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P.O. BOX 247
NORTHBROOK, ILL.

IN ANSWERING PLEASE REFER TO R46
63K3074

October 16, 1963

PLAINTIFF'S EXHIBIT
BIR-461

Mr. Stanley H. Sallie,
Product Development Manager
Bird & Son, Inc.
East Walpole, Massachusetts

Dear Stan:

On October 1, you witnessed the conduct of Class A fire tests on shingles which were manufactured at the Charleston Plant on August 22 and selected by our Inspector on that date.

In the Spread-Of-Flame test conducted on three decks, flames spread to a distance of 6-1/4, 6, and 6-1/4 ft on the respective decks. Flaming then gradually receded and the tests were terminated at approximately 8 min. Since flames spread beyond 6 ft, the shingle does not comply with the requirements for Class A.

The Flame Exposure test was conducted on duplicate decks and the results indicated that the shingles protected the roof deck from ignition. Although the deck boards were stained with asphalt, no charring of the boards was in evidence.

One deck was subjected to a Burning Brand test and, again, the shingles protected the deck boards from ignition. Examination of the deck after the test revealed that the third and fourth boards were lightly charred, the maximum depth of char being 1/8 in.

Results of tests conducted by our Chemical Department on the shingle and its components are tabulated on the attached sheet. Photographs of typical test decks are also enclosed.

Since this concludes our work, we are closing Assignment No. 63K3074 with this letter. At such time as you wish to submit another Class A shingle, please advise and we shall be glad to forward an application form to you.

Very truly yours,

R. L. DONAHUE
Sr. Project Engineer
Fire Protection Dept.

Reviewed by:

E. K. STOEHR
Assoc. Managing Engineer
Fire Protection Dept.

RLD:mk

RESULTS OF TESTS CONDUCTED ON THE SHINGLE AND ITS COMPONENTS

FINISHED PRODUCT

Weight, lb per 100 sq ft	125.6
Desaturated felt weight, lb per 100 sq ft	12.1
Mineral matter, per cent	57.7
Granule adhesion loss, g	2.71

DRY FELT

Weight, lb per 100 sq ft	12.2
Ash content, per cent	3.1

SATURATED FELT

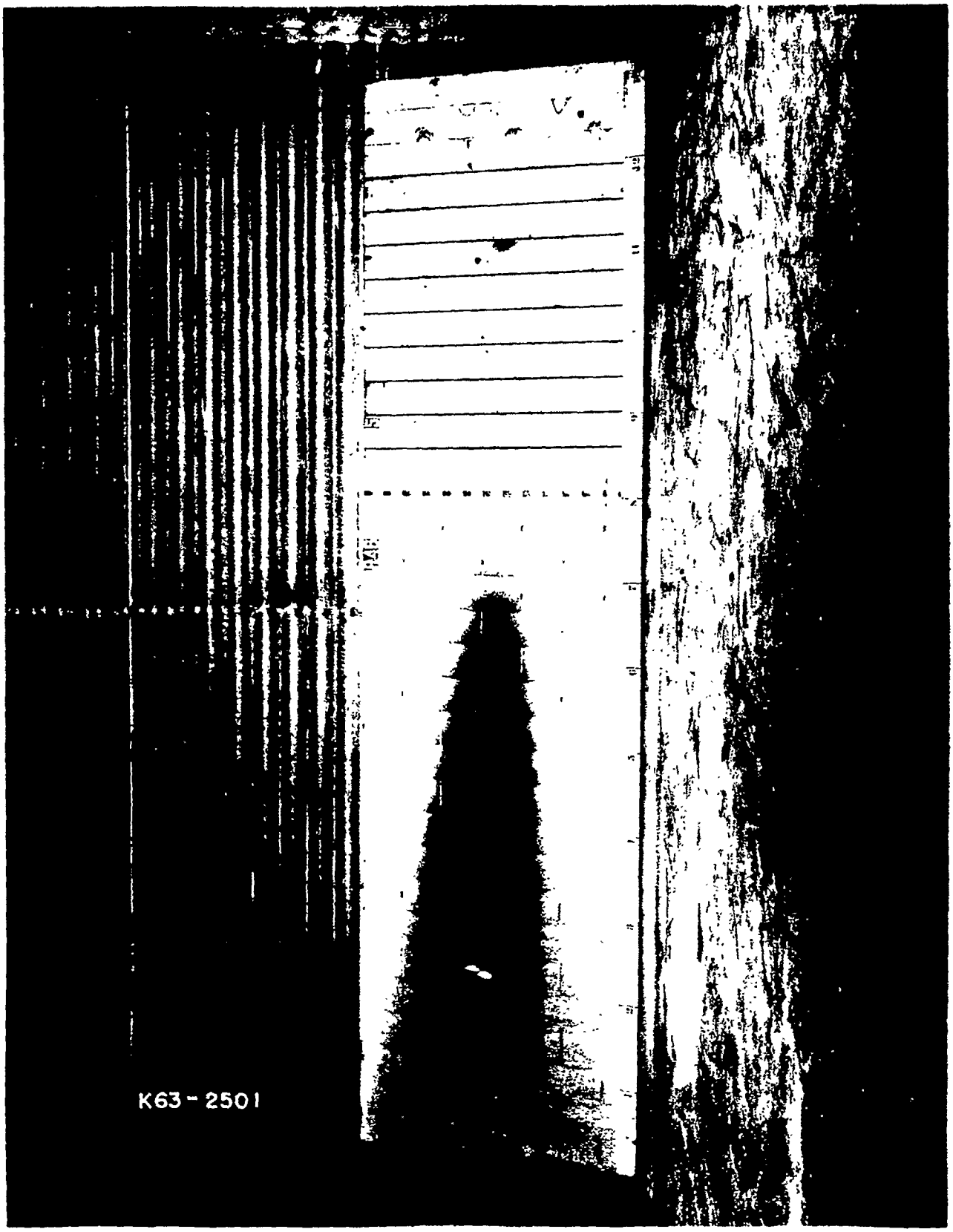
Weight, lb per 100 sq ft	32.8
Saturation, per cent	182.2
Desaturated felt weight, lb per 100 sq ft	11.6

