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

· **Product identifier**

· **Trade name:** Colorcarb
· **Article number:** 02400115

· **Relevant identified uses of the substance or mixture and uses advised against**
  No further relevant information available.

· **Application of the substance / the preparation**
  Laboratory chemicals

· **Details of the supplier of the safety data sheet**
  · **Manufacturer/Supplier:** PerkinElmer Life and Analytical Sciences
  710 Bridgeport Avenue
  Shelton, Connecticut 06484 USA
  · **Emergency telephone number:**
    CHEMTREC (within US) 800-424-9300
    CHEMTREC (from outside US) +1 703-527-3887 (call collect)

2 Hazards identification

· **Classification of the substance or mixture**

  ![GHS05 Corrosion]

  **H314** Causes severe skin burns and eye damage.

· **Label elements**
  · **GHS label elements** The product is classified and labelled according to the Globally Harmonized System (GHS).
  · **Hazard pictograms** GHS05
  · **Signal word** Danger

· **Hazard-determining components of labelling:**
  sodium hydroxide

· **Hazard statements**
  H314 Causes severe skin burns and eye damage.

· **Precautionary statements**
  P260 Do not breathe dust/fume/gas/mist/vapours/spray.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P310 Immediately call a POISON CENTER or doctor/physician.
  P321 Specific treatment (see on this label).
  P405 Store locked up.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:** Void

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**

  Health = 4
  Fire = 0
  Reactivity = 0

(Contd. on page 2)
Trade name: Colorcarb

· HMIS-ratings (scale 0 - 4)
  
<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FIRE</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>Fire</td>
<td>Reactivity</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

· Other hazards
  The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

· Results of PBT and vPvB assessment
  · PBT: Not applicable.
  · vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Substances
  · CAS No. Description
    1310-73-2 sodium hydroxide
  · Identification number(s)
    · EC number: 215-185-5
    · Index number: 011-002-00-6
  · Chemical characterization: Mixtures
    · Description: Mixture of the substances listed below with nonhazardous additions.

· Hazardous components:
  
<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1310-73-2</td>
<td>sodium hydroxide</td>
<td>H314 75-100%</td>
</tr>
<tr>
<td>1305-78-8</td>
<td>calcium oxide</td>
<td>H318 10-25%</td>
</tr>
</tbody>
</table>

4 First aid measures

· 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. Then consult a doctor.
  · After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.
  · Most important symptoms and effects, both acute and delayed: No further relevant information available.
  · Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Firefighting measures

· Extinguishing media
  · Suitable extinguishing agents:
    CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  · Special hazards arising from the substance or mixture: No further relevant information available.
  · Advice for firefighters
  · Protective equipment: No special measures required.
6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
  Do not allow product to reach sewage system or any water course.
  Inform respective authorities in case of seepage into water course or sewage system.
  Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Use neutralizing agent.
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- 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.

7. Handling and storage

- Handling:
- Precautions for safe handling
  Thorough dedusting.
  Prevent formation of dust.
- Information about protection against explosions and fires: No special measures required.
- 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 receptacle tightly sealed.
- Specific end use(s) No further relevant information available.

8. Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters

<table>
<thead>
<tr>
<th>Components with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1310-73-2 sodium hydroxide</td>
</tr>
<tr>
<td>PEL () 2 mg/m³</td>
</tr>
<tr>
<td>REL () Short-term value: C 2 mg/m³</td>
</tr>
<tr>
<td>TLV () Short-term value: C 2 mg/m³</td>
</tr>
<tr>
<td>1305-78-8 calcium oxide</td>
</tr>
<tr>
<td>PEL () 5 mg/m³</td>
</tr>
<tr>
<td>REL () 2 mg/m³</td>
</tr>
<tr>
<td>TLV () 2 mg/m³</td>
</tr>
</tbody>
</table>
- Additional information: The lists that were valid during the creation were used as basis.
Trade name: Colorcarb

- 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.
    Avoid contact with the eyes and skin.
- Breathing equipment:
  In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
  - Penetration time of glove material
    The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection:
  - Tightly sealed goggles or safety glasses

