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

1.1 Product identifier

Trade name: N-methyl-2-pyrrolidone

· Article number: 1356
· CAS Number: 872-50-4
· EC number: 212-828-1
· Index number: 606-021-00-7
· Registration number 01-2119472430-46-XXXX

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

Life cycle stages
IS Use at industrial Sites
M Manufacture
F Formulation or re-packing
PW Widespread use by professional workers

Sector of Use
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU9 Manufacture of fine chemicals
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU24 Scientific research and development

Product category
PC19 Intermediate
PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
PC21 Laboratory chemicals
PC40 Extraction agents

Process category
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC5 Mixing or blending in batch processes
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC10 Roller application or brushing
PROC11 Non industrial spraying
PROC12 Use of blowing agents in manufacture of foam
PROC13 Treatment of articles by dipping and pouring
PROC14 Tabletting, compression, extrusion, pelletisation, granulation
PROC15 Use as laboratory reagent

Environmental release category
ERC1 Manufacture of the substance
ERC2 Formulation into mixture
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC6a Use of intermediate
ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

(Contd. on page 2)
Application of the substance / the mixture
Chemical for research, development, manufacturing, laboratory chemical for analysis.

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Biosolve Chimie
20 Rue Roger Husson, 57260 Dieuze, France
Tel: +33 3 878 675 80/81/82/83/84/85
Email: info@biosolvechimie.com

Biosolve B.V.
Leenderweg 78, 5555 CE Valkenswaard, the Netherlands.
Tel: +31-(0)40-2071300
Fax:+31-(0)40-2048537
Email: info@biosolve-chemicals.com

Further information obtainable from: Product safety department.
Emergency telephone number:
For emergency telephone numbers of the poisons centers in Europe please use this link: http://www.eapcct.org/

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

- GHS08 health hazard
- Repr. 1B  H360D  May damage the unborn child.

- GHS07
- Skin Irrit. 2  H315  Causes skin irritation.
- Eye Irrit. 2  H319  Causes serious eye irritation.
- STOT SE 3  H335  May cause respiratory irritation.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.

- Hazard pictograms
  - GHS07
  - GHS08

- Signal word Danger
- Hazard statements
  - H315  Causes skin irritation.
  - H319  Causes serious eye irritation.
  - H360D  May damage the unborn child.
**Trade name: N-methyl-2-pyrrolidone**

- **H335** May cause respiratory irritation.
- **Precautionary statements**
  - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P405 Store locked up.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Additional information:**
  Restricted to professional users.

**SECTION 3: Composition/information on ingredients**

- **3.1 Chemical characterisation: Substances**
  - CAS No. Description
    - 872-50-4 N-methyl-2-pyrrolidone
  - Identification number(s)
    - EC number: 212-828-1
    - Index number: 606-021-00-7
- **SVHC**
  - 872-50-4 N-methyl-2-pyrrolidone

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
  - **General information:** Immediately remove any clothing soiled by the product.
  - **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
  - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed**
  No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
  No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
  - **Suitable extinguishing agents:**
    - CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**
  No further relevant information available.
5.3 Advice for firefighters

Protective equipment: No special measures required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

6.2 Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/surface or ground water.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Information about fire - and explosion protection: Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: Keep container tightly sealed.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

872-30-4 N-methyl-2-pyrrolidone

<table>
<thead>
<tr>
<th>Substance</th>
<th>Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Short-term</td>
</tr>
<tr>
<td>872-30-4</td>
<td>80 mg/m³, 20 ppm</td>
</tr>
<tr>
<td>872-30-4</td>
<td>Long-term</td>
</tr>
<tr>
<td>872-30-4</td>
<td>40 mg/m³, 10 ppm</td>
</tr>
</tbody>
</table>

DNELs

872-30-4

Workers Skin contact Acute systemic effects 208mg/kg BW/d
Workers Inhalation Acute systemic effects 80 mg/m³
Trade name: N-methyl-2-pyrrolidone

Workers Skin contact Long-term systemic effects 19.8mg/kg BW/d
Workers Inhalation Long-term systemic effects 40 mg/m³

- **PNECs**
  - 872-50-4
  - Water 5 mg/l
  - Soil 0.138 mg/kg
  - Marine water 0.025 mg/kg
  - Fresh water 0.25 mg/l
  - Fresh water sediment 0.805 mg/kg
  - Onsite sewage treatment plant 10 mg/l

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**
  - **Personal protective equipment:**
    - General protective and hygienic measures:
      - Keep away from foodstuffs, beverages and feed.
      - Immediately remove all soiled and contaminated clothing.
      - Wash hands before breaks and at the end of work.
      - Store protective clothing separately.
      - Avoid contact with the eyes and skin.
    - Respiratory protection:
      - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
  - **Protection of hands:**
    - **Protective gloves**
      - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. 
      - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
      - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
    - **Material of gloves**
      - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
    - **Penetration time of glove material**
      - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - **Eye protection:**
    - **Tightly sealed goggles**
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
   General Information
   - Appearance: Fluid
   - Colour: Not determined.
   - Odour: Amine-like
   - Odour threshold: Not determined.
   - pH-value: Not determined.

