Safety Data Sheet

CERFOBOL R90

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

1.1. Product identifier
   Trade name: CERFOBOL R90
   MSDS code: F007842
   Chemical description: Aqueous emulsion of organic polymer.

1.2. Relevant identified uses of the substance or mixture and uses advised against
   Recommended use:
   Industrial uses.

1.3. Details of the supplier of the safety data sheet
   Supplier:
   LAMBERTI S.p.A. - Via Piave 18 - 21041 Albizzate (VA) - Phone +39 0331 715 111 - Fax +39 0331 775 577 - e-mail: hse@lamberti.com
   Competent person responsible for the safety data sheet:
   hse@lamberti.com

1.4. Emergency telephone number
   LAMBERTI S.p.A. - Phone +39 0331 715 111 - 24h

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
   EC regulation criteria 1272/2008 (CLP)
   Danger, Eye Dam. 1, Causes serious eye damage.
   Warning, Repr. 2, Suspected of damaging fertility or the unborn child.

   Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:
   Properties / Symbols:
   This product is not a hazardous article and need not be labelled according to EC-Directive 67/548, 1999/45 as amended.

   Adverse physicochemical, human health and environmental effects:
   No other hazards

2.2. Label elements
   Symbols:
   Danger

   Hazard statements:
   H318 Causes serious eye damage.
   H361 Suspected of damaging fertility or the unborn child.

   Precautionary statements:
   P201 Obtain special instructions before use.
   P202 Do not handle until all safety precautions have been read and understood.
   P280 Wear protective gloves/protective clothing/eye protection/face protection.
   P281 Use personal protective equipment as required.
   P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove
SECTION 3: Composition/information on ingredients

3.1. Substances
N.A.

3.2. Mixtures
Hazardous components within the meaning of EEC directive 67/548 and CLP regulation and related classification:
1% - 5% Alkylphenol polypropylene glycol ether.
Xi; R36/38-53
3.3/2 Eye Irrit. 2 H319
3.2/2 Skin Irrit. 2 H315
4.1/C4 Aquatic Chronic 4 H413

1% - 5% 1-Ethylpyrrolidin-2-one
REACH No.: 01-2119472138-36-XXXX, CAS: 2687-91-4, EC: 220-250-6 INDEX:N.D.
Repr. Cat. 3; Xi; R63-41
3.3/1 Eye Dam. 1 H318
3.7/2 Repr. 2 H361d

SECTION 4: First aid measures

4.1. Description of first aid measures
In case of skin contact:
Wash with plenty of water and soap.
In case of eyes contact:
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
In case of Ingestion:
Do not under any circumstances induce vomiting. Seek immediately medical advice.
In case of Inhalation:
Remove casualty to fresh air and keep warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed
Not known.

4.3. Indication of any immediate medical attention and special treatment needed
Treatment:
Not known.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media:
Water.
Carbon dioxide (CO2).
Extinguishing media which must not be used for safety reasons:
Not known.

5.2. Special hazards arising from the substance or mixture
Do not inhale explosion and combustion gases.

5.3. Advice for firefighters
Use suitable breathing apparatus.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear personal protection equipment.
Remove persons to safety.
See protective measures under point 7 and 8.

6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up
Suitable material for taking up: absorbing material, organic, sand
Wash with plenty of water.

6.4. Reference to other sections
See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid contact with skin and eyes, inhalation of vapours and mists.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities
Keep away from food, drink and feed.
Instructions as regards storage premises:
Adequate ventilation in working area.
Packaging suggested:
Plastic drums.

