respirable dust)
Norway	Grenseverdier (AN) (mg/m³)	5 mg/m³ (natural-total dust) 2 mg/m³ (natural-respirable dust) 10 mg/m³ (synthetic-total dust) 4 mg/m³ (synthetic-respirable dust)
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	10 mg/m³ (natural-total dust) 4 mg/m³ (natural-respirable dust) 15 mg/m³ (synthetic-total dust) 8 mg/m³ (synthetic-respirable dust)
Switzerland	MAK (mg/m³)	2.5 mg/m³ (natural-respirable dust) 5 mg/m³ (natural-inhalable dust)
USA - ACGIH	ACGIH TWA (mg/m³)	2 mg/m³ (all forms except graphite fibers-respirable particulate matter)

Copper (7440-50-8)		
Austria	MAK (mg/m³)	1 mg/m³ (inhalable fraction) 0.1 mg/m³ (respirable fraction, smoke)

Copper (7440-50-8)		
Austria	MAK Short time value (mg/m³)	4 mg/m³ (inhalable fraction) 0.4 mg/m³ (respirable fraction, smoke)
Belgium	Limit value (mg/m³)	0.2 mg/m³ (fume) 1 mg/m³ (dust and mist)
Bulgaria	OEL TWA (mg/m³)	0.1 mg/m³ (metal vapor)
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	0.2 mg/m³ (fume) 1 mg/m³ (dust)
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	2 mg/m³ (fume and dust)
Czech Republic	Expoziční limity (PEL) (mg/m³)	1 mg/m³ (dust) 0.1 mg/m³ (fume)
Denmark	Grænseværdie (langvarig) (mg/m³)	1 mg/m³ (dust and powder) 0.1 mg/m³ (fume)
Estonia	OEL TWA (mg/m³)	1 mg/m³ (total dust) 0.2 mg/m³ (respirable dust)
Finland	HTP-arvo (8h) (mg/m³)	0.02 mg/m³ (respirable dust)
France	VME (mg/m³)	0.2 mg/m³ (fume) 1 mg/m³ (dust)
France	VLE (mg/m³)	2 mg/m³ (dust)
Greece	OEL TWA (mg/m³)	0.2 mg/m³ (fume) 1 mg/m³ (dust)
Greece	OEL STEL (mg/m³)	2 mg/m³ (dust)
Hungary	AK-érték	1 mg/m³ 0.1 mg/m³ (fume)
Hungary	CK-érték	4 mg/m³ 0.4 mg/m³ (fume)
Ireland	OEL (8 hours ref) (mg/m³)	0.2 mg/m³ (fume) 1 mg/m³ (dusts and mists)
Ireland	OEL (15 min ref) (mg/m3)	2 mg/m³ (dusts and mists) 0.6 mg/m³ (calculated-fume)
Latvia	OEL TWA (mg/m³)	0.5 mg/m³
Lithuania	IPRV (mg/m³)	1 mg/m³ (inhalable fraction) 0.2 mg/m³ (respirable fraction)

Copper (7440-50-8)		
Netherlands	Grenswaarde TGG 8H (mg/m³)	0.1 mg/m³ (inhalable fraction)
Poland	NDS (mg/m³)	0.2 mg/m³
Portugal	OEL TWA (mg/m³)	0.2 mg/m³ (fume) 1 mg/m³ (dust and mist)
Romania	OEL TWA (mg/m³)	0.5 mg/m³ (powder)
Romania	OEL STEL (mg/m³)	0.2 mg/m³ (fume) 1.5 mg/m³ (dust)
Slovakia	NPHV (priemerná) (mg/m³)	1 mg/m³ (inhalable fraction) 0.2 mg/m³ (respirable fraction)
Slovenia	OEL TWA (mg/m³)	1 mg/m³ (inhalable fraction) 0.1 mg/m³ (respirable fraction, fume)
Slovenia	OEL STEL (mg/m³)	4 mg/m³ (inhalable fraction) 0.4 mg/m³ (respirable fraction, fume)
Spain	VLA-ED (mg/m³)	0.2 mg/m³ (fume) 1 mg/m³ (dust and mist)
Sweden	nivågränsvärde (NVG) (mg/m³)	0.01 mg/m³ (respirable dust)
United Kingdom	WEL TWA (mg/m³)	1 mg/m³ (dust and mists) 0.2 mg/m³ (fume)
United Kingdom	WEL STEL (mg/m³)	0.6 mg/m³ (calculated-fume) 2 mg/m³ (dust and mist)
Norway	Grenseverdier (AN) (mg/m³)	0.1 mg/m³ (fume) 1 mg/m³ (dust)
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	0.3 mg/m³ (value calculated-fume) 2 mg/m³ (value calculated-dust)
Switzerland	MAK (mg/m³)	0.1 mg/m³ (inhalable dust)
Switzerland	KZGW (mg/m³)	0.2 mg/m³ (inhalable dust)
USA - ACGIH	ACGIH TWA (mg/m³)	0.2 mg/m³ (fume)