* 9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
  - Appearance:
    Form: Powder
    Color: White
  - Odor:
    Odour threshold: Characteristic
- pH-value:
  Not applicable.
- Change in condition
  - Melting point/Melting range: 319 °C (606 °F)
  - Boiling point/Boiling range: 1390 °C (2534 °F)
- Flash point:
  Not applicable.
- Flammability (solid, gaseous):
  Not determined.
36.0.3
· Ignition temperature:
  · Decomposition temperature: Not determined.
· Auto igniting: Product is not selfigniting.
· Danger of explosion: Product does not present an explosion hazard.
· Explosion limits:
  · Lower: Not determined.
  · Upper: Not determined.
· Vapor pressure at 800 °C (1472 °F): 3.5 hPa (3 mm Hg)
· Density at 20 °C (68 °F): 2.378 g/cm³ (19.844 lbs/gal)
  · Relative density: Not determined.
  · Vapour density: Not applicable.
  · Evaporation rate: Not applicable.
· Solubility in / Miscibility with Water at 20 °C (68 °F): 420 g/l
· Partition coefficient (n-octanol/water): Not determined.
· Viscosity:
  · Dynamic: Not applicable.
  · Kinematic: Not applicable.
· Solvent content:
  · Organic solvents: 0.0 %
· Solids content: 100.0 %
· Other information: No further relevant information available.

10 Stability and reactivity
· Reactivity
· Chemical stability
· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
· Possibility of hazardous reactions: No dangerous reactions known.
· Conditions to avoid: No further relevant information available.
· Incompatible materials: No further relevant information available.
· Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information
· Information on toxicological effects
  · Acute toxicity:
  · Primary irritant effect:
    · on the skin: Strong caustic effect on skin and mucous membranes.
    · on the eye: Strong caustic effect.
  · Sensitization: No sensitizing effects known.
12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or unneutralized.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
  - Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation:
  Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT UN3262
  - ADR, IMDG, IATA UN1823
- UN proper shipping name
  - DOT CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE)
  - ADR 1823 SODIUM HYDROXIDE, SOLID, mixture
  - IMDG, IATA SODIUM HYDROXIDE, SOLID, mixture
- Transport hazard class(es)
  - DOT 8 Corrosive substances.
  - Class 8
  - Label 8
Trade name: Colorcarb

- **ADR**
  - Class: 8 (C6) Corrosive substances
  - Label: 8

- **IMDG, IATA**
  - Class: 8 Corrosive substances.
  - Label: 8

  - Packing group: DOT, ADR, IMDG, IATA
    - Label: II

  - Environmental hazards:
    - Marine pollutant: No
  - Special precautions for user: Warning: Corrosive substances
  - Danger code (Kemler): 80
  - EMS Number: F-A,S-B
  - Segregation groups: Alkalis

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.
- **UN "Model Regulation":** UN1823, SODIUM HYDROXIDE, SOLID, mixture, 8, II

*15 Regulatory information*

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - **Sara**
    - Section 355 (extremely hazardous substances):
      - None of the ingredients is listed.
    - Section 313 (Specific toxic chemical listings):
      - None of the ingredients is listed.
    - TSCA (Toxic Substances Control Act): All ingredients are listed
    - Proposition 65
      - Chemicals known to cause cancer:
        - None of the ingredients is listed.
      - Chemicals known to cause reproductive toxicity for females:
        - None of the ingredients is listed.
      - Chemicals known to cause reproductive toxicity for males:
        - None of the ingredients is listed.
      - Chemicals known to cause developmental toxicity:
        - None of the ingredients is listed.
**Trade name: Colorcarb**

- **Cancerogenity categories**
  - EPA (Environmental Protection Agency)
    None of the ingredients is listed.
  - TLV (Threshold Limit Value established by ACGIH)
    None of the ingredients is listed.
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    None of the ingredients is listed.

- **GHS label elements** The product is classified and labelled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms** GHS05
  - **Signal word** Danger

- **Hazard-determining components of labelling:**
  - sodium hydroxide

- **Hazard statements**
  - H314 Causes severe skin burns and eye damage.

- **Precautionary statements**
  - P260 Do not breathe dust/fume/gas/mist/vapours/spray.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P310 Immediately call a POISON CENTER or doctor/physician.
  - P321 Specific treatment (see on this label).
  - P405 Store locked up.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **National regulations:**
  - Information about limitation of use:
    Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.
  - Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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**16 Other information**

**Disclaimer**
The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

- **Contact:**
  - With in the USA:  1-(800)-762-4000
  - Out side the USA:  1-(203)-712-8488
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 Organization
- 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
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)

* Data compared to the previous version altered.