# Product Wind Resistance Calculator

Temporary Hoarding - UK Temporary Hoarding Panel

<table>
<thead>
<tr>
<th>Product Type:</th>
<th>Dimensions:</th>
<th>Stabilisers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>HERAS 2m Readyhoard Panel (0.5) with Infills</td>
<td>2.14m high X 1.98m wide</td>
<td>Heras Stormguard with 10 End +12 Mid x 20 Kg Blocks</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Factor of Safety:</th>
<th>Zone:</th>
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<tbody>
<tr>
<td>1.0 (0%)</td>
<td>D - 7 panels in line and above</td>
</tr>
</tbody>
</table>

MAX. WINDSPEED

**SITE SIDE**

71.43 mph  
31.94 m/s

**OPEN SIDE**

70.48 mph  
31.51 m/s

All calculations are based upon the use of an Anti-lift Device and a minimum of two ZND Gripper Couplers at every panel intersection.
Terms & Conditions

Definition of terms used in the ZND Product Wind Resistance Calculator

1. “Product group” refers to either an open mesh fence panel, a hoarding sheet panel, a combination of open mesh and hoarding sheet in one panel or a pedestrian barrier.

2. “Above ground stabilisation” refers to stabiliser systems that have no components that penetrate into the ground.

3. “Below ground stabilisation” refers to stabiliser systems that use components that go into the ground as a means of securing the panels or barriers in position.

4. “Product Type” refers to the general construction of the panel or barriers that are in the “Product Group”.

5. “Dimensions” of the “Product Type” are the dimensions used generally in the description of the “Product Type” and are not an exact measure of the product.

6. “Stabilisation” refers to the components or system used to keep the fence or hoarding panels vertical. These stabilisers offer resistance to the wind loadings. The method of stabilisation can be concrete or plastic blocks used on their own with no stabilisers or it can be a combination of blocks used with different stabiliser types.

7. “Factor of Safety” refers to the value that can be applied to the resultant wind loadings (Limit of Stability) This factor if chosen is to suit customer or site standards.

8. “Open Side” refers to the side of the panel installation where the general public will be.

9. “Site Side” refers to the opposite side of the panel installation to where the general public will be.

10. “Limit of Stability” is used to describe the point at which the panel installation becomes unstable which is the lowest value between overturning and sliding.

Conditions used in the ZND Product Wind Resistance Calculator

1. Although great care has been taken to ensure, to the best of our knowledge, that the data and contents of this publication are accurate, ZND UK Limited does not accept responsibilities for errors or for information which is found to be misleading. Suggestions for or descriptions of the end use or application of products or methods of assembly are for information only and ZND UK Limited accept no liability in respect thereof.

2. ZND Product Wind Resistance Calculator has been specifically set up to check the suitability of products supplied solely by ZND UK Limited.

3. It is assumed that the products covered in this ZND Product Wind Resistance Calculator will be installed correctly and in accordance with suppliers guidelines to suit specific site requirements.

4. At this stage the ZND Product Wind Resistance Calculator only covers products that are sat “above ground” and does not cover stabilisation systems that require any ground penetrations.

5. The calculations used to determine the results in this ZND Product Wind Resistance Calculator are theoretical and are not currently backed up by actual field tests. All calculations are available upon written request.

6. The “Limit of Stability” is the term used to describe the point at which the product installation becomes unstable (either through overturning or sliding) based on first principles of:- For overturning (restoring moment = overturning moment) For sliding (total mass x co-efficient of drag for sliding) The “Limit of Stability” is taken as the lower of the 2 results, the resultant wind speed at either the “Open Side” or “Site Side”.

7. Each product and stabilisation system develops its own unique restoring moment, to which the individual “Limit of Stability” is obtained.

8. Within the calculations a friction coefficient of sliding of 0.7 has been used where a rubber or concrete foot is used and a friction coefficient of sliding of 0.8 has been used where a special design of foot with integral grippers is used. These are empirical factors based on experience. Additional calculations can be provided using different factors if requested.

9. It has been assumed that no factors relating to ground conditions have been applied to the calculations and that the ground is taken as being level with no adverse undulations. Customers are welcome to apply any known factors relating to ground conditions as long as they are aware as to the effects of applying these factors. ZND UK Limited take no responsibility for any results taken from this ZND Product Wind Resistance Calculator which are then modified using any additional factors. ZND UK Limited are happy to look at producing calculations taking into account ground conditions to suit specific customer sites upon written request.

10. A factor of safety ranging from 1.0 (0%) up to 2.0 (100%) can also be applied to the results by using the Factor of Safety pull down menu to suit different customer and site requirements. Please note that when a factor of safety of 1.0 (0%) is used this is the point where the products are starting to become unstable due to either wanting to slide or overturn, therefore ZNDUK recommend using a minimum factor of safety of 1.2 (20%). It is the customers responsibility to choose their own factor of safety.

Note: ZND UK Limited is not responsible for the information given on any third party sites.