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

1.1 **Product identifier:** CMRL w/ L-Glutamine w/o Sodium Bicarbonate PM-C1051

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

   Relevant uses: Used in biotechnology. For professional user/industrial user only.

   Uses advised against: All uses not specified in this section or in section 7.3

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

   BIOSERA FRANCE SAS
   Rue de la Caille
   49340 Nuaillé - France
   Phone : 00 33 5 61 97 69 69
   Email : info@biosera.com
   www.biosera.com

1.4 **Emergency telephone number:** ORFILA: 01 45 42 59 59

SECTION 2: HAZARDS IDENTIFICATION

2.1 **Classification of the substance or mixture:**

   CLP Regulation (EC) n° 1272/2008:
   The product is not classified as dangerous according to CLP Regulation (EC) n° 1272/2008.

2.2 **Label elements:**

   CLP Regulation (EC) n° 1272/2008:
   
   **Hazard statements:** Non-applicable
   
   **Precautionary statements:** Non-applicable
   
   **Supplementary information:** EUH210: Safety data sheet available on request

2.3 **Other hazards:**

   Product fails to meet PBT/vPvB criteria

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 **Substance:** Non-applicable

3.2 **Mixture:**

   **Chemical description:** Mixture composed of inorganic substances

   **Components:**

   In accordance with Annex II of Regulation (EC) n°1907/2006 (point 3), the product contains:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Chemical name/Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 7048-04-6</td>
<td>L-Cysteine, hydrochloride, hydrate (1:1:1) ¹</td>
<td>Self-classified</td>
</tr>
<tr>
<td>EC: 615-117-8</td>
<td>Regulation 1272/2008</td>
<td>2,5 - &lt;10 %</td>
</tr>
<tr>
<td>Index: Non-applicable REACH:01-2119885378-25-XXX</td>
<td>Eye Irrit. 2: H319; Skin Irrit. 2: H315; STOT SE 3: H335 - Warning</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS: 10043-52-9</td>
<td>Calcium chloride ¹</td>
<td>ATP CLP00</td>
</tr>
<tr>
<td>EC: 233-140-8</td>
<td>Regulation 1272/2008</td>
<td>1 - &lt;2,5 %</td>
</tr>
<tr>
<td>Index: 017-013-00-0 REACH:01-2119494219-28-XXX</td>
<td>Eye Irrit. 2: H319 - Warning</td>
<td></td>
</tr>
</tbody>
</table>

² Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830

To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 and 16.

- CONTINUED ON NEXT PAGE -
SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:
   The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

   By inhalation:
   This product is not classified as hazardous through inhalation, however, it is recommended in case of intoxication symptoms to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

   By skin contact:
   This product is not classified as hazardous when in contact with the skin. However, in case of skin contact it is recommended to remove contaminated clothes and shoes, rinse the skin or shower the person affected if necessary thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.

   By eye contact:
   Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

4.2 Most important symptoms and effects, both acute and delayed:
   Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed:
   Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:
   Product is non-flammable under normal conditions of storage, manipulation and use. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:
   As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:
   Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.
   Additional provisions:
   Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
   Sweep up and shovel product or other means and place in container for reuse (preferred) or disposal

6.2 Environmental precautions:
   This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

6.3 Methods and material for containment and cleaning up:
   It is recommended:
   Sweep up and shovel product or other means and place in container for reuse (preferred) or disposal

6.4 Reference to other sections:
   See sections 8 and 13.
SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:
A. Precautions for safe manipulation
   Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.
B. Technical recommendations for the prevention of fires and explosions
   Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, manipulation and use.
C. Technical recommendations to prevent ergonomic and toxicological risks
   Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.
D. Technical recommendations to prevent environmental risks
   It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:
A. Technical measures for storage
   Store in a cool, dry, well-ventilated location
B. General conditions for storage
   Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):
   Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:
Substances whose occupational exposure limits have to be monitored in the work environment
Nuisance dust: Inhalable dust 10 mg/m3 // Respirable dust 4 mg/m3

DNEL (Workers):

<table>
<thead>
<tr>
<th>Identification</th>
<th>Systemic Short exposure</th>
<th>Local Short exposure</th>
<th>Systemic Long exposure</th>
<th>Local Long exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride</td>
<td>Oral</td>
<td>Non-applicable</td>
<td>Non-applicable</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>CAS: 10043-52-4</td>
<td>Dermal</td>
<td>Non-applicable</td>
<td>Non-applicable</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>EC: 233-140-8</td>
<td>Inhalation</td>
<td>Non-applicable</td>
<td>10 mg/m³</td>
<td>Non-applicable</td>
</tr>
</tbody>
</table>

