1 Identification of substance:

· **Product details:**
  - **Trade name:** VpCI-649
  - **Application of the substance / the preparation** Corrosion inhibitors

· **Manufacturer/Supplier:**
  Cortec Corporation
  4119 White Bear Parkway
  St. Paul, MN 55110 USA
  Phone (651) 429-1100
  Fax (651) 429-1122

· **Information department:**
  info@cortecvci.com
  Product safety department.

· **Emergency information:** Chemtrec (for spill, leak, fire exposure or accident): 1-800-424-9300

2 Composition/Data on components:

· **Chemical characterization**
  · **Description:** Mixture of the substances listed below with nonhazardous additions.

  · **Dangerous components:**
    - **dicarboxylate**
      - CAS: 64663-37-2
      - EINECS: 265-004-9
      - Xi; R 36/37/38 17-20%
    - **Tolyltriazole, sodium salt**
      - CAS: 7631-95-0
      - EINECS: 231-551-7
      - T, C; R 25-34 1-2%
    - **Sodium molybdate**
      - CAS: 7631-95-0
      - EINECS: 231-551-7
      - Xi; R 37/38 1-2%

· **Additional information** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

· **Hazard description:**
  · Irritant

· **Information pertaining to particular dangers for man and environment**
  The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
  Irritating to eyes, respiratory system and skin.

· **Classification system**

· **NFPA ratings (scale 0–4)**
  · Health = 1
  · Fire = 0
  · Reactivity = 0

(Contd. on page 2)
Trade name: VpCI-649

· HMIS rating system (0-4)

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>REACTIVITY</td>
<td>1</td>
</tr>
</tbody>
</table>

- Health = 1
- Flammability = 0
- Reactivity = 1

4 First aid measures

· After inhalation: Supply fresh air; consult doctor in case of complaints.
· After skin contact: Immediately wash with water and soap and rinse thoroughly.
· After eye contact: Rinse opened eye for several minutes under running water.
· After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.

5 Fire fighting measures

· Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

· Person-related safety precautions: Not required.
· Measures for environmental protection: Do not allow to enter sewers/surface or ground water.
· Measures for cleaning/collecting: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· Additional information: No dangerous substances are released.

7 Handling and storage

· Handling: No special measures required.
· Information about safe handling: No special measures required.
· Information about protection against explosions and fires: No special measures required.
· Storage: No special requirements.
· Information about storage in one common storage facility: Not required.
· Further information about storage conditions: Keep receptacle tightly sealed.

8 Exposure controls and personal protection

· Additional information about design of technical systems: No further data; see item 7.
· Components with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· Additional information: The lists that were valid during the creation were used as basis.
· Personal protective equipment:
· General protective and hygienic measures: Keep away from foodstuffs, beverages and feed.
Trade name: VpCI-649

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:
Use suitable respiratory protective device only when aerosol or mist is formed.

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.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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.
Body protection: Protective work clothing.

9 Physical and chemical properties:

General Information

Form: Liquid
Color: Amber colored
Odor: Characteristic

Change in condition
Melting point/Melting range: undetermined
Boiling point/Boiling range: undetermined

Flash point: Not applicable
Ignition temperature: 260.0°C (500°F)
Auto igniting: Product is not selfigniting.
Danger of explosion: Product does not present an explosion hazard.

Vapor pressure at 20°C (68°F): 23 hPa (17 mm Hg)
Density at 20°C (68°F): 1.14-1.16 g/cm³ (9.5-9.7 lb/gal)

Solubility in / Miscibility with
Water: Fully miscible
pH-value at 20°C (68°F): 9.1-9.6 (Neat)

Solvent content:
Organic solvents: 0.0 %
Water: 51-57 %
Solids content: 43-49 %

Additional information
The above data are typical values and do not constitute a specification.

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

(Contd. on page 4)
Trade name: VpCI-649

- Materials to be avoided:
- Dangerous reactions: No dangerous reactions known
- Dangerous products of decomposition: No dangerous decomposition products known

11 Toxicological information

- Acute toxicity:
- Primary irritant effect:
  - on the skin: Repeated or prolonged skin contact with this product may produce skin irritation.
  - on the eye: May be irritating.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
  The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version. When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information:

- Additional ecological information:
- General notes:
  Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

- Product:
  - Recommendation:
    Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- Land transport ADR/RID (cross-border)
  - UN-Number: Not applicable
  - Label: Not applicable

- Maritime transport IMDG:
  - IMDG Class: Not applicable
  - UN Number: Not applicable
  - Marine pollutant: No
  - Proper shipping name: Not applicable

- Air transport ICAO-TI and IATA-DGR:
  - ICAO/IATA Class: Not applicable
  - UN/ID Number: Not applicable
Trade name: VpCI-649

15 Regulations

- SARA Section 355 (extremely hazardous substances)
  None of the ingredients is listed.

- SARA Section 313 (specific toxic chemical listings)
  None of the ingredients is listed.

- TSCA (Toxic Substances Control Act)
  All ingredients are listed.

- Prop 65 - Chemicals known to cause cancer
  None of the ingredients is listed.

- Cancerogenity categories

  - EPA (Environmental Protection Agency)
    None of the ingredients is listed.

  - IARC (International Agency for Research on Cancer)
    None of the ingredients is listed.

  - NTP (National Toxicology Program)
    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.

- Markings according to EU guidelines:
  Observe the general safety regulations when handling chemicals
  The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

- Code letter and hazard designation of product:
  Irritant

- Risk phrases:
  Irritating to eyes, respiratory system and skin.

- Safety phrases:
  Do not breathe gas/fumes/vapour/spray.
  In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  Wear suitable gloves.

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.