9.2 Other information
   No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
   No further relevant information available.

10.2 Chemical stability
   No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions
   No dangerous reactions known.

10.4 Conditions to avoid
   No further relevant information available.

10.5 Incompatible materials
   No further relevant information available.
SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>3,914 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>8,000 mg/kg (rabbit)</td>
</tr>
</tbody>
</table>

Primary irritant effect:

- **Skin corrosion/irritation**
  Causes skin irritation.

- **Serious eye damage/irritation**
  Causes serious eye irritation.

- **Respiratory or skin sensitisation**
  Based on available data, the classification criteria are not met.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

- **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**
  May damage the unborn child.

- **STOT-single exposure**
  May cause respiratory irritation.

- **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.

SECTION 12: Ecological information

12.1 Toxicity

- **Aquatic toxicity**: No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Additional ecological information:

- **General notes**
  Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment

- **PBT**: Not applicable.
- **vPvB**: Not applicable.

12.6 Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

**Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Trade name: N-methyl-2-pyrrolidone

- European waste catalogue
  - HP 4 Irritant - skin irritation and eye damage
  - HP 5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
  - HP 10 Toxic for reproduction

- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.
  - Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- 14.1 UN-Number
  - ADR, ADN, IMDG, IATA Void

- 14.2 UN proper shipping name
  - ADR, ADN, IMDG, IATA Void

- 14.3 Transport hazard class(es)
  - ADR, ADN, IMDG, IATA Void

- 14.4 Packing group
  - ADR, IMDG, IATA Void

- 14.5 Environmental hazards:
  - Marine pollutant: No

- 14.6 Special precautions for user
  - Not applicable.

- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
  - Not applicable.

- UN "Model Regulation": Void

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Labelling according to Regulation (EC) No 1272/2008
    - The substance is classified and labelled according to the CLP regulation.
  - Hazard pictograms
    - GHS07
    - GHS08

- Signal word Danger

- Hazard statements
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.
  - H360D May damage the unborn child.
  - H335 May cause respiratory irritation.

(Contd. on page 9)
Trade name: N-methyl-2-pyrrolidone

46.2.1 Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P304+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 30

- National regulations:
- Other regulations, limitations and prohibitive regulations
- Substances of very high concern (SVHC) according to REACH, Article 57
  - 872-50-4 N-methyl-2-pyrrolidone
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: Product safety department
Contact: Product safety department

Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

* Data compared to the previous version altered.
* Annex: Exposure scenario

- **Short title of the exposure scenario**
- **Sector of Use**
  - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
  - SU9 Manufacture of fine chemicals
  - SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
  - SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
  - SU24 Scientific research and development
- **Product category**
  - PC19 Intermediate
  - PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
  - PC21 Laboratory chemicals
  - PC40 Extraction agents
- **Process category**
  - PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
  - PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
  - PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
  - PROC4 Chemical production where opportunity for exposure arises
  - PROC5 Mixing or blending in batch processes
  - PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
  - PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
  - PROC10 Roller application or brushing
  - PROC11 Non industrial spraying
  - PROC12 Use of blowing agents in manufacture of foam
  - PROC13 Treatment of articles by dipping and pouring
  - PROC14 Tablettting, compression, extrusion, pelletisation, granulation
  - PROC15 Use as laboratory reagent
- **Environmental release category**
  - ERC1 Manufacture of the substance
  - ERC2 Formulation into mixture
  - ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
  - ERC6a Use of intermediate
  - ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)
  - ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
- **Notes**
  Do not use for private / domestic purposes (household).
  The product is intended for professional use.

**Description of the activities / processes covered in the Exposure Scenario**

872-50-4
1. Manufacturing and on-site use
   - Main User Groups : SU 3
   - Sectors of end-use : SU 3, SU9
   - Chemical product category : PC19, PC40
   - Process categories : PROC1, PROC2, PROC3, PROC4, PROC8b, PROC9, PROC12, PROC13, PROC15
   - Environmental Release Categories : ERC1, ERC4, ERC6a