7.3. Specific end use(s)
None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
DNEL Exposure Limit Values
1-Ethylpyrrolidin-2-one
Worker Industry: 40 mg/m3 - Worker Professional: 40 mg/m3 - General population: 10 mg/l - Exposure: Long Term, systemic effects Human Inhalation
Worker Industry: 80 mg/m3 - Worker Professional: 80 mg/m3 - General population: 40 mg/m3 - Exposure: Short Term, systemic effects Human Inhalation
Worker Industry: 40 mg/m3 - Worker Professional: 40 mg/m3 - General population: 40 mg/m3 - Exposure: Long Term, local effects Human Inhalation
Worker Industry: 40 mg/m3 - Worker Professional: 40 mg/m3 - General population: 10 mg/m3 - Exposure: Long Term, local effects Human Inhalation
Worker Industry: 80 mg/m3 - Worker Professional: 80 mg/m3 - General population: 10 mg/m3 - Exposure: Short Term, local effects Human Inhalation
Worker Industry: 8 mg/kg - Worker Professional: 8 mg/kg - General population: 5 mg/kg - Exposure: Long Term, systemic effects Human Dermal
General population: 2.5 mg/kg - Exposure: Long Term, systemic effects Human Oral
potassium hydroxide; caustic potash
Worker Industry: 1 mg/m3 - Worker Professional: 1 mg/m3 - General population: 1 mg/m3 - Exposure: Long Term, local effects Human Inhalation
PNEC Exposure Limit Values
1-Ethylpyrrolidin-2-one
Fresh Water 0.25 mg/l
Marine water 0.025 mg/l
Intermittent release 1 mg/l
STP 10 mg/l
Freshwater sediments 1.91 mg/kg
Soil (agricultural) 0.235 mg/kg

8.2. Exposure controls
Eye protection:
Use close fitting safety goggles. (ref. EN 166, EN 140, EN175).

Protection for skin:
Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton. (ref. EN 340).

Protection for hands:
Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber. (ref. EN 374).

Respiratory protection:
Use adequate protective respiratory equipment. (ref. EN 136, EN 140, EN 141, EN 143, EN 149, EN 405).
Thermal Hazards:
None
Environmental exposure controls:
None

SECTION 9: Physical and chemical properties
9.1. Information on basic physical and chemical properties
   Appearance and colour: Liquid
   Odour: Characteristic
   Odour threshold: N.D.
   pH: 8 - 10 (cal quale)
   Melting point / freezing point: N.D.
   Initial boiling point and boiling range: N.D.
   Solid/gas flammability: N.A.
   Upper/lower flammability or explosive limits: N.D.
   Vapour density: N.D.
   Flash point: N.D.
   Evaporation rate: N.D.
   Vapour pressure: N.D.
   Relative density: 0.9 - 1.1
   Solubility in water: Soluble
   Solubility in oil: N.D.
   Partition coefficient (n-octanol/water): N.D.
   Auto-ignition temperature: N.D.
   Decomposition temperature: N.D.
   Viscosity: N.D.
   Explosive properties: N.D.
   Oxidizing properties: N.D.
9.2. Other information
   Miscibility: N.D.
   Fat Solubility: N.D.
   Conductivity: N.D.
   Substance Groups relevant properties N.D.

SECTION 10: Stability and reactivity
10.1. Reactivity
   Stable under normal conditions
10.2. Chemical stability
   Stable under normal conditions
10.3. Possibility of hazardous reactions
   Stable under normal conditions
10.4. Conditions to avoid
   Stable under normal conditions.
10.5. Incompatible materials
   Not known.
10.6. Hazardous decomposition products
   Not known.

SECTION 11: Toxicological information
11.1. Information on toxicological effects
   Toxicological information of the mixture:
   a) acute toxicity:
      LD50 Oral Rat > 2000 mg/kg Calculated data.
   b) skin corrosion/irritation:
      Irritation Skin: repeated and prolonged contacts may cause slight irritation.
   c) serious eye damage/irritation:
      Irritation Eye: Causes serious eye damage.
   g) reproductive toxicity:
      Toxicity: Suspected of damaging fertility or the unborn child.
   Toxicological information of the main substances found in the mixture:
   1-Ethylpyrrolidin-2-one
   a) acute toxicity:
      Toxicity Oral Rat LD50> 3200 mg/kg Literature data.
      OECD 403 Inhalation Rat LC50 > 5.1 mg/l - Duration: 4h Literature data.
      OECD 402 Skin Rat LD50> 2000 mg/kg - Duration: 24h Literature data.
   b) skin corrosion/irritation:
      OECD 404 Skin Rabbit: Not irritant. - Duration: 4h Literature data.
   c) serious eye damage/irritation:
      OECD 405 Eye Rabbit: Highly irritating. Literature data.
   d) respiratory or skin sensitisation:
      OECD 429 Skin Mouse: Not sensitizing. Literature data.
SECTION 12: Ecological information

12.1. Toxicity

Ecological information of the mixture:

a) Aquatic acute toxicity:
   Fish LC50 > 100 mg/l Calculated data.