Aluminum (7429-90-5)		
Austria	MAK (mg/m³)	10 mg/m³ (inhalable fraction)
Austria	MAK Short time value (mg/m³)	20 mg/m³ (inhalable fraction)

Aluminum (7429-90-5)		
Belgium	Limit value (mg/m³)	1 mg/m³
Bulgaria	OEL TWA (mg/m³)	10 mg/m³ (metal dust) 1.5 mg/m³ (respirable fraction)
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	10 mg/m³ (total dust) 4 mg/m³ (respirable dust)
Croatia	Croatia - BLV	200 mg/l Parameter: Aluminum - Medium: urine - Sampling time: at the end of the work shift
Czech Republic	Expoziční limity (PEL) (mg/m³)	10 mg/m³ (dust)
Denmark	Grænseværdie (langvarig) (mg/m³)	5 mg/m³ (dust, fume and powder, total) 2 mg/m³ (dust and powder, respirable)
Estonia	OEL TWA (mg/m³)	10 mg/m³ (total dust) 4 mg/m³ (respirable dust)
France	VME (mg/m³)	10 mg/m³ (metal) 5 mg/m³ (dust)
Greece	OEL TWA (mg/m³)	10 mg/m³ (inhalable fraction) 5 mg/m³ (respirable fraction)
Hungary	AK-érték	6 mg/m³ (respirable dust)
Ireland	OEL (8 hours ref) (mg/m³)	1 mg/m³ (respirable fraction)
Ireland	OEL (15 min ref) (mg/m3)	3 mg/m³ (calculated-respirable dust)
Latvia	OEL TWA (mg/m³)	2 mg/m³
Lithuania	IPRV (mg/m³)	5 mg/m³ (inhalable fraction) 2 mg/m³ (respirable fraction) 1 mg/m³
Poland	NDS (mg/m³)	2.5 mg/m³ (non-stabilized-inhalable fraction) 1.2 mg/m³ (non-stabilized-respirable fraction)
Portugal	OEL TWA (mg/m³)	10 mg/m³ (metal dust)
Romania	OEL TWA (mg/m³)	3 mg/m³ (dust) 1 mg/m³ (fume)

Aluminum (7429-90-5)		
Romania	OEL STEL (mg/m³)	10 mg/m³ (dust) 3 mg/m³ (fume)
Romania	Romania - BLV	200 µg/l Parameter: Aluminum - Medium: urine - Sampling time: end of shift
Slovakia	Slovakia - BLV	60 µg/g creatinine Parameter: Aluminum - Medium: urine - Sampling time: not critical
Spain	VLA-ED (mg/m³)	10 mg/m³ (dust)
Sweden	nivågränsvärde (NVG) (mg/m³)	5 mg/m³ (total dust) 2 mg/m³ (respirable dust)
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ (inhalable dust) 4 mg/m³ (respirable dust)
United Kingdom	WEL STEL (mg/m³)	30 mg/m³ (calculated-inhalable dust) 12 mg/m³ (calculated-respirable dust)
Norway	Grenseverdier (AN) (mg/m³)	5 mg/m³ (pyrotechnical-powder)
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	10 mg/m³ (pyrotechnical-powder)
Switzerland	MAK (mg/m³)	3 mg/m³ (respirable dust)
Switzerland	Switzerland - BLV	60 µg/g creatinine Parameter: Aluminum - Medium: urine - Sampling time: no restrictions
USA - ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (respirable particulate matter)

Polypropylene (9003-07-0)		
Czech Republic	Expoziční limity (PEL) (mg/m³)	5 mg/m³ (dust)
Latvia	OEL TWA (mg/m³)	5 mg/m³ (dust)
Lithuania	IPRV (mg/m³)	10 mg/m³ (not stabilized)

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Remove all sources of ignition. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	Blue
Odour	:	Odorless
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	Not applicable
Boiling point	:	No data available
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Insoluble
Log Pow	:	No data available
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	Not applicable
Explosive properties	:	Not an explosive
Oxidising properties	:	No data available
Explosive limits	:	Not an explosive

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No deformation, destruction, crushed, disassemble, overcharge, short circuit. Prolonged exposure to damp conditions

10.5. Incompatible materials

Strong acid, Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Sodium carboxymethyl cellulose (9004-32-4)	
LD50 oral rat	**27000 mg/kg**
LC50 inhalation rat (mg/l)	**> 5800 mg/m³ (Exposure time: 4 h)**

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Polypropylene (9003-07-0)	
IARC group	**3 - Not classifiable**

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 3480	**UN 3480**	**UN 3480**	**UN 3480**	**UN 3480**
14.2. UN proper shipping name				
LITHIUM ION BATTERIES	**LITHIUM ION BATTERIES**	**LITHIUM ION BATTERIES**	**LITHIUM ION BATTERIES**	**LITHIUM ION BATTERIES**
Transport document description				
UN 3480 LITHIUM ION BATTERIES, 9A, (E)	**UN 3480 LITHIUM ION BATTERIES, 9**	**UN 3480 LITHIUM ION BATTERIES, 9**	**UN 3480 LITHIUM ION BATTERIES, 9A**	**UN 3480 LITHIUM ION BATTERIES, 9A**
14.3. Transport hazard class(es)				
9A	**9A**	**9**	**9A**	**9A**
				
