1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Vector Galvashield XP4
APPLICATION: Embedded Zinc Anode, which acts to prevent corrosion of reinforcing steel in concrete
COMPANY: Vector Corrosion Technologies
474B Dovercourt Drive,
Winnipeg, Manitoba, Canada, R3Y 1G4
TELEPHONE: +1-204-489-9611

2. HAZARD IDENTIFICATION

CLASSIFICATION: Acute Toxicity, Category 4
Skin Corrosion, Category 1B
Specific Target Organ Toxicity
– Single Exposure, Category 3

Hazard Pictograms:

Signal Word:
Danger

Hazard Statements:
H302 / Harmful if swallowed.
H314 / Causes severe skin burns and eye damage.
H335 / May cause respiratory irritation.

Precautionary Statements:
P260 / Do not breathe dust or mist.
P280 / Wear protective gloves/protective clothing/eye protection/face protection.
P301/P330/P331 / IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
P303/P353/P361 / IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
P304/P340 / IF INHALED: Remove victim to fresh air and keep at rest in a comfortable position for breathing.
P305/P338/P351 / 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 control center or doctor/physician.

OTHER HAZARDS: None
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>EC #</th>
<th>Classification</th>
<th>Concentration %</th>
<th>Symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement, Portland</td>
<td>65997-15-1</td>
<td>266-043-4</td>
<td>Skin Irritation, 2, H315&lt;br&gt;Eye Damage, 1, H318&lt;br&gt;STOT-SE, 3, H335</td>
<td>&gt;10 &lt;25</td>
<td>Xi</td>
</tr>
<tr>
<td>Lithium Hydroxide Monohydrate</td>
<td>1310-66-3</td>
<td>215-183-4</td>
<td>Skin Corrosion, 1B, H314&lt;br&gt;Acute Toxicity, 4, H302</td>
<td>&gt;10 &lt;25</td>
<td>C</td>
</tr>
</tbody>
</table>

All constituents of this product are listed in EINECS (European Inventory of Existing Commercial Chemical Substances) or ELINCS (European List of New Chemical Substances) or are exempt. Refer to Section 8 for Occupational Exposure Limits.

4. FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES:

EYES: Irrigate immediately with copious quantities of water for several minutes. Obtain immediate medical attention urgently.

SKIN: Wash immediately with copious quantities of water for several minutes. Remove contaminated clothing and/or shoes immediately. Obtain medical advice if skin disorders develop.

INHALATION: Remove from exposure, rest and keep warm and obtain medical attention urgently.

INGESTION: Rinse out mouth with water. Do NOT induce vomiting. Obtain medical attention urgently.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

SYMPTOMS: Gastrointestinal discomfort<br>Cough<br>Respiratory disorder<br>Dermatitis<br>See Section 11 for more detailed information on health effects and symptoms.

RISKS: Health injuries may be delayed.<br>Corrosive effects<br>Irritant effects

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

TREATMENT: Treat symptomatically
5. FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Dry chemical, CO₂, water spray or regular foam.
HAZARDOUS COMBUSTION PRODUCTS: Corrosive lithium dust.
ADVICE FOR FIREFIGHTERS: Wear full protective clothing and self-contained breathing apparatus approved for firefighting.
FURTHER INFORMATION: Standard procedure for fighting chemical fires.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear rubber boots in addition to the recommended personal protective equipment.
ENVIRONMENTAL PRECAUTIONS: Prevent entry into drains, sewers and water courses
METHODS FOR CLEANING UP: Avoid the creation of dust in atmosphere. Gather into suitable container.

7. Handling and Storage

HANDLING: Avoid creating dust. Avoid breathing dust. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid skin and eye contact.
STORAGE: Store in cool, dry area.

8. Exposure Controls / Personal Protection

CONTROL PARAMETERS:

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No</th>
<th>Value</th>
<th>Control Parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement, Portland</td>
<td>65997-15-1</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>GB EH40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>4 mg/m³</td>
<td>GB EH40</td>
</tr>
<tr>
<td>Lithium Hydroxide Monohydrate</td>
<td>1310-66-3</td>
<td>STEL</td>
<td>1 mg/m³</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>

ENGINEERING CONTROL MEASURES: Atmospheric levels of dust must be maintained within the Occupational Exposure Limit. Where mechanical methods are inadequate or impractical, appropriate personal protective equipment must be used.