DNEL (General population):

<table>
<thead>
<tr>
<th>Identification</th>
<th>Systemic Short exposure</th>
<th>Local Short exposure</th>
<th>Systemic Long exposure</th>
<th>Local Long exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride</td>
<td>Oral</td>
<td>Non-applicable</td>
<td>Non-applicable</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>CAS: 10043-52-4</td>
<td>Dermal</td>
<td>Non-applicable</td>
<td>Non-applicable</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>EC: 233-140-8</td>
<td>Inhalation</td>
<td>Non-applicable</td>
<td>5 mg/m³</td>
<td>Non-applicable</td>
</tr>
</tbody>
</table>

PNEC:
Non-applicable

8.2 Exposure controls:
A. General security and hygiene measures in the work place
   As a preventative measure it is recommended to use basic Personal Protection Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,…) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.
   All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.
B. Respiratory protection
   The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

CONTINUED ON NEXT PAGE
**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

C. - Specific protection for the hands
   Non-applicable
   As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application

D. - Ocular and facial protection
   Non-applicable

E. - Bodily protection
   Non-applicable

F. - Additional emergency measures
   It is not necessary to take additional emergency measures.

**Environmental exposure controls:**
In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**Volatile organic compounds:**
With regard to Directive 2010/75/EU, this product has the following characteristics:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>V.O.C. (Supply)</td>
<td>0 % weight</td>
</tr>
<tr>
<td>V.O.C. density at 20 ºC</td>
<td>0 kg/m³ (0 g/L)</td>
</tr>
<tr>
<td>Average carbon number</td>
<td>Non-applicable</td>
</tr>
<tr>
<td>Average molecular weight</td>
<td>Non-applicable</td>
</tr>
</tbody>
</table>

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties:**
For complete information see the product datasheet.

**Appearance:**
- Physical state at 20 ºC: Solid
- Appearance: Powdery
- Colour: Orange
- Odour: Not available
- Odour threshold: Non-applicable *

**Volatile:**
- Boiling point at atmospheric pressure: Non-applicable *
- Vapour pressure at 20 ºC: Non-applicable *
- Vapour pressure at 50 ºC: <300000 Pa (300 kPa)
- Evaporation rate at 20 ºC: Non-applicable *

**Product description:**
- Density at 20 ºC: 1978 kg/m³
- Relative density at 20 ºC: 1,978
- Dynamic viscosity at 20 ºC: Non-applicable *
- Kinematic viscosity at 20 ºC: Non-applicable *
- Kinematic viscosity at 40 ºC: Non-applicable *
- Concentration: Non-applicable *
- pH: 3 - 3,6
- Vapour density at 20 ºC: Non-applicable *
- Partition coefficient n-octanol/water 20 ºC: Non-applicable *
- Solubility in water at 20 ºC: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.*
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solubility properties</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Non-applicable *</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Non-applicable *</td>
</tr>
</tbody>
</table>

**Flammability:**
- Flash Point: Non-applicable
- Flammability (solid, gas): Non-applicable *
- Autoignition temperature: 480 °C
- Lower flammability limit: Non-applicable *
- Upper flammability limit: Non-applicable *

**Explosive:**
- Lower explosive limit: Non-applicable *
- Upper explosive limit: Non-applicable *

9.2 Other information:
- Surface tension at 20 °C: Non-applicable *
- Refraction index: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:
No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:
Chemically stable under the conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:
Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:
Applicable for handling and storage at room temperature:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Shock and friction</th>
<th>Contact with air</th>
<th>Increase in temperature</th>
<th>Sunlight</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

10.5 Incompatible materials:

<table>
<thead>
<tr>
<th>Category</th>
<th>Acids</th>
<th>Water</th>
<th>Combustive materials</th>
<th>Combustible materials</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid strong acids</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Avoid alkalis or strong bases</td>
</tr>
</tbody>
</table>

10.6 Hazardous decomposition products:
See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:
The experimental information related to the toxicological properties of the product itself is not available.

