

## Quality Control + Expectations

---

Each TAKTL panel is inspected prior to shipment for compliance with our Quality Management Tolerances and Acceptance Criteria (Doc. Q2-1). This inspection includes dimensions, surface quality, color, drill hole layout, and flatness. It is not necessary to conduct a secondary inspection once panels arrive onsite except in the following situations:

- Crates are damaged or shockwatches are activated upon receipt
- Water has seeped into, the crates during shipping or storage

Per our Quality Management Tolerances and Acceptance Criteria (Doc. Q2-1), expectations for some surface imperfections, color variation, and dimensional variation should include the following.

### Chips and Scratches

Chips and scratches outside of our acceptance criteria are patched in our factory prior to shipment. Additional chips and scratches will inevitably occur during shipping, handling, and installation. Most chips and scratches that occur during shipping or onsite should be fixed onsite prior to installation. In general, TAKTL will not be responsible for chips and scratches once the panels are onsite as we are no longer in control of the panels.

### Dimensions and Anchor Locations

Panels are inspected prior to shipment but some isolated errors in drill hole placement or panel dimensions are to be expected. Please document these issues with photographs and serial numbers of affected panels and your TAKTL Project Manager will assist in resolution.

### Back Surface

Due to the nature of our manufacturing process, panel backs are not completely flat. Deviations from flatness in the back of the panel are acceptable if they do not interfere with the installation of the panel.

### Panel Bowing

Panels are thin enough to bow slightly from their own weight. Gradual curvature in a panel will flatten out when the panel is installed on the subframe. Bowing that interferes with the installation of the panel should be rejected.

### Surface Conditions

Surface imperfections from the manufacturing process are unavoidable. To determine acceptability of surface imperfections, view at a right angle from 20' in normal day light conditions. Anything not readily visible is acceptable.

### Thickness Variation

Panels are measured for thickness in accordance with ASTM C1186 protocols. Some variation in thickness within a panel and between panels is acceptable. Generally speaking, a 1/8" variation between installed panels is acceptable.

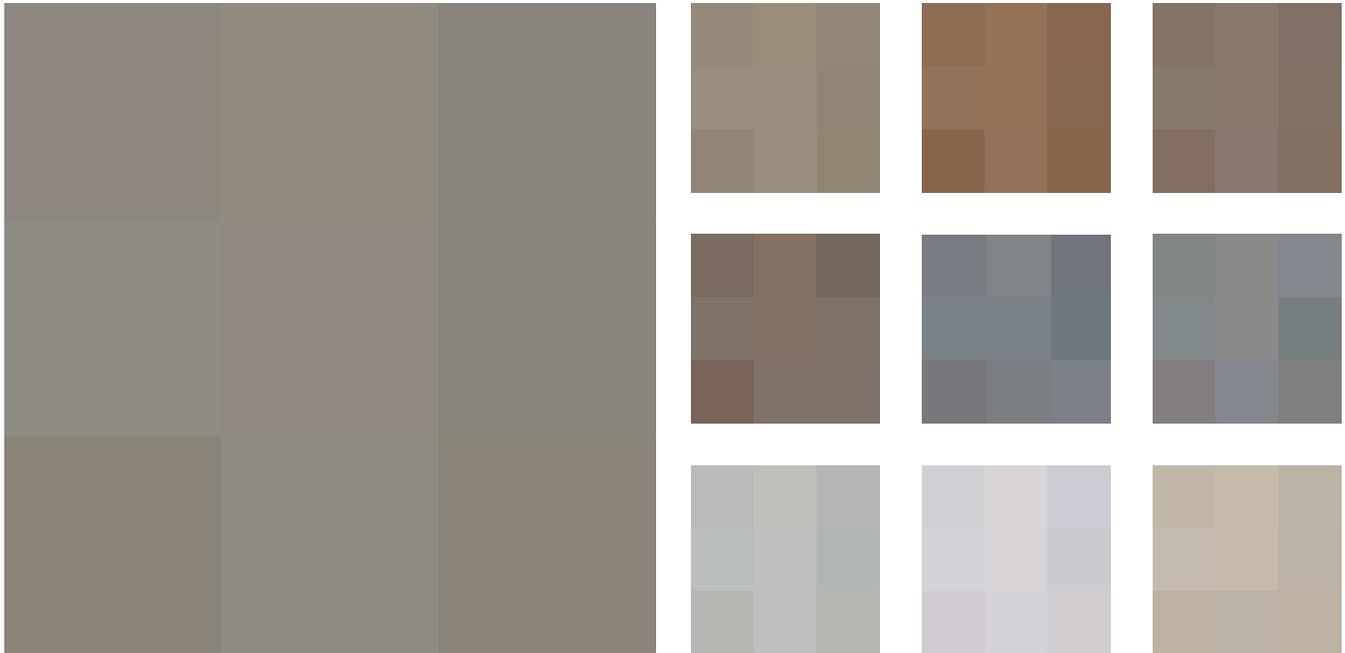
### Aggregate Distribution and Appearance

