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

- Product identifier
- Trade name: Vitamin D2 Neat
- Part number: N-2251-50MG
- CAS Number:
  50-14-6
- EC number:
  200-014-9
- Index number:
  603-179-00-9
- Application of the substance / the mixture: Laboratory chemicals

2 Hazard(s) identification

- Classification of the substance or mixture
  GHS06 Skull and crossbones
  Acute Tox. 3 H301 Toxic if swallowed.
  Acute Tox. 3 H311 Toxic in contact with skin.
  Acute Tox. 2 H330 Fatal if inhaled.

- Label elements
  GHS08 Health hazard
  STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.

- GHS label elements
  The substance is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms
  GHS06 GHS08

- Signal word: Danger

(Contd. on page 2)
44.2.6

· Hazard-determining components of labeling:
  ergocalciferol

· Hazard statements
  Toxic if swallowed or in contact with skin.
  Fatal if inhaled.
  Causes damage to organs through prolonged or repeated exposure.

· Precautionary statements
  Do not breathe dust/fume/gas/mist/vapors/spray.
  [In case of inadequate ventilation] wear respiratory protection.
  Wear protective gloves / protective clothing.
  Wash thoroughly after handling.
  Do not eat, drink or smoke when using this product.
  Use only outdoors or in a well-ventilated area.
  IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
  Specific treatment is urgent (see on this label).
  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  Call a POISON CENTER/doctor if you feel unwell.
  Get medical advice/attention if you feel unwell.
  Rinse mouth.
  IF ON SKIN: Wash with plenty of water.
  Take off immediately all contaminated clothing and wash it before reuse.
  Store locked up.
  Store in a well-ventilated place. Keep container tightly closed.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:
  · NFPA ratings (scale 0 - 4)
    Health = 4
    Fire = 0
    Reactivity = 0

  · HMIS-ratings (scale 0 - 4)
    HEALTH
    Health = *3
    FIRE
    Fire = 0
    REACTIVITY
    Reactivity = 0

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

3 Composition/information on ingredients

· Chemical characterization: Substances
  · CAS No. Description
    50-14-6 ergocalciferol
  · Identification number(s)
  · EC number: 200-014-9
  · Index number: 603-179-00-9
### 4 First-aid measures

- **General information:**
  - Immediately remove any clothing soiled by the product.
  - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - Remove breathing apparatus only after contaminated clothing have been completely removed.
  - In case of irregular breathing or respiratory arrest provide artificial respiration.

- **After inhalation:**
  - Supply fresh air or oxygen; call for doctor.
  - 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:**
  - Do not induce vomiting; immediately call for medical help.

- **Information for 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 Fire-fighting measures

- **Extinguishing media**
  - Use fire fighting measures that suit the environment.

- **Suitable extinguishing agents:**
  - During heating or in case of fire poisonous gases are produced.

- **Advice for firefighters**
  - **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  - Mount respiratory protective device.

- **Environmental precautions:**
  - Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**
  - 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.

- **Protective Action Criteria for Chemicals**

  - **PAC-1:**
    - Substance is not listed.

  - **PAC-2:**
    - Substance is not listed.

  - **PAC-3:**
    - Substance is not listed.
7 Handling and storage

- Handling:
  - Precautions for safe handling
    Thorough dedusting.
    Ensure good ventilation/exhaustion at the workplace.
    Open and handle receptacle with care.
  - Information about protection against explosions and fires: Keep respiratory protective device available.
- 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
- Components with limit values that require monitoring at the workplace:
  The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
  The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
  At this time, the remaining constituent has no known exposure limits.
  At this time, the other constituents have no known exposure limits.
- Additional information: The lists that were valid during the creation were used as basis.
- 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.
  - 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.
9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**
  - **Appearance:**
    - **Form:** Solid
    - **Color:** Not determined.
  - **Odor:** Characteristic
  - **Odor threshold:** Not determined.
  - **pH-value:** Not applicable.

- **Change in condition**
  - **Melting point/Melting range:** 115-119 °C (239-246 °F)
  - **Boiling point/Boiling range:** Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Product is not flammable.

- **Ignition temperature:**
  - **Decomposition temperature:** Not determined.
  - **Auto igniting:** Not determined.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.

- **Vapor pressure:** Not applicable.

- **Density at 20 °C (68 °F):** 1.03 g/cm³ (8.595 lbs/gal)
  - **Relative density:** Not determined.
  - **Vapor density:** Not applicable.
  - **Evaporation rate:** Not applicable.

- **Solubility in / Miscibility with**
  - **Water:** Insoluble.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**
  - **Dynamic:** Not applicable.
  - **Kinematic:** Not applicable.

- **Solvent content:**
  - **Organic solvents:** 0.0 %
Trade name: Vitamin D2 Neat

10 Stability and reactivity

· Reactivity: No further relevant information available.
· 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:
  · LD/LC50 values that are relevant for classification:

<table>
<thead>
<tr>
<th></th>
<th>ATE (Acute Toxicity Estimates)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50 36 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50 300 mg/kg</td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4 h 0.05 mg/L</td>
</tr>
</tbody>
</table>

50-14-6 ergocalciferol

· Primary irritant effect:
  · on the skin: No irritant effect.
  · on the eye: No irritating effect.
· Sensitization: No sensitizing effects known.
· Additional toxicological information:

· Carcinogenic categories
  · IARC (International Agency for Research on Cancer)
    Substance is not listed.
  · NTP (National Toxicology Program)
    Substance is not listed.
  · OSHA-Ca (Occupational Safety & Health Administration)
    Substance is not listed.

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.
Trade name: Vitamin D2 Neat

- Additional ecological information:
- General notes:
  Water hazard class 2 (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
  Danger to drinking water if even small quantities leak into the ground.
- 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, IMDG, IATA
    UN2811
- UN proper shipping name
  - DOT
  - IMDG, IATA
    Toxic solids, organic, n.o.s.
    TOXIC SOLID, ORGANIC, N.O.S.
- Transport hazard class(es)
  - DOT
    6.1 Toxic substances
- IMDG, IATA
  - Class
    6.1 Toxic substances
- Environmental hazards:
  - Not applicable.
- Special precautions for user
  - Warning: Toxic substances
- Danger code (Kemler):
  - 60
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not applicable.
Trade name: Vitamin D2 Neat

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara
    - Section 355 (extremely hazardous substances):
      Substance is listed.
    - Section 313 (Specific toxic chemical listings):
      Substance is not listed.
  - TSCA (Toxic Substances Control Act):
    Substance is listed.
  - Proposition 65
    - Chemicals known to cause cancer:
      Substance is not listed.
    - Chemicals known to cause reproductive toxicity for females:
      Substance is not listed.
    - Chemicals known to cause reproductive toxicity for males:
      Substance is not listed.
    - Chemicals known to cause developmental toxicity:
      Substance is not listed.
  - Carcinogenic categories
    - EPA (Environmental Protection Agency)
      Substance is not listed.
    - TLV (Threshold Limit Value established by ACGIH)
      Substance is not listed.
    - NIOSH-Ca (National Institute for Occupational Safety and Health)
      Substance is not listed.
  - GHS label elements
    The substance is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms
    - GHS06
    - GHS08

- Signal word Danger
- Hazard-determining components of labeling:
  ergocalciferol
- Hazard statements
  Toxic if swallowed or in contact with skin.
  Fatal if inhaled.
  Causes damage to organs through prolonged or repeated exposure.
Precautionary statements:

Do not breathe dust/fume/gas/mist/vapors/spray.

[In case of inadequate ventilation] wear respiratory protection.

Wear protective gloves / protective clothing.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

IF SWALLOWED: Immediately call a POISON CENTER/doctor.

Specific treatment is urgent (see on this label).

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor if you feel unwell.

Get medical advice/attention if you feel unwell.

Rinse mouth.

IF ON SKIN: Wash with plenty of water.

Take off immediately all contaminated clothing and wash it before reuse.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.