AQUAGALV - Waterborne Inorganic Zinc Silicate

**Features**
- Low VOC - Less than 15g/L
- High Zinc Content
- Water Borne
- Suitable for surfaces exposed to temperatures up to 400°C
- Superior to galvanising in marine environments
- Non Flammable

**Benefits**
- Excellent corrosion protection
- Extremely hard wearing and abrasion resistant
- Non Flammable
- Low Odour

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**Typical Usage**

AQUAGALV is a two pack self-curing water borne inorganic zinc silicate suitable for use as a permanent primer and as a prime coating underneath specified topcoats. It is the first choice when requiring a long term protective primer for steel structures that need to meet Green Building Council "GREENSTAR" requirements.

When cured, AQUAGALV exhibits a smooth even appearance and is an exceptionally hard coating that resists damage during transport.

AQUAGALV provides excellent corrosion resistant properties for conditions of severe weathering including marine exposure, moderate chemical environments and hydrocarbon contact. The service life may be extended or a decorative finish can be achieved by overcoating with a suitable topcoat.

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**Performance Guide**

<table>
<thead>
<tr>
<th>Weather</th>
<th>Salt</th>
<th>Heat</th>
<th>Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withstands the most severe weathering conditions</td>
<td>Requires topcoating for immersed conditions.</td>
<td>-50°C to 400°C dry heat.</td>
<td>Excellent when fully cured. Refer to Drying Characteristics.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Abrasion</th>
<th>Acid</th>
<th>Alkali</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insoluble in chlorinated hydrocarbons (dry), aromatics, ketones &amp; esters, most petroleum solvents and oil crudes.</td>
<td>Excellent.</td>
<td>Not recommended for acid environments. Insoluble in chlorinated hydrocarbons (dry), aromatics, ketones &amp; esters, most petroleum solvents and oil crudes.</td>
<td>Resists alkali environments when overcoated with epoxy topcoats.</td>
</tr>
</tbody>
</table>

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**Typical Properties and Application Data**

<table>
<thead>
<tr>
<th>Gloss Level</th>
<th>Matt</th>
<th>Thinner</th>
<th>No Thinning Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gloss Level Ind</td>
<td></td>
<td>Spread Rate</td>
<td>4.5sqm/L</td>
</tr>
<tr>
<td>Volume Solids</td>
<td>11.8</td>
<td>Components</td>
<td>2</td>
</tr>
<tr>
<td>Colour</td>
<td>Grey</td>
<td>V.O.C Level</td>
<td>&lt; 15 g/L</td>
</tr>
<tr>
<td>Sanding Properties</td>
<td>Not Applicable</td>
<td>Mixing Ratio</td>
<td>Liquid: 1.00 Powder: 2.54</td>
</tr>
<tr>
<td>Pot Life</td>
<td>4 hours (25°C, 50% RH)</td>
<td>Wet film per coat</td>
<td>Min 424 Max 763 Recom 636 μm</td>
</tr>
<tr>
<td>Dry film per coat</td>
<td>Min 50 Max 90 Recom 75 μm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Application Method
AQUAGALV - Waterborne Inorganic Zinc Silicate

Drying Characteristics

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Touch</th>
<th>Handle</th>
<th>Full Cure</th>
<th>Recoat Min</th>
<th>Recoat Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>At 25°C</td>
<td>30 Minutes</td>
<td>4 Hours</td>
<td>48 Hours</td>
<td>48 Hours</td>
<td>Indefinite</td>
</tr>
</tbody>
</table>

These figures are given as a guide only, as ventilation, film thickness, humidity, thinning and other factors will influence the rate of drying. To recoat AQUAGALV - Waterborne Inorganic Zinc Silicate either with itself or with another product, may require the surface to be abraded in order to ensure adequate adhesion.

Special Comments

Theoretical spreading rate at recommended dry film thickness:

A spreading rate of 1.6 sq. meters per litre corresponds to 75 microns dry film thickness assuming no loss. Practical spreading rates will vary due to such factors as method and conditions of application and surface roughness.

Application Guide

Surface Preparation

Round off all rough welds, sharp edges and remove weld spatter. Remove grease, oil and other contaminants in accordance with AS1627.1. Rinse surface thoroughly to remove acid or alkali contamination. Abrasive blast clean to a minimum of AS1627.4 Class 2.5 with a blast profile of 35-50 microns. Immersed steel must be prepared to AS1627.4 Class 3. Remove all dust by brushing or vacuum cleaning. Apply product before any surface deterioration occurs.