Ecological information of the main substances found in the mixture:

1-Ethylpyrrolidin-2-one

a) Aquatic acute toxicity:
   OECD 203 Fish LC50 > 464 mg/l - Duration h: 96 Literature data.
   OECD 202 Daphnia magna EC50 > 104 mg/l - Duration h: 48 Literature data.
   OECD 201 Algae EC50 > 101 mg/l - Duration h: 72 Literature data.

b) Aquatic chronic toxicity:
   OECD 211 Daphnia LOEC = 25 mg/l - Duration h: 504 By analogy to product with similar composition.

12.2. Persistence and degradability

Ecological information of the mixture:

N.D.

Ecological information of the main substances found in the mixture:

1-Ethylpyrrolidin-2-one

    Biodegradability: Rapidly degradable - Test: OECD 301 A - Duration: 28 days. - Date: >90% - Notes: Literature data.

12.3. Bioaccumulative potential

Ecological information of the mixture:

N.D.

Ecological information of the main substances found in the mixture:

1-Ethylpyrrolidin-2-one

    Bioaccumulation: Not bioaccumulative - Test: Evaluation. - Notes: Literature data (estimated).

12.4. Mobility in soil

Ecological information of the mixture:

N.D.

Ecological information of the main substances found in the mixture:

1-Ethylpyrrolidin-2-one

    Mobility in soil: Very high - Test: Koc: 40.46 - Notes: Calculated data.
12.5. Results of PBT and vPvB assessment
- vPvB Substances: None
- PBT Substances: None
12.6. Other adverse effects
None
- Use according to criteria of good industrial practice, avoiding product dispersion in the environment.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
- If possible recover the product, otherwise dispose of in authorized landfill or incinerate in accordance with local regulation.

SECTION 14: Transport information
14.1. UN number
- N.A.
14.2. UN proper shipping name
- Proper Shipping Name: N.A.
14.3. Transport hazard class(es)
- Road (ADR): N.A.
- Air (ICAO/IATA): N.A.
- Sea (IMO/IMDG): N.A.
14.4. Packing group
- ADR-Packing Group: N.A.
14.5. Environmental hazards
- Environmental Pollutant: No
14.6. Special precautions for user
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
- N.D.

SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
- Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances).
- Dir. 99/45/EEC (Classification, packaging and labelling of dangerous preparations).
- Dir. 98/24/EC (Risks related to chemical agents at work).
- Dir. 2000/39/EC (Occupational exposure limit values).
- For non-EU Countries, the Material Safety Data Sheet it is prepared following the main principles of Globally Harmonized System of Classification and Labelling of Chemicals (GHS) which are adopted worldwide.
- Refer to other local regulations that may be relevant (i.e. : sanitary control, waste treatment etc.)
15.2. Chemical safety assessment
- No

SECTION 16: Other information
- N.A. = Not Applicable
- N.D. = No Data available

Full text of phrases referred to in Section 3:
- R36/38 Irritating to eyes and skin.
- R41 Risk of serious damage to eyes.
- R53 May cause long-term adverse effects in the aquatic environment.
- R63 Possible risk of harm to the unborn child
- H319 Causes serious eye irritation.
- H315 Causes skin irritation.
- H413 May cause long lasting harmful effects to aquatic life.
- H318 Causes serious eye damage.
- H361d Suspected of damaging the unborn child.

This safety data sheet has been completely updated in compliance to Regulation 453/2010/EU.

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:
- TOXNET - Databases on toxicology, hazardous chemicals, environmental health, and toxic releases;
- European Chemical Bureau - ESIS: European chemical Substances Information System;
- CESIO - Classification and labelling of anionic, nonionic surfactants (January 2000).
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CLP: Classification, Labeling, Packaging.
DNEL: Derived No Effect Level.
EINECS: European Inventory of Existing Commercial Chemical Substances.
GefStoffV: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
INCI: International Nomenclature of Cosmetic Ingredients.
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LTE: Long-term exposure.
PNEC: Predicted No Effect Concentration.
REACH: Registration Evaluation and Authorization of Chemicals.
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE: Short-term exposure.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
SVHC: Candidate List of Substances of Very High Concerns.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK: German Water Hazard Class.