ASPHALT COMPOUNDS

	Filled Coating	Unfilled Coating	Saturant
Flash Point, F, (PMCT)		515	525
Softening point, F, (R & B)		224	145
Penetration (77F, 100 g)		17	

Insoluble in chloroform, per cent-35.4

RLD:mk



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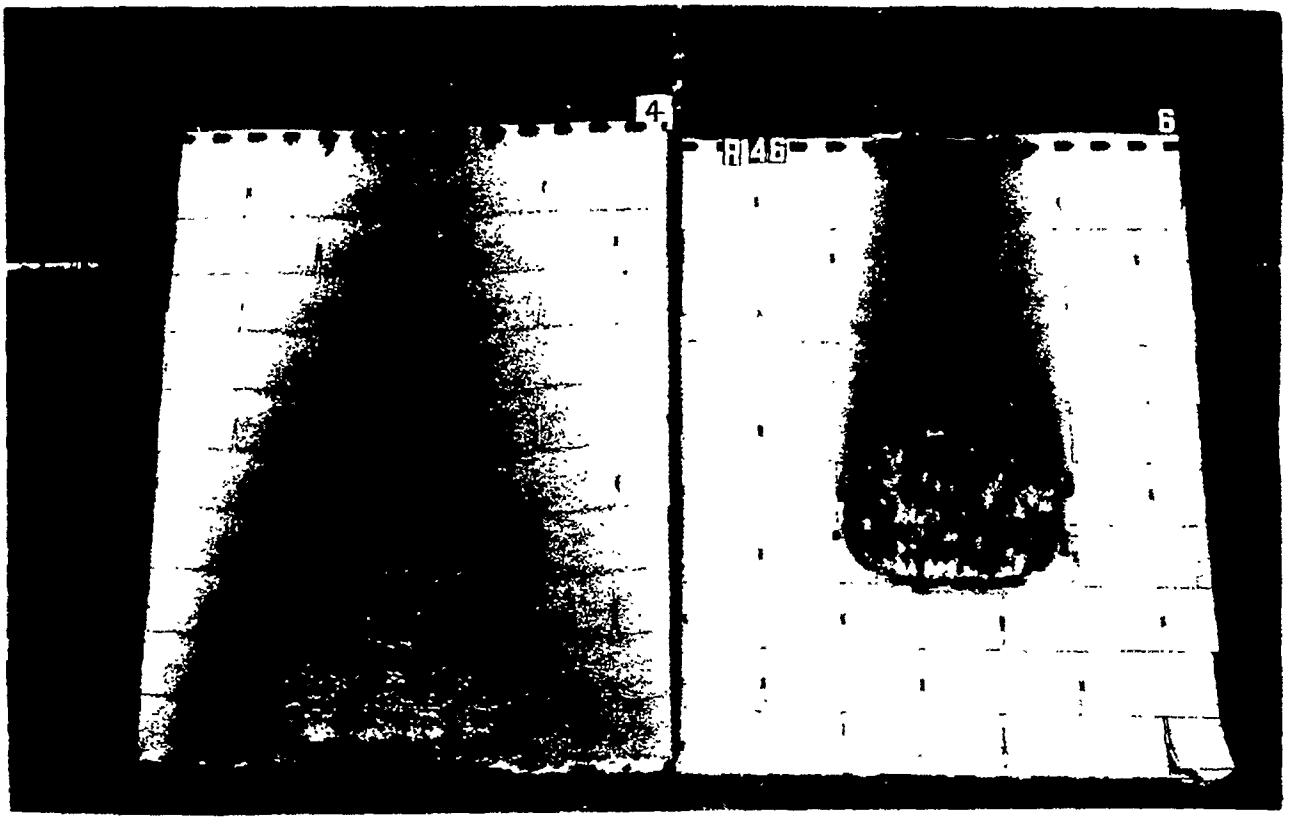
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