2. Formulation of preparations
   - Main User Groups : SU 3
Trade name: N-methyl-2-pyrrolidone

<table>
<thead>
<tr>
<th>Conditions of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration and frequency</td>
</tr>
<tr>
<td>Worker</td>
</tr>
<tr>
<td>Application duration</td>
</tr>
<tr>
<td>Frequency of use</td>
</tr>
<tr>
<td>Environment</td>
</tr>
<tr>
<td>Indoor use</td>
</tr>
<tr>
<td>Physical parameters</td>
</tr>
<tr>
<td>Physical state</td>
</tr>
<tr>
<td>Concentration of the substance in the mixture</td>
</tr>
<tr>
<td>Raw material.</td>
</tr>
<tr>
<td>Covers the percentage of the substance in the product up to 100 %</td>
</tr>
<tr>
<td>Used amount per time or activity</td>
</tr>
<tr>
<td>According to directions for use.</td>
</tr>
<tr>
<td>Covers the percentage of the substance in the product up to 100 %</td>
</tr>
<tr>
<td>Other operational conditions</td>
</tr>
<tr>
<td>Other operational conditions affecting environmental exposure</td>
</tr>
<tr>
<td>Observe section 6 of the Safety Data Sheet (Accidental release measures).</td>
</tr>
<tr>
<td>Other operational conditions affecting worker exposure</td>
</tr>
<tr>
<td>Avoid contact with eyes.</td>
</tr>
<tr>
<td>Avoid contact with the skin.</td>
</tr>
<tr>
<td>Take precautionary measures against static discharge.</td>
</tr>
<tr>
<td>Keep away from sources of ignition - No smoking.</td>
</tr>
<tr>
<td>Do not breathe gas/vapour/aerosol.</td>
</tr>
<tr>
<td>Always wear safety goggles during mechanical processing (grinding, sawing/cutting, drilling, milling).</td>
</tr>
<tr>
<td>Risk management measures</td>
</tr>
<tr>
<td>Worker protection</td>
</tr>
</tbody>
</table>

(S contd. of page 10)
Organisational protective measures
Deploy only trained chemical workers.
Provide Internal Plant Instruction.
Handling procedures must be well documented.
Ensure that activities are executed by specialists or authorised personnel only.
Consider section 4 of the Safety Data Sheet (First aid measures).
Provide emergency eye wash station and mark its location clearly.

Technical protective measures
Ensure that suitable extractors are available on processing machines
Provide explosion-proof electrical equipment.

Personal protective measures
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
Avoid contact with the eyes.
Pregnant women should strictly avoid inhalation or skin contact.
Tightly sealed goggles
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

Measures for consumer protection
Ensure adequate labelling.

Environmental protection measures
Water Do not allow to reach ground water, water bodies or sewage system.
Soil Prevent contamination of soil.
Notes In case of unintended release of the product: See section 6 of the Safety Data Sheet.

Disposal measures
Disposal must be made according to official regulations.
Ensure that waste is collected and contained.

Disposal procedures
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Waste type Partially emptied and uncleaned packaging

Exposure estimation
Worker (dermal)
Detailed information on the exposure estimation can be found at http://www.ecetoc.org/tra.
872-50-4 With local exhaust ventilation

PROC1 0.034 mg/kg BW/d
PROC2 1.371 mg/kg BW/d
PROC3 0.686 mg/kg BW/d
PROC4 6.857 mg/kg BW/d
PROC5 13.714 mg/kg BW/d
PROC8b 13.714 mg/kg BW/d
PROC9 6.857 mg/kg BW/d
PROC10 5.486 mg/kg BW/d
PROC11 10.714 mg/kg BW/d
Trade name: N-methyl-2-pyrrolidone

PROC12 0.343 mg/kg BW/d
PROC13 2.743 mg/kg BW/d
PROC14 3.429 mg/kg BW/d
PROC15 0.343 mg/kg BW/d

The calculated value is smaller than the DNEL.
Risk Characterization ratio <1

Worker (inhalation)
Detailed information on the exposure estimation can be found at http://www.etoc.org/tra.

PROC1 0.041 mg/m³
PROC2 0.413 mg/m³
PROC3 1.239 mg/m³
PROC4 8.261 mg/m³
PROC5 8.261 mg/m³
PROC8b 1.033 mg/m³
PROC9 2.065 mg/m³
PROC10 20.652 mg/m³
PROC11 16.522 mg/m³
PROC12 8.261 mg/m³
PROC13 8.261 mg/m³
PROC14 8.261 mg/m³
PROC15 4.13 mg/m³

The calculated value is smaller than the DNEL.
Risk Characterization ratio <1

Environment
A chemical safety assessment was performed according REACH Article 14(3), Annex I, sections 3 (Environmental Hazard assessment) and 4 (PBT/vPvB Assessment). As no hazard was identified, an exposure assessment and risk characterization is not necessary (REACH Annex I section 5.0).

Consumer
Not relevant for this Exposure Scenario.

Guidance for downstream users
Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system; ECHA Guidance for downstream users; ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).