PERSONAL PROTECTIVE EQUIPMENT: Impervious gloves (eg PVC). Goggles / Safety glasses. Approved dust mask. Change contaminated clothing immediately and clean before re-use.
### 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPEARANCE:</td>
<td>Powder</td>
</tr>
<tr>
<td>COLOUR:</td>
<td>Light grey/brown</td>
</tr>
<tr>
<td>ODOUR:</td>
<td>Odourless</td>
</tr>
<tr>
<td>ODOUR THRESHOLD:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH (working dilution):</td>
<td>&gt;12</td>
</tr>
<tr>
<td>BOILING POINT/RANGE (°C):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>MELTING POINT/RANGE (°C):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>EVAPORATION RATE:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>FLASH POINT (closed, (°C)):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>AUTO-IGNITION TEMP (°C):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IGNITION TEMP (°C):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>OXIDIZING PROPERTIES:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>VAPOUR PRESSURE:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>LOWER EXPLOSION LIMIT (Vol-%):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>UPPER EXPLOSION LIMIT (Vol-%):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>FLAMMABILITY (Solid/gas):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>RELATIVE DENSITY (AT 20°C):</td>
<td>1.60</td>
</tr>
<tr>
<td>WATER SOLUBILITY:</td>
<td>Insoluble</td>
</tr>
<tr>
<td>VISCOSITY:</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
VECTOR GALVASHIELD XP4

10. Stability and Reactivity

REACTIVITY: Reacts with acids.
CHEMICAL STABILITY: The product is chemically stable.
POSSIBILITY OF HAZARDOUS REACTIONS: Stable under recommended storage conditions.
CONDITIONS TO AVOID: Contact with acids.
INCOMPATIBLE MATERIALS: Acids
HAZARDOUS DECOMPOSITION PRODUCTS: None

11. Toxicological Information

SKIN CORROSION/IRRITATION: Corrosive – causes severe burns.
SERIOUS EYE DAMAGE/IRRITATION: Severe irritation. Causes irreversible damage to eye tissue if not removed promptly.
RESPIRATORY OR SKIN SENSITIZATION: No data available.
GERM CELL MUTAGENICITY: No data available.
CARCINOGENICITY: No data available.
REPRODUCTIVE TOXICITY: No data available.
INHALATION: Irritating to respiratory system. Inflammation of the nasal mucous membrane by exposure to cement dust.
REPEATED EXPOSURE: Repeated ingestion may cause dizziness, ringing in the ears, visual disturbances, tremors and mental confusion. Prolonged absorption may affect electrolyte balance, impair kidney function and thyroid disturbances. Cement, cementitious grouts and mortars are known to cause both irritant and allergic contact dermatitis. Prolonged skin contact can result in chemical burns.
12. Ecological Information

ENVIRONMENTAL ASSESSMENT: Little detailed information is available on the ecological effects of this product, but its overall environmental impact is not regarded as significant.

TOXICITY: No data available for the product.

PERSISTENCE / DEGRADABILITY: No data available for the product.

BIOACCUMULATIVE POTENTIAL: No data available for the product.

MOBILITY IN SOIL: No data available for the product.

13. Disposal Considerations

Disposal must be in accordance with local, regional, and national legislation.

UNUSED PRODUCT: Dispose of in an approved manner

USED/CONTAMINATED PRODUCT: Dispose of in an approved manner

PACKAGING: The method of disposal must be acceptable to the local authority

14. Transport Information

This product is NOT classified as dangerous for transport.

15. Regulatory Information

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE SUBSTANCE OR MIXTURE: No data available for the product.
SAFETY DATA SHEET
VECTOR GALVASHIELD XP4

16. Other Information

REVISION SUMMARY: Revision #01, Feb 25, 2016. All sections revised, new format.


The data and advice given apply when the product is used for the stated application or applications. The product is not sold as suitable for any other application. Use of the product for applications other than as stated in this sheet may give rise to risks not mentioned in this sheet. The product should not be used other than for the stated application or applications without seeking advice from Vector Corrosion Technologies.

If this product has been purchased for supply to a third party for use at work, it is the purchaser’s duty to take all necessary steps to ensure any person handling or using the product is provided with the information in this sheet.

It is the responsibility and duty of the employer to inform employees and others who may be affected of any hazards described in this sheet and of any precautions which should be taken.

This sheet does not constitute or substitute for the users own assessment of workplace risk, as required by other health and safety legislation.

The information in the Safety Data Sheet was obtained from sources we believe are reliable. The information, however, is provided without any representation or warranty, expressed or implied regarding the accuracy or correctness.

The condition or methods of handling, storage, use and disposal of the product are beyond our control. We do not assume responsibility and expressly disclaim liability for loss, damage or exposure arising out of or in any way connected with the handling, storage, use or disposal of the product.

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