**Dangerous health implications:**
In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A.- Ingestion (acute effect):...
SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, however it does contain substances classified as dangerous for this effect. For more information see section 3.
B- Inhalation (acute effect):
- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.
C- Contact with the skin and the eyes (acute effect):
- Contact with the skin: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for skin contact. For more information see section 3.
- Contact with the eyes: Based on available data, the classification criteria are not met, however it does contain substances classified as dangerous for this effect. For more information see section 3.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
E- Sensitizing effects:
- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
- Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
F- Specific target organ toxicity (STOT) - single exposure:
Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.
G- Specific target organ toxicity (STOT) - repeated exposure:
- Specific target organ toxicity (STOT) - repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
H- Aspiration hazard:
Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

Other information:
Non-applicable

Specific toxicology information on the substances:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Acute toxicity</th>
<th>Genus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride</td>
<td>LD50 oral 2301 mg/kg</td>
<td>Rat</td>
</tr>
<tr>
<td>CAS: 10043-52-4</td>
<td>LD50 dermal 5100 mg/kg</td>
<td>Rabbit</td>
</tr>
<tr>
<td>EC: 233-140-8</td>
<td>LC50 inhalation Non-applicable</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

<table>
<thead>
<tr>
<th>Identification</th>
<th>Acute toxicity</th>
<th>Species</th>
<th>Genus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride</td>
<td>LC50 4630 mg/L (96 h)</td>
<td>Pimephales promelas</td>
<td>Fish</td>
</tr>
<tr>
<td>CAS: 10043-52-4</td>
<td>EC50 2400 mg/L (48 h)</td>
<td>Daphnia magna</td>
<td>Crustacean</td>
</tr>
<tr>
<td>EC: 233-140-8</td>
<td>EC50 27000 mg/L (72 h)</td>
<td>Pseudokirchneriella subcapitata</td>
<td>Algae</td>
</tr>
</tbody>
</table>
CMRL w/ L-Glutamine w/o Sodium Bicarbonate
PM-C1051

SECTION 12: ECOLOGICAL INFORMATION (continued)

12.2 Persistence and degradability:
Not available

12.3 Bioaccumulative potential:
Not available

12.4 Mobility in soil:
Not available

12.5 Results of PBT and vPvB assessment:
Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects:
Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Waste class (Regulation (EU) No 1357/2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 03 04</td>
<td>Inorganic wastes other than those mentioned in 16 03 03</td>
<td>Non dangerous</td>
</tr>
</tbody>
</table>

Type of waste (Regulation (EU) No 1357/2014):
Non-applicable

Waste management (disposal and evaluation):
Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

Regulations related to waste management:
In accordance with Annex II of Regulation (EC) n°1907/2006 (REACH) the community or state provisions related to waste management are stated


SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:
With regard to ADR 2017 and RID 2017:

14.1 UN number: Non-applicable
14.2 UN proper shipping name: Non-applicable
14.3 Transport hazard class(es): Non-applicable
   Labels: Non-applicable
14.4 Packing group: Non-applicable
14.5 Environmental hazards: No
14.6 Special precautions for user
   Special regulations: Non-applicable
   Tunnel restriction code: Non-applicable
   Physico-Chemical properties: see section 9
   Limited quantities: Non-applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:
Non-applicable

Transport of dangerous goods by sea:
With regard to IMDG 38-16:

- CONTINUED ON NEXT PAGE -
SECTION 14: TRANSPORT INFORMATION (continued)

14.1 UN number: Non-applicable
14.2 UN proper shipping name: Non-applicable
14.3 Transport hazard class(es): Non-applicable
   Labels: Non-applicable
14.4 Packing group: Non-applicable
14.5 Environmental hazards: No
14.6 Special precautions for user
   Special regulations: Non-applicable
   EmS Codes:
   Physico-Chemical properties: see section 9
   Limited quantities: Non-applicable
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

Transport of dangerous goods by air:
With regard to IATA/ICAO 2017:

14.1 UN number: Non-applicable
14.2 UN proper shipping name: Non-applicable
14.3 Transport hazard class(es): Non-applicable
   Labels: Non-applicable
14.4 Packing group: Non-applicable
14.5 Environmental hazards: No
14.6 Special precautions for user
   Physico-Chemical properties: see section 9
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Non-applicable
Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable
Article 95, REGULATION (EU) No 528/2012: Non-applicable
REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable
Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc....): Non-applicable
Specific provisions in terms of protecting people or the environment:
It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.
Other legislation:
The product could be affected by sectorial legislation

15.2 Chemical safety assessment:
The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:
This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) Nº 1907/2006 (Regulation (EC) Nº 2015/830)
SECTION 16: OTHER INFORMATION (continued)

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks:
Non-applicable

Texts of the legislative phrases mentioned in section 3:
The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) no 1272/2008:
Eye Irrit. 2: H319 - Causes serious eye irritation
Skin Irrit. 2: H315 - Causes skin irritation
STOT SE 3: H335 - May cause respiratory irritation

Classification procedure:
Non-applicable

Advice related to training:
Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:
http://echa.europa.eu
http://eur-lex.europa.eu

Abbreviations and acronyms:
ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5-day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
Log-POW: Octanol–water partition coefficient
Koc: Partition coefficient of organic carbon