FILE NAME: Allied Signal Bendix (ASB)

DATE: 1968

DOC#: ASB122

DOCUMENT DESCRIPTION: Internal Inspection Results

Table 1. Chemical Composition of Grinding Dust

PROXIMATE ANALYSIS OF LOT RECEIVED DECEMBER 3, 1968

	Percent by Weight
By Experiment	
Moisture content (weight loss at 220°F) (seasonal variations expected)	1.1%
Composition on a dry basis	
Ignition loss at 1700°F (organics plus bound water)	33.5%
Ash by difference (largely olivine from ignition of chrysotile* asbestos plus $BaSO_4$, etc.)	66.5%
	100.0%
By Calculation From Experimental Data	
Chrysotile* content, based on 12% water	76.0%
Organic content (resin plus friction dust and other combustibles)	24.0%
	100.0%
Abrasive content (probable range)	0.05 to 0.5%**
Mesh size	fine, but not known
Free metal content (copper, brass, aluminum, zinc, iron)	0.01 to 0.1%***

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*Chrysotile is a fibrous form of hydrated magnesium silicate with this typical composition:

Mg (as MgO)	37 %
Si (as SiO_2)	43 %
Fe (as Fe_2O_3 in lattice)	4 %
Fe_3O_4 (free magnetite)	variable
Water of hydration	12 %
Miscellaneous (Al_2O_3, CaO, NiO, etc.)	balance
	100 %

**Requires further definition

***May be controlled by in-plant segregation.

Table 2. Typical Physical Properties of Grinding Dust

A product composed of 75% chrysotile asbestos fines coated with 25% phenolic resin and inert fillers to reduce dust.

Bulk density - loose	50 lbs/ft^3
or apparent density	0.81 g/cc
Bulk density - tapped	57 lbs/ft^3
or tapped density	0.91 g/cc
Briquetted density (12,000 psi)	0.054 lbs/in^3
or	1.50 g/cc
Specific gravity	1.91 g/cc
pH (1% slurry)	7.3
Color	light tan
Odor	pungent (phenolic)
Flammability	chars
Storage life (dry)	good
Toxicity, health hazard	breathing airborne dust may caus lung damage; skin contact may cause dermatitis
Maximum operating temperature	550°F

Screen Analysis

Screen Size	Percent Retained	Cumulative Percent
30 mesh	0.4	0.4
60	4.9	5.3
80	34.8	40.1
100	50.3	90.4
200	6.1	96.5
325	2.2	98.7
through 325	1.6	100.3

Based on Lot Received December 3, 1968