When ordered, decorative aggregate is added to panels by hand to achieve a natural look. The density and distribution of aggregate will vary within and between panels and this is acceptable as long as it does not form a distinct pattern or acute contrast.

## Color Variation

If the specified sealer is Microseal, color variation is to be expected. This is communicated prior to the project start by way of the TAKTL Natural Color Variation (Doc. SP36-1) and it an important reference for all project participants, as the color variation is largely unpredictable and will be perceived differently depending on the position of panels on the building relative to the sun and aspect of an elevation.

## Example Natural Color Variation References



## Example Natural Color Variation (MicroSeal/T)



Prior to shipment, panels are visually assessed in our facility, and the color of each lot is assessed during the manufacturing process to determine whether adjustments need to be made. Most frequently, objections to color variation are based on the placement or grouping of panels on the building wall. A contiguous block of panels of one shade next to a block of panels of another shade can produce a non-random look. This is something that TAKTL cannot control. Often, installing contractors have been able to shift panels onsite to achieve an acceptable visual effect.

## Weathering and Efflorescence

Exposure to rain and sun will cause the panel surface to weather over time, and this to be expected. Depending on the finish and local weather conditions, the panels may effloresce.

Efflorescence is aesthetic issue, not a product defect, and it does not affect panel performance. Because efflorescence is white it is more apparent on dark colors. Mediablast finish panels display more efflorescence than panels with cast finish. Efflorescence most often occurs during or shortly after the completion of construction. Weather plays a key role in both the creation and removal of staining. Efflorescence reduces in severity over the course of 12-24 months as rainwater interacts with panel surfaces. The drier and warmer the climate the longer this process takes, but in areas that see a substantial amount of rain the reaction can happen more rapidly. The first impulse is to immediately try to remediate the issue, but in nearly all literature this is ill-advised. Instead, it is recommended to wait for the aforementioned period, because in most cases efflorescing salts will be removed by normal weathering. For more information, please reference our Memorandum on Efflorescence on Cement-Based Products (Doc. Q10-1).

### Natural Efflorescence



### Improper Storage + Mishandling Efflorescence



## Surface Tension Lines

Surface tension lines are hairline imperfections in panels that do not affect panel performance and may be visible when the effected panel is wet. Surface tension lines are acceptable if not visible when the panel is dry, do not span more than one-third of the panel surface, and are isolated, not clustered which are not visible when the panel is dry.

## Reporting a Product Quality Issue

Our goal is high quality on every project. If there is a problem with product quality onsite, please report it to your TAKTL Project Manager using the Customer Claim Form (Doc. Q6-1), so we can respond promptly. When reporting an issue, the following information is required, as applicable:

- Photographs
- Crate numbers(s)
- Part numbers(s)
- Serial number(s)
- Installed location (elevation)

In order to address product quality claims, a site visit by TAKTL personnel may be required.

		<b>Customer Claim Form</b> Q6-1-1704-1	
<b>PROJECT NAME:</b>		<b>DATE:</b>	
Customer:		Contact Name:	
Address:		Phone:	
		Email:	
<b>PRODUCT DESCRIPTION</b>			
<b>DESCRIPTION OF COMPLAINT</b>		<b>PART #</b>	<b>QTY</b>
<b>COMPLAINT ATTACHMENTS</b>			
<input type="checkbox"/> Photographs		<input type="checkbox"/> Test Reports	
		<input type="checkbox"/> Other Documentation:	
Signature:		Name + Title:	