14.4. Packing group				
Not applicable	**Not applicable**	**Not applicable**	**Not applicable**	**Not applicable**

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
TÜV SÜD Group
Building 12&13, Zhiheng Wisdomland Business Park,
Nantou Checkpoint road 2,
Shenzhen 518052, P. R. China
Tel.: (86) 755 88286998
Fax: (86) 755 88285299

14.5. Environmental hazards				
Dangerous for the environment : No	**Dangerous for the environment : No Marine pollutant : No**	**Dangerous for the environment : No**	**Dangerous for the environment : No**	**Dangerous for the environment : No**
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : M4
Special provisions (ADR) : 188, 230, 310, 348, 376, 377, 636
Limited quantities (ADR) : 0
Excepted quantities (ADR) : E0
Packing instructions (ADR) : P903, P908, P909, P910, LP903, LP904
Transport category (ADR) : 2
Tunnel restriction code (ADR) : E
EAC code : 4W

Transport by sea

Special provisions (IMDG) : 188, 230, 310, 348, 376, 377, 384
Packing instructions (IMDG) : P903, P908, P909 , P910, LP903, LP904
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-I
Stowage category (IMDG) : A
Stowage and handling (IMDG) : SW19
Properties and observations (IMDG) : Electrical batteries containing lithium ion encased in a rigid metallic body. Lithium ion batteries may also be shipped in, or packed with, equipment. Electrical lithium batteries may cause fire due to an explosive rupture of the body caused by improper construction or reaction with contaminants.

Air transport

PCA Excepted quantities (IATA) : E0
PCA Limited quantities (IATA) : Forbidden
PCA limited quantity max net quantity (IATA) : Forbidden

PCA packing instructions (IATA)	: Forbidden
PCA max net quantity (IATA)	: Forbidden
CAO packing instructions (IATA)	: See 965
CAO max net quantity (IATA)	: See 965
Special provisions (IATA)	: A88, A99, A154, A164, A183, A201, A206, A331
ERG code (IATA)	: 9F

Inland waterway transport

Classification code (ADN)	: M4
Special provisions (ADN)	: 188, 230, 310, 348, 376, 377, 636
Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: M4
Special provisions (RID)	: 188, 230, 310, 348, _376, 377, 636
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P903, 908, 909, P910, LP903, LP904
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE2
Hazard identification number (RID)	: 90

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.
Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC..

Zirconium oxide (ZrO2) (1314-23-4)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Graphite (7782-42-5)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Phosphate(1-), hexafluoro-, lithium (21324-40-3)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Copper (7440-50-8)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Aluminum (7429-90-5)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

15.1.2. National regulations

Zirconium oxide (ZrO2) (1314-23-4)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

Graphite (7782-42-5)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

Phosphate(1-), hexafluoro-, lithium (21324-40-3)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

Copper (7440-50-8)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

Aluminum (7429-90-5)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

1,1-Difluoroethylene polymer (24937-79-9)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

Sodium carboxymethyl cellulose (9004-32-4)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene and ethenylbenzene **(25053-09-2)**
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

Polypropylene (9003-07-0)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

Germany

Reference to AwSV	: Water hazard class (WGK) 2, Significantly hazardous to water (Classification according to AwSV, Annex 1)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen	: None of the components are listed
SZW-lijst van mutagene stoffen	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: None of the components are listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:	
Flam. Sol. 1	Flammable solids, Category 1
Water-react. 2	Substances and Mixtures which, in contact with water, emit flammable gases, Category 2
H228	Flammable solid.
H261	In contact with water releases flammable gases.

Key or legend to abbreviations and acronyms used in the safety data sheet

ADR	:	European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMDG	:	International Maritime Dangerous Goods
IATA	:	International Air Transport Association
ADN	:	European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterway
RID	:	Regulations Concerning the International Carriage of Dangerous Godds by Rail
PBT	:	Persistent, Bioaccumulative and Toxic
vPvB	:	Very Persistent and Very Bioaccumulative
DNEL	:	Derived No Effect Level
PNEC	:	Predicted No Effect Concentration
LC50	:	Lethal Concentration 50
LD50	:	Lethal Dose 50
EC50	:	Effective Concentration 50
TWA	:	Time Weighted Average
STEL	:	Short Term Exposure Limit

Key literature references and sources for data
ECHA: http://echa.europa.eu/
IFA GESTIS: http://gestis-en.itrust.de/nxt/gateway.dll?f=templates$fn=default.htm$vid=gestiseng:sdbeng
HSDB: http://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
ICSC: http://www.ilo.org/dyn/icsc/showcard.home
eChemPortal: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
NITE-CHRIP: http://www.nite.go.jp/en/chem/chrip/chrip_search/srhInput

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product