

# **Fire Rated Joint Assembly Verify & Comply Calculation**

## UL 2079 Product Cert. & Joint Deflection Design Calculation

<b><i>Certification Info - (UL Listing Header)</i></b>			<b><i>Project Design - Specifications</i></b>		
UL Listing:		<b><i>Cert</i></b>	Project:		<b><i>Spec</i></b>
Nominal (Install) Joint Width Limit	<b><i>IGL</i></b>		Deflection Spec. per E.O.R (Compress + Extension)	<b><i>DEF</i></b>	
Extension - (Multi-Story lowest %)	<b><i>EXT</i></b>		Install Gap Required (DEF ÷ EXT ÷ 2)	<b><i>IGR</i></b>	
Compression - (Single Story)	<b><i>COMP</i></b>		Architect Specified Gap	<b><i>ASG</i></b>	

Deflection = Span x 12in / Load Limit

Example: 20ft x 12in ÷ L/240 = 1.00" (one way compression)

***Installed Joint (Multi-Story) = min. 1.00" & Joint Protection Required = 2.00" Overall Deflection***

➤ Verify Overall Deflection with Engineer of Record: \_\_\_\_\_

Product/System – Overall <b><i>Certified</i></b> Max. DEF (Deflection)	<b><i>IGL</i></b>	<b><i>EXT/COMP</i></b>	<b><i>Max. DEF</i></b>
<i>Multi-Story Certified Limit (Comp. + Ext.) = IGL x EXT x 2</i>			
<i>Single-Story Certified Limit (Comp. Only) = IGL x COMP</i>			

Product/System – Overall <b><i>Design Spec.</i></b> Max. DEF (Deflection)	<b><i>ASG</i></b>	<b><i>EXT/COMP</i></b>	<b><i>Max. DEF</i></b>
<i>Multi-Story Authorize Limit (Comp. + Ext.) = ASG x EXT x 2</i>			
<i>Single-Story Limit (Comp. Only) = AIG x COMP</i>			

➤ ***Max DEF < DEF*** – **Non-Compliant** (Verify Spec. & Plan Set Details)

<b><i>Movement Capability – Zone Rating Definitions</i></b>		
Class I	Thermal	500 cycles – 1 cycle/min
Class II	Wind Sway	500 cycles – 10 cycle/min
Class III	Seismic	500 cycles – 30 cycle/min

<b>Conversion Chart</b>	
1/4"	.250
3/8"	.375
1/2"	.500
5/8"	.625
3/4"	.750

Submitted By: \_\_\_\_\_ (Print) \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_

Company: \_\_\_\_\_