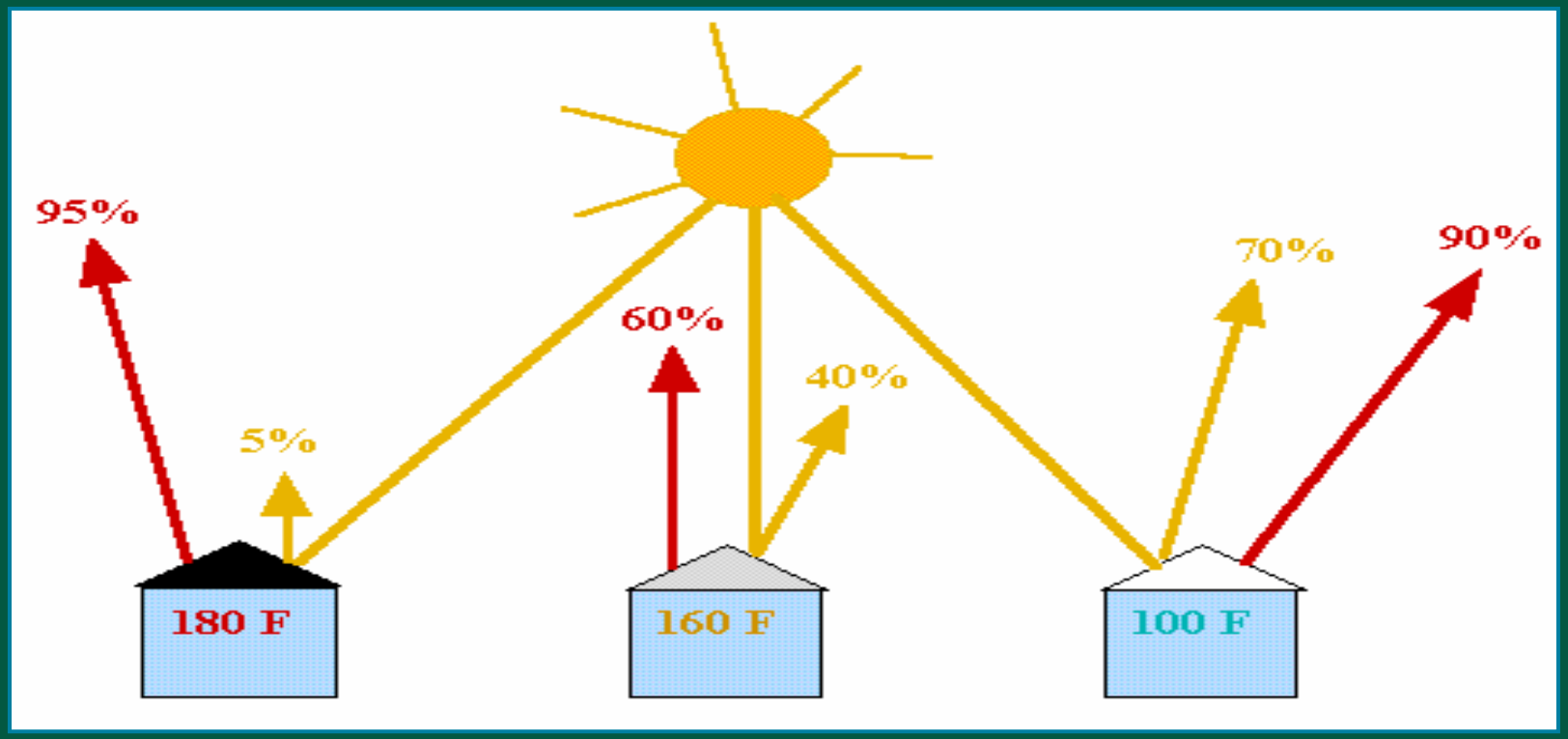
Effect of Reflectivity & Emissivity on Temperature

Produced by Sarnafil Inc., and Adapted by International Code Council, Inc.



black asphalt
low reflectivity
High

aluminum coating
high reflectivity
low emissivity

white membrane
very high reflectivity
high emissivity

§303.1

INTERNATIONAL CODE COUNCIL

Emissive & Reflective Properties of Common Products

Produced by Sarnafil Inc., and Adapted by International Code Council, Inc.

Roofing Material	Emissivity	Reflectivity
• Black EPDM	.86	.06
• Gray EPDM	.87	.23
• White EPDM	.87	.69
• Smooth BUR	.86	.06
• White Granular Modified	.92	.26
• SBS Modified Bitumen	.92	.26
• Dark gravel BUR	.90	.12
• White coated BUR	.90	.65
• Sarnafil/GAF white membranes	.92	.83

Photo courtesy of Sarnafil Inc.

Owners of the Ross-Ade Stadium at Purdue University, Indianapolis, Indiana saved a lot of future maintenance headaches and nearly $150,000 by choosing Semafil's Décor Profile Roof System over traditional standing seam metal.

More Resources

1. **Chicago Department of Environment OR Construction & Permits** www.cityofchicago.org
2. **EPA Energy Star** www.energystar.gov
3. **US Dept of Energy** www.doe.gov
4. **National Roofing Contractors Association** www.nrca.net
5. **ASTM E06.21.16 Cool Construction Materials** www.astm.org
6. **Lawrence Berkeley National Laboratory** http://eetd.lbl.gov/ea/heatisland/
7. **Dr. Lisa Gartland, PositivEnergy Consultants** www.positivEnergy.com
8. **GAF Materials** www.gaf.com **OR Sarnafil Roofing** www.sarnafilus.com
9. **Los Angeles Water & Power Cool Roof Contractor's** www.ladwp.com
10. **Rebuild America OR Energy$mart Schools** www.eren.doe.gov