OVERCOATING

Aged coating should be tested for lifting by a method appropriate for the coating thickness, for example ‘X’ cut or cross-hatch methods. If it lifts, remove it. The surface must be free of oil, grease, zinc corrosion products and other contaminants. High-pressure water wash at 8.3 to 10.3 MPa (1200 - 1500 p.s.i.) to remove loosely adhering chalk and dust.

It is not recommended to recoat aged AQUAGALV with itself. Use ZINCANODE 202.

Environmental Conditions

Application, drying and curing of AQUAGALV - Waterborne Inorganic Zinc Silicate should take place within a set range of conditions (listed below) for a successful result. The usage outside these limits may result in some form of adhesion or coating failure. Use of AQUAGALV - Waterborne Inorganic Zinc Silicate at the high or low end of these ranges may affect its standard application, drying or curing characteristics. Care should be taken to compensate or allow for these changes.

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air temperature</td>
<td>10</td>
<td>35</td>
</tr>
<tr>
<td>Substrate Surface Temp.</td>
<td>7</td>
<td>50</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>30</td>
<td>80</td>
</tr>
</tbody>
</table>

Notes

All equipment should be flushed sequentially: firstly with acetone, then with ethanol (Methylated Spirits) and then water before use.
### Health and Safety

#### Using Safety Precautions
- Use with good ventilation and avoid inhalation of spray mists and fumes. If risk of inhalation of spray mists exists, wear combined organic vapour/particulate respirator.

#### Welding
- Avoid inhalation of fumes if welding surfaces coated with this paint. grind off coating before welding.

#### Handling
- Avoid moisture contamination of the Zinc dust component as gassing may occur. As with any chemical, ingestion, inhalation and prolonged or repeated skin contact should be avoided by good occupational work practice. Eye protection approved to AS1337 should be worn where there is a risk of splashes entering the eyes. Always wash hands before smoking, eating, drinking or using toilet.

### Flammability
- Not Flammable

### Storage
- Both components are NOT classified as dangerous goods for transport or storage. Store in a bunded area under cover. Keep containers closed at all times. Avoid moisture contamination of Zinc dust component.

### Precautions and Limitations

**PRECAUTIONS**
- This is an industrial product designed for use by experienced Protective Coating applicators. Where conditions may require variation from the recommendations on this Product Data Sheet contact your nearest Dulux Protective Coatings specialist for advice prior to painting. Do not apply in conditions outside the parameters stated in this document without the express written consent of Dulux New Zealand. Freshly mixed material must not be added to material that has been mixed for some time. The rate of cure is dependent upon temperature. Do not apply at temperatures below 5°C. Do not apply at relative humidity above 80%, below 40% or when the surface is less than 3°C above the dewpoint.

- If the recommended profile is not achieved there is a risk that the coating will not adhere to the substrate once cured. When excessive builds are applied the zinc will sink to the bottom of the wet film and leave the surface glossy and hazy in appearance. The product is prone to mud crack in corners where it has been excessively overbuilt (greater than 300um)). Mist coating with water to assist cure is NOT allowed.

- Minimum top-coating interval of 48 hrs. Top-coating before this interval can result in adhesion failures at the primer/topcoat interface.

- If the atmospheric temperature is very low and the humidity high (above 85%) then crystals of resin may form on the surface of the coating. This is likely to occur if condensation forms on the surface during curing. Before top-coating these crystals need to be removed by abrading (scotch brite sufficient) and then thoroughly water washing and drying. Care MUST be taken to ensure the application equipment is totally free of any solvent contamination. Low humidity will affect the rate of cure. Topcoats of a saponifiable nature such as alkyds must be applied directly to AQUAGALV. Material that has been mixed for a period longer than the stated pot life of 4 hours may appear to still be suitable for use and will form a film of normal appearance, however this material must NOT be used as the protective properties of the coating will be compromised.

- Do not exceed 90 microns DFT in one application. If applied below 30% relative humidity or onto a very hot surface, curing will be retarded and may even be prevented. When the relative humidity is below 30% contact a Dulux Protective Coatings specialist prior to applying to product. Product should not be thinned.

**CLEAN UP**
- Clean all equipment by thoroughly flushing with water and then Ethanol (Methylated Spirits). All gun parts can be soaked overnight to remove dried on product. If these parts are not cleaned within 24 hours they may require soaking in caustic, however this can also damage the metal and should not be done regularly.

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**Issue No** | 2.0  
**Page No** | 3 of 4  
**Date Issued** | 14/12/2011
## Transport and Storage

<table>
<thead>
<tr>
<th>Pack</th>
<th>Flash point</th>
<th>Dangerous Goods Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>B</td>
<td>812-33225</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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