

*Appendix
XIII*

Duct Insulation Table

Duct, Duct Insulation & Duct Jacketing Table

Item #	Service	Location	Duct Joint Sealer Material	Duct Material	Max. Duct Leakage @ Given S.P.	Insulation Requirements			Regulatory Compliance	Jacket / Finished Face Type	Comments
						Thickness (in.)	Type	Density (lb/ft ³)			
1	SA, RA, GEA, OSA & TA	Indoor - Unconditioned Mechanical Rooms	DuPont 1010/1020	Galvanized Steel, ASTM A653/A653M		2.0	Rigid Glass Fiber Insulation Board	3.0	8.0	ASJ Foil Faced Finish w/ Moisture Barrier	Attach fiberglass boards to ductwork by means of mechanical pins and chemical adhesive per manufacturer's recommendation. Provide water-proof tape at corners, breaks, joints and penetrations.
		Indoor - Exposed to Unconditioned Spaces (e.g. tunnel entrances)		Galvanized Steel, ASTM A653/A653M		2.0	Rigid Glass Fiber Insulation Board	3.0	8.0		
3	SA, & RA	Indoor - Above Ceiling Plenum, Unconditioned	DuPont 1010/1020	Galvanized Steel, ASTM A653/A653M		2.0	Fiberglass Blanket Wrap	0.75	6.3	ASJ Foil Faced Finish w/ Moisture Barrier	Fiberglass duct wrap is applied to the exterior of sheet metal ducts by cutting to correct stretch-out length with a staple flap. The longitudinal seam is secured with staple or tape tab and, where a vapor retarder is required, sealed with pressure sensitive tape or glass fabric and mastic. Circumferential joints between pieces of duct wrap are sealed in the same manner.
		Internal Shafts - Unconditioned, Not Exposed to Elements		Galvanized Steel, ASTM A653/A653M		2.0	Fiberglass Blanket Wrap	0.75	6.3		
5	SA & RA	External Shafts - Unconditioned, Not Exposed to Elements	SEKALEX 1A	Galvanized Steel, ASTM A653/A653M		2.0	Fiberglass Blanket Wrap	0.75	N/A	Granular Coating w/ White Finish	Refer to CTF's design guide for application details and material specification.
		Outdoor - Exposed on Roof		Galvanized Steel, ASTM A653/A653M		3.0	Spray-On Foam	N/A	N/A		
7	SA	Indoor - Exposed to View, Conditioned Space	DOW-CORNING Clear Silicone Sealant, Model # 732 or GE-SCS 1201 (Option #1)	Galvanized Steel, ASTM A653/A653M		1.0	Closed Cell Elastomeric Foam (Similar to AP Armaflex Internal Lining) Option #1	N/A	N/A	N/A	Insulation shall be attached to the interior of the duct by means of mechanical fasteners and chemical adhesive both.
				Galvanized Steel, ASTM A653/A653M		1.5	Rigid Glass Fiber Board w/ Aluminum Foil Backing (Option #2)	N/A	4.2		
8	SA	Indoor - Exposed to View, Conditioned Space	DOW-CORNING Clear Silicone Sealant, Model # 732 or GE-SCS 1201 (Option #2)	Galvanized Steel, ASTM A653/A653M		1.5	Rigid Glass Fiber Board w/ Aluminum Foil Backing (Option #2)	N/A	4.2	FSK Foil Faced Finish w/ Moisture Barrier	Fiberglass duct wrap is applied to the exterior of sheet metal ducts by cutting to correct stretch-out length with a staple flap. The longitudinal seam is secured with staple or tape tab and, where a vapor retarder is required, sealed with pressure sensitive tape or glass fabric and mastic. Circumferential joints between pieces of duct wrap are sealed in the same manner.
				Galvanized Steel, ASTM A653/A653M		2.0	Rigid Glass Fiber Insulation Board	3.0	8.0		
9	RA	Indoor - Exposed to View, Conditioned Space	DOW-CORNING Clear Silicone Sealant, Model # 732 or GE-SCS 1201	Galvanized Steel, ASTM A653/A653M		N/A	N/A	N/A	N/A	N/A	
				Galvanized Steel, ASTM A653/A653M		2.0	Rigid Glass Fiber Insulation Board	3.0	8.0		
10	RA	Indoor - Exposed to View, Un-Conditioned Space	DOW-CORNING Clear Silicone Sealant, Model # 732 or GE-SCS 1201	Galvanized Steel, ASTM A653/A653M		2.0	Rigid Glass Fiber Insulation Board	3.0	8.0	N/A	
				Galvanized Steel, ASTM A653/A653M		2.0	Rigid Glass Fiber Insulation Board	3.0	8.0		

11	SA, RA, GEA, OSA & TA	Direct Buried Below Grade	Blue Silicone Sealant - Manufactured by AQC Industries	HDPE		N/A	Integrally Insulated Heavy-Duty HDPE Duct	N/A	N/A	ASTM: E 84, D2000, D394, D624, D412, D1002, D2240, D3807, D2412.96	N/A	Underground duct systems shall be polyethylene similar to AQC Industries. All joints and connections shall be clamp and gasket fastened in accordance with manufacturers recommendations to ensure an air and water-tight system. All ducts and fittings shall be installed and backfilled according to manufacturer's recommendations, using pea gravel, sand or equivalent with good compaction.
12		Direct Buried Below Grade	DOW-CORNING Clear Silicone Sealant, Model # 730	316 L Stainless Steel	1% @ 6.0" w.c.	N/A	N/A	N/A	N/A	N/A	N/A	Duct to be encased in 1 sack slurry 12" all the way around the entire circumference.
13	EA - Serving Chemical Fume Hoods	Indoor - Exposed to View, Conditioned/Un- Conditioned Space	DOW-CORNING Clear Silicone Sealant, Model # 730	316 L Stainless Steel	1% @ 6.0" w.c.	N/A	N/A	N/A	N/A	N/A	N/A	Apply a 2" wide bead of silicone sealant in a clean and even manner. End product must be done in a workmanlike manner and look visually presentable.
14		Outdoor - Exposed to Elements	DOW-CORNING Clear Silicone Sealant, Model # 730	316 L Stainless Steel	1% @ 6.0" w.c.	N/A	N/A	N/A	N/A	N/A	N/A	Cover joints with 12 ounce canvas/parabol to protect against UV.

Legend: SA=Supply Air, RA=Return Air, GEA=General Exhaust Air, EA=Exhaust Air, TA=Transfer Air, OSA=Outside Air, ASJ=All Service Jacket, FSK=Foil Scrim Kraft

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