SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier:
HyCeram opaque colors / pearl colors / luminex colors / neon colors

In the following colours:
standard (opaque) colors: organic white, deep white, indian yellow, oriental orange, granada red, zircon red, columbia blue, coral blue, vitrol blue, arizona blue, inca turquoise, lotus green, lakota pink, persian violet, platin grey, veneto brown, onyx black, deep black
Silk: beige, blue, yellow, rose, green, moss
Vita: cyan, orange, lavender, kiwi, pink, yellow
Luxe: aubergine, ruby, coral, burgundy, green, forest
pearl colors: pearl white, pearl silver, pearl rose, pearl gold, pearl red, pearl bronze, pearl anthracite, sparkling brown, sparkling black
luminex colors: white, yellow, turquoise, green
neon colors: yellow, orange, pink, green

1.2. Relevant identified uses of the substance or mixture and uses advised against:
Colour material for jewellery and watch components and other accessories, for industrial and professional use.

1.3. Details of the supplier of the safety data sheet:

Information about the manufacturer:
Invicon Chemical Solutions GmbH
Schweizer Strasse 96
A-6830 Rankweil
Tel: +43-(0)5522-45301
E-mail: office@invicon.at

1.3.1. Responsible person: -
E-mail: office@invicon.at

1.4. Emergency telephone number: *+43-(0)5522-45301 (during business hours)*

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008 (CLP):
Sensitisation - Skin, hazard category 1B – H317
Hazardous to the aquatic environment – Chronic Hazard, Category 3 – H412

Hazard statements:
H317 – May cause an allergic skin reaction.
H412 – Harmful to aquatic life with long lasting effects.

2.2. Label elements:

Components that define the hazards: 7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate

Hazard statements:
H317 – May cause an allergic skin reaction.
H412 – Harmful to aquatic life with long lasting effects.

Precautionary statements:
P264 – Wash hands thoroughly after handling.
P273 – Avoid release to the environment.
P280 – Wear protective gloves/protective clothing.
P302 + **P352** – IF ON SKIN: Wash with plenty of water.
P333 + **P313** – If skin irritation or rash occurs: Get medical advice/attention.
P501 – Dispose of contents/container in accordance with local/national regulations.

Additional labelling element for the product pearl anthracite:
EUH 208 – Contains Tricobalt tetraoxide; Cobalt diiron tetraoxide. May produce an allergic reaction.

Additional labelling element for the product pearl white:
EUH 211 – Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

2.3. Other hazards:

The product has no other known specific hazards for human or environment.
Results of PBT and vPvB assessment: Based on available data, the product does not contain ingredients that meet the criteria for PBT or vPvB substances.
Endocrine disrupting property: Based on available data, does not contain endocrine disruptors.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances:

Not applicable.

3.2. Mixtures:

Description: Mixture of substances listed below with non-hazardous additives and miscellaneous pigments.
It does not contain any other substance considered to be hazardous to health or to the environment, which is classified as a PBT or vPvB substance, which has a workplace exposure limit value, or its concentration does not reach the level specified in the relevant legislation and therefore it does not need to be included in the safety data sheet.

Description	CAS number	EC number / ECHA list number	REACH registration number	Conc. (%)	Classification according to Regulation (EC) No 1272/2008 (CLP)		
					Pictogram, signal word code(s)	Hazard class and category code(s)	Hazard statement code(s)
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate*	72869-86-4	276-957-5	01-2120751202-68	>10-<22	GHS07 GHS09 Warning	Skin Sens. 1B Aquatic Chronic 2	H317 H411

1,1,2,2-Tetraphenylethane-1,2-diol / Benzopinacol*	464-72-2	207-356-8	-	>0.2 - <0.5	GHS09 Warning	Aquatic Acute 1 Aquatic Chronic 1	H400 H410
product in pearl anthracite colour							
Cobalt diiron tetraoxide*	12052-28-7	234-992-3	-	>0.1 - <1	GHS08 Warning	Resp. Sens. 1 Skin Sens. 1	H334 H317
Tricobalt tetraoxide*	1308-06-1	215-157-2	-	>0.1 - <1	GHS08 Warning	Resp. Sens. 1 Skin Sens. 1	H334 H317
Mica*	12001-26-2	310-127-6	-	>1 - < 5	GHS07 Warning	STOT SE 3	H335
product in pearl white colour							
Titanium dioxide Index number: 022-006-00-2 Note V, W, 10	13463-67-7	236-675-5	-	> 0.5 - < 2	GHS08 Warning	Carc. 2	H351 (in-halation)

*: Classification specified by the manufacturer; the substance is not listed in Annex VI of the Regulation (EC) No 1272/2008.

