



Hail Damage Cheat Sheet

HAAG Engineering Definition of Hail Damage:	
Functional Damage For All Roofs is:	
Reduction of water shedding capability	
Reduction of expected long term life cycle of the roofing product.	
Additionally, for Foam:	
Fractures in coating	
Fractures in coating accompanied by dents and/or fractures in SPF	

National Weather Services' rating for hail size.		
Hail Size	NWS Classification	Other Notes:
<1/4	Pea	"Severe" Hail is classified as 1" or larger.
1/2	Marble	
3/4	Dime	The most common size of hail is "Pea" size.
1	Quarter	
1-3/4	Golf Ball	As hail increases in size, the severity of the impact increases exponentially. For instance, a 1" hail stone has approximately 14 times the energy that 1/2" hail has.
2-3/4	Baseball	
4-1/2	Softball	

HAAG Engineering Threshold For Damage To Roofing Materials:			
Hail Size	Pitched Roof Material	Hail Size	Flat Roof Material
1	Lightweight Shingles	1/2	Foam
1-1/4	Heavy Weight Shingles	1	Single-Ply
1-1/4	Wood Shakes	1-1/2	Modified
1-1/2	Medium Shakes	2	EPDM Single-Ply
1-1/2	Clay Tiles	2	Smooth Built-Up
1-3/4	Concrete Tiles	2-1/2	Ballasted Roofs
2-1/2	Metal Panels		

Collateral Inspections and Hail Size Correlation:
The Best is an A/C Coil Impact - Impact/.8 = Size
2nd is Aluminum Flashings - Impact/.5 = Size
Nothing Else Really Correlates.

Various sources, reports are used in these notes. This sheet is to be used as a cheat sheet only and information may have been changed since this sheet was drafted. Please verify all information as Max Consulting Services, LLC is not liable for the information contained herein.

Additional Notes: