

MORTALITY EXPERIENCES OF ASBESTOS INSULATION WORKERS 1943 - 1968*

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On December 31, 1942, there were 632 members of the Asbestos Workers Union in the New York area (New York and Newark, New Jersey locals of the International Association of Heat and Frost Insulators and Asbestos Workers, I.A.H.F.I.A.W.). From January 1, 1943, to December 31, 1962, another 890 men joined the union. We have followed each of these 1,522 men prospectively to the present. Four hundred and four died by December 31, 1968. Analyses of these deaths demonstrate that serious risks have been associated with work in this trade.

own observations and those of others^{2,3} indicate that trade practices are essentially uniform through the country, the data which follow may be taken to represent mortality experience in this trade for the United States and Canada; direct study of all United States union insulation worker deaths, 1967-1968, supports this.⁴

Exposure: There is scattered information recorded concerning variation in insulation materials used in the United States, 1870-1969^{1, 7}; it would appear that some materials (as, hair-felt, cork, mineral wool) have sharply decreased while others (as, fibrous glass, plastics) have increased.¹ Table 1 lists material currently used.

TABLE 1: INSULATION MATERIALS (U.S.)-1969⁸

1. Minerals Containing Asbestos	Asbestos Content
Product	
Blankets	100% amosite
Moulded	95% amosite (5% filler)
Insulation block	(a) 85% magnesia: 10-15% amosite + chrysotile
	(b) 85% cal. silicate: 10-15% amosite
	(c) 85% cal. silicate: 10-15% amosite + chrysotile
	(d) 85% calcined diatomaceous silica
	10-15% amosite + chrysotile
	(e) 85% calcium silicate: 10-15% chrysotile
Finishing 'cements'	(a) 100% chrysotile
	(b) 50% chrysotile, 50% cement
Sprayed asbestos	10-15% asbestos-variable
2. Fibrous Glass and or Mineral Wool	
Block, rolls, prefabricates, high temperature insulation, finishing cements, mineral wool and cement.	
3. Plastics	
Polystyrenes and polyurethanes: prefabricated, powdered and foamed in place.	
4. Other	
Cork, glass flakes, adhesives (epoxy and solvents; asphalt base and solvent, wheat paste, silicones, magnesia, Portland cement).	

MATERIALS AND METHODS

The procedures followed in this study have been described.^{1, 2} Briefly, these men install insulation in the construction and (to a limited extent) in the shipbuilding industries. Approximately 10 of United States union insulation workers are in the New York-New Jersey locals and since our

The quantity of asbestos used annually in insulation materials has not changed very much in the past fifty years—12,300 tons in 1920 and 16,000 tons in 1968 (Table 2).⁸ There are currently, however, more insulation workers than previously; pre-

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