Note V:
If the substance is to be placed on the market as fibres (with diameter < 3 µm, length > 5 µm and aspect ratio ≥ 3:1) or particles of the substance fulfilling the WHO fibre criteria or as particles with modified surface chemistry, their hazardous properties must be evaluated in accordance with Title II of this Regulation, to assess whether a higher category (Carc. 1B or 1A) and/or additional routes of exposure (oral or dermal) should be applied.

Note W:
It has been observed that the carcinogenic hazard of this substance arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung. This note aims to describe the particular toxicity of the substance; it does not constitute a criterion for classification according to this Regulation.

Note 10:
The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm.

For the full text of hazard statements, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1. **Description of first aid measures:**

General information: Remove contaminated and soaked clothing immediately.

INGESTION:

Measures:

- Do not induce vomiting.
- Obtain immediate medical attention.
- In case of vomiting, if the victim is laying on their back, turn them on their side.

INHALATION:

Measures:

- Take the victim into fresh air.
- In case of complaints, obtain medical help.
- In case of unconsciousness, place the victim in stable recovery position for transport.

SKIN CONTACT:

Measures:

- Immediately wash the skin with water and soap then rinse thoroughly.
- If skin irritation or rash occurs: Get medical advice/attention.

EYE CONTACT:

Measures:

- In case of contact with eyes flush with water holding eyelids apart and moving the eyeballs for several minutes.
- If eye irritation persists, consult a specialist.

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

May cause an allergic skin reaction.

4.3. **Indication of any immediate medical attention and special treatment needed:**
No special treatment needed; treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. **Extinguishing media:**
5.1.1. **Suitable extinguishing media:**
Foam, powder, carbon dioxide.
5.1.2. **Unsuitable extinguishing media:**
Water.
5.2. **Special hazards arising from the substance or mixture:**
In case of fire, smoke and other combustion products may be formed; the inhalation of such combustion products can have serious adverse effects on health.
5.3. **Advice for firefighters:**
Wear full protective clothing and self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. **Personal precautions, protective equipment and emergency procedures:**
6.1.1. **For non-emergency personnel:**
Allow only well-trained experts wearing suitable protective clothing to abide in the field of accident.
6.1.2. **For emergency responders:**
Ensure adequate ventilation.
Use respiratory protective equipment against fumes/dust/aerosols.
Avoid contact with skin and eyes.
Wear appropriate personal protective equipment.
6.2. **Environmental precautions:**
Dispose of the spillage and the resulting waste according to the applicable environmental regulations. Do not allow the product and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.
6.3. **Methods and material for containment and cleaning up:**
Collect the spilled product with absorbent (sand, tripoli, acid binder, universal binder, sawdust), then place into a suitable, closed, properly labelled chemical waste container for removal/disposal.
Dispose of the collected waste in accordance with regulations.
6.4. **Reference to other sections:**
For further and detailed information see Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. **Precautions for safe handling:**
Observe conventional hygiene precautions.
Avoid contact with skin and eyes.
Wear appropriate personal protective equipment.
Technical measures:
Ensure adequate ventilation.
Precautions against fire and explosion:
General measures of preventive fire protection.
7.2. **Conditions for safe storage, including any incompatibilities:**
Technical measures and storage condition:
Keep away from heat and direct sunlight.
Store in unopened, original container.
Keep away from foodstuffs.
Store in cool, dry places in tightly closed containers.
Store container in a well-ventilated area.
Incompatible materials: See Section 10.5.
Packaging material: No special prescriptions.
7.3. **Specific end use(s):**
No specific instructions available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. **Control parameters:**

Occupational exposure limit values (Commission Directive (EC) No 2000/39 of 8 June 2000):
The components of the mixture are not regulated with exposure limit value.

7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl-bismethacrylate (CAS: 72869-86-4):

DNEL values	
Oral	0.3 mg/kg bw/day
Dermal	0.7 mg/kg bw/day
Inhalation	0.6 mg/m³

PNEC values		
Compartment	Value	Note(s)
Freshwater	0.01 mg/l	no notes
Marine water	0.001 mg/l	no notes
Freshwater sediment	4.56 mg/kg	no notes
Marine water sediment	0.46 mg/kg	no notes
Sewage Treatment Plant (STP)	3.61 mg/l	no notes
Intermittent release	no data	no notes
Secondary poisoning	no data	no notes
Soil	0.91 mg/kg	no notes

8.2. **Exposure controls:**

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

8.2.1. **Appropriate engineering controls:**

In pursuance of work is proper foresight needed to avoid leaking onto clothes and floors and to avoid contact with eyes and skin.

