Brake Lining Composition

The average composition of typical brake linings of the type tested is shown in Table 2. Individual mixes may vary considerably from these averages.

Table 2

Brake Lining Composition

Ingredient	Automobile	Truck
Asbestos	55	33
Resins and Polymers	28	48
Oxides and pigments	9	16
Metals	3	2
Carbon, graphite, etc.	5	1
	100%	100%

Each of these ingredients performs a particular function. The asbestos provides strength, heat resistance and selective decomposition under stress. The resins and polymers hold the other ingredients together. Various oxides are added as pigments and to improve the grip of the lining on the drum. Soft metals such as lead and brass improve wear while carbon and graphite serve as friction modifiers.

Brake lining quality depends to a large extent on the type of binder used. Linseed oil, which begins to decompose at about 450 F, is used for light service brakes. More demanding service requires brakes made from cashew type resins or oil modified phenolic resins. These ingredients are mixed, either dry or with a solvent added, formed into shape and cured

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