8.2.2. **Individual protection measures, such as personal protective equipment:**

Keep away from food, drink and feed.
Wash skin before breaks and at the end of the work.
The information regarding personal protective equipment is only for informative purposes. A complete risk assessment is required before the use of the product for the determination of the appropriate personal protective equipment, taking local circumstances into account.

1. **Eye/face protection:** The use of appropriate protective goggles is recommended (EN ISO 16321-1:2022; EN 166).
2. **Skin protection:**
    a. **Hand protection:** Use appropriate protective gloves (EN 374).
    For short-term contact or if splashes may occur: Recommended minimum protection index 2, penetration time > 30 minutes, nitrile rubber (NBR), thickness ≥ 0.4 mm.
    For direct and prolonged contact: Recommended protection index 6, penetration time > 480 minutes, nitrile rubber (NBR), thickness ≥ 0.4 mm.
    The glove material should be impermeable and resistant to the product.
    Select glove material based on the penetration time, rates of diffusion and degradation.
    The selection of suitable gloves does not only depend on the material, but also on further marks of quality which may vary from manufacturer to manufacturer.
    As the product is a mixture of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked before use.
    The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
    b. **Other:** Use appropriate protective clothing.
3. **Respiratory protection:** In case of normal condition of use and adequate ventilation, not required.
4. **Thermal hazards:** No thermal hazards known.

8.2.3. **Environmental exposure controls:**

No specific prescription.

The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions, an expert's advice is necessary before deciding upon further protective measures.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. **Information on basic physical and chemical properties:**

	Parameter	Value / Test method / Remarks
1.	Physical state	liquid
2.	Colour	colour according to product designation
3.	Odour, odour threshold	no data*
4.	Melting point/freezing point	no data*
5.	Boiling point or initial boiling point and boiling range	> 200 °C
6.	Flammability	not applicable
7.	Lower and upper explosion limit	no data*
8.	Flash point	> 100 °C
9.	Auto-ignition temperature	not self-igniting
10.	Decomposition temperature	no data*
11.	pH	not applicable
12.	Kinematic viscosity	no data*
13.	Solubility in water in other solvents	<1 g/l no data*
14.	Partition coefficient n-octanol/water (log value)	no data*
15.	Vapour pressure	no data*
16.	Density and/or relative density	no data*
17.	Relative vapour density	no data*
18.	Particle characteristics	no data*

9.2. **Other information:**

9.2.1. **Information with regard to physical hazard classes:**
No further data available or not applicable for the product.

9.2.2. **Other safety characteristics:**
No other characteristics available.

*: The manufacturer did not carry out any tests on this parameter for the product or the results of the tests are not available at the time of publication of the data sheet, or the property is not applicable for the product.

SECTION 10: STABILITY AND REACTIVITY

10.1. **Reactivity:**
No reactivity known.

10.2. **Chemical stability:**
Stable within normal temperature and under general work conditions.

10.3. **Possibility of hazardous reactions:**
At temperatures above 110 °C, spontaneous exothermic polymerisation may occur in the CeraPower polymerisation unit. The product is converted into an inert solid substance (application purpose).

10.4. **Conditions to avoid:**
No conditions to avoid known.

10.5. **Incompatible materials:**
No incompatible materials known.

10.6. **Hazardous decomposition products:**
No hazardous decomposition products known if used and stored according to specification.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. **Information on hazard classes as defined in Regulation (EC) No 1272/2008:**
Acute toxicity: Based on available data, the classification criteria are not met.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Serious eye damage/irritation: Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation: May cause an allergic skin reaction.
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.
STOT-single exposure: Based on available data, the classification criteria are not met.
STOT-repeated exposure: Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.

11.1.1. Summaries of the information derived from the test conducted:
No data available.

11.1.2. Relevant toxicological properties:
No data available about the product.
Information about the components:
Acute toxicity:
7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl-bismethacrylate (CAS: 72869-86-4):
LD50 (oral, rat): > 5000 mg/kg (OECD 401)
LD50 (dermal, rat, 24 hours): > 2000 mg/kg (OECD 402)
Respiratory or skin sensitisation:
7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl-bismethacrylate (CAS: 72869-86-4):
Skin sensitisation:
OECD 429 (Local lymph node test) (dermal, rabbit): Sensitizing.
Reproductive toxicity:
7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl-bismethacrylate (CAS: 72869-86-4):
NOAEL (oral, rat, 64 days): 300 mg/kg bw/day (OECD 422, Combined toxicity for repeated toxicity with screening test about reproductive and developmental toxicity)

11.1.3. Information on likely routes of exposure:
Ingestion, inhalation, skin contact, eye contact.

11.1.4. Symptoms related to the physical, chemical and toxicological characteristics:
No data available.

11.1.5. Delayed and immediate effects as well as chronic effects from short and long-term exposure:
May cause an allergic skin reaction.

11.1.6. Interactive effects:
No data available.

11.1.7. Absence of specific data:
No information.

11.2. Information on other hazards:
Endocrine disrupting properties:
Endocrine disrupting property: Based on available data, does not contain endocrine disruptors.
Other information:
No data available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:
Harmful to aquatic life with long lasting effects.
The mixture has not been tested ecotoxicologically.
The classification of this mixture was performed based on the calculation method detailed in "General Classification guideline for mixtures of the EU" in the latest valid version.
Information about the components:
7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl-bismethacrylate (CAS: 72869-86-4):
EC50 (algae): > 0.68 mg/l/72h (OECD 201, Growth inhibition test with freshwater algae and cyanobacteria)
EC50 (Daphnia magna): > 1,2 mg/l/48h (OECD 202, Daphnia sp., Acute Immobilisation Test)
EC50 (fish): 10.1 mg/l/96h (OECD 203, Acute toxicity for fish)

12.2. Persistence and degradability:
No data available about the product.
Information about the components:
7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl-bismethacrylate (CAS: 72869-86-4):
Not easily biodegradable.

12.3. Bioaccumulative potential:
No data available about the product.
Information about the components:
7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl-bismethacrylate (CAS: 72869-86-4):
Partition coefficient: 3.39

12.4. Mobility in soil:
No data available.

12.5. **Results of PBT and vPvB assessment:**
Based on available data, the product does not contain ingredients that meet the criteria for PBT or vPvB substances.

12.6. **Endocrine disrupting properties:**
Endocrine disrupting property: Based on available data, does not contain endocrine disruptors.

12.7. **Other adverse effects:**
The product must not enter sewers, ground water, surface water or soil.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. **Waste treatment methods:**
Disposal according to the local regulations.

13.1.1. **Information regarding the disposal of the product:**
Product:
Hand over to hazardous waste disposers.
Dispose of in accordance with applicable regulations.
List of Waste Code:
No waste disposal key according to the List of Waste Code (LoW code) can be determined for this product, as only the purpose of application defined by the user enables an allocation. The LoW code number has to be determined after a discussion with a waste disposal specialist.

13.1.2. **Information regarding the disposal of the packaging:**
Dispose of in accordance with applicable regulations.

13.1.3. **Physical/chemical properties that may affect waste treatment options shall be specified:**
No data available.

13.1.4. **Sewage disposal:**
No data available.

13.1.5. **Special precautions for any recommended waste treatment:**
No data available.

SECTION 14: TRANSPORT INFORMATION

Not subject to the conventions of carriage of dangerous goods.

14.1. **UN number or ID number:**
No UN or ID number.

14.2. **UN proper shipping name:**
No proper shipping name.

14.3. **Transport hazard class(es):**
No transport hazard classes.

14.4. **Packing group:**
No packing group.

14.5. **Environmental hazards:**
No relevant information available.

14.6. **Special precautions for user:**
No relevant information available.

14.7. **Maritime transport in bulk according to IMO instruments:**
Not applicable.

SECTION 15: REGULATORY INFORMATION

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

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive (EC) No 1999/45 and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive (EEC) No 76/769 and Commission Directives (EEC) No 91/155, (EEC) No 93/67, (EC) No 93/105 and (EC) No 2000/21

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives (EEC) No 67/548 and (EC) No 1999/45, and amending Regulation (EC) No 1907/2006

COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Luminex Colors green:
The mixture contains an ingredient listed in Annex XVII of Regulation (EC) 1907/2006 and is therefore restricted (< 0.1 %):
Condition of restriction: entry 27 - Nickel and its compounds

Does not contain any substances listed in Annex XIV of Regulation (EC) 1907/2006 (REACH). (List of substances subject to authorisation).

Does not contain any substances included in the candidate list for Substances of Very High Concern (SVHC) according to Regulation (EC) 1907/2006 (REACH).

15.2. **Chemical safety assessment:** No information.

SECTION 16: OTHER INFORMATION

Information regarding the revision of the safety data sheet:
The safety data sheet has been revised according to Regulation (EU) 2020/878 (Section 1-16).
The composition of the mixture was modified compared to the previous version.
The hazard classification of the mixture did not change compared to the previous version.

This safety data sheet supersedes all previous versions according to Annex II of Regulation (EC) No 1907/2006.

Literature references / data sources:
Safety data sheet issued by the manufacturer (15. 09. 2023, version 4, IT)
Previous version of the safety data sheet (17. 04. 2020, version 2),

Methods used for the classification according to Regulation (EC) No 1272/2008:

Classification	Method
Sensitisation - Skin, hazard category 1B – H317	Based on calculation method
Hazardous to the aquatic environment – Chronic Hazard, Category 3 – H412	Based on calculation method

Relevant hazard statements (code and full text) of Sections 2 and 3:
H317 – May cause an allergic skin reaction.
H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 – May cause respiratory irritation.
H351 – Suspected of causing cancer <*state route of exposure if it is conclusively proven that no other routs of exposure cause the hazard*>.
H400 – Very toxic to aquatic life.
H410 – Very toxic to aquatic life with long lasting effects.
H411 – Toxic to aquatic life with long lasting effects.
H412 – Harmful to aquatic life with long lasting effects.
EUH 208 – Contains Tricobalt tetraoxide; Cobalt diiron tetraoxide. May produce an allergic reaction.
EUH 211 – Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Training advice: No data available.

Full text of the abbreviations in the safety data sheet:
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE: Acute Toxicity Estimate.
AOX: Adsorbable organic halides.
BCF: Bioconcentration factor.
BOD: Biological Oxygen Demand.
CAS number: Chemical Abstract Service number.
CLP: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
CMR effects: Carcinogenic, mutagenic, reprotoxic effects.
COD: Chemical Oxygen Demand.
CSA: Chemical Safety Assessment.
CSR: Chemical Safety Report.
DNEL: Derived-No-Effect-Level.
ECHA: European Chemical Agency.
EC: European Community.
EC number: EINECS and ELINCS numbers (see also EINECS and ELINCS).
EEC: European Economic Community.
EEA: European Economic Area (EU + Iceland, Liechtenstein and Norway).
EINECS: European Inventory of Existing Commercial Chemical Substances.
ELINCS: European List of Notified Chemical Substances.
EN: European Norm.
EU: European Union.
EuPCS: European Product Categorisation System.
EWC: European Waste Catalogue (replaced by LoW – see below).
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.
IATA: International Air Transport Association.
ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
IMO: International Maritime Organization.
IMSBC: International Maritime Solid Bulk Cargoes.
IUCLID: International Uniform Chemical Information Database.
IUPAC: International Union of Pure and Applied Chemistry.
Kow: n-Octanol - Water Partition Coefficient.
LC50: Lethal concentration resulting in 50 % mortality.
LD50: Lethal dose resulting in 50 % mortality (median lethal dose).
LoW: List of Waste.
LOEC: Lowest Observed Effect Concentration.
LOEL: Lowest Observed Effect Level.
NOEC: No Observed Effect Concentration.
NOEL: No Observed Effect Level.
NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
OECD: Organization for Economic Cooperation and Development.
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic.
PNEC: Predicted No Effect Concentration.
QSAR: Quantitative Structure Activity Relationship.
REACH: Regulation 1907/2006/EC concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.
RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.
SCBA: Self Contained Breathing Apparatus.
SDS: Safety Data Sheet.
STOT: Specific Target Organ Toxicity.
SVHC: Substances of Very High Concern.
UN: United Nations.
UVCB: Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials.
VOC: Volatile Organic Compound.
vPvB: very Persistent and very Bioaccumulative.

This safety data sheet had been prepared on the basis of information provided by the manufacturer/supplier and conform to the relevant regulations.
The information, data and recommendations contained herein are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information.
The SDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required.
Users are cautioned to determine the appropriateness and applicability of the above information to their particular circumstances and purposes and assume all risk associated with the use of this product.
It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.

Safety data sheet was prepared by:
MSDS-Europe
International branch of ToxInfo Kft.

Professional help regarding the explanation of the safety data sheet:
+36 70 335 8480; info@msds-europe.com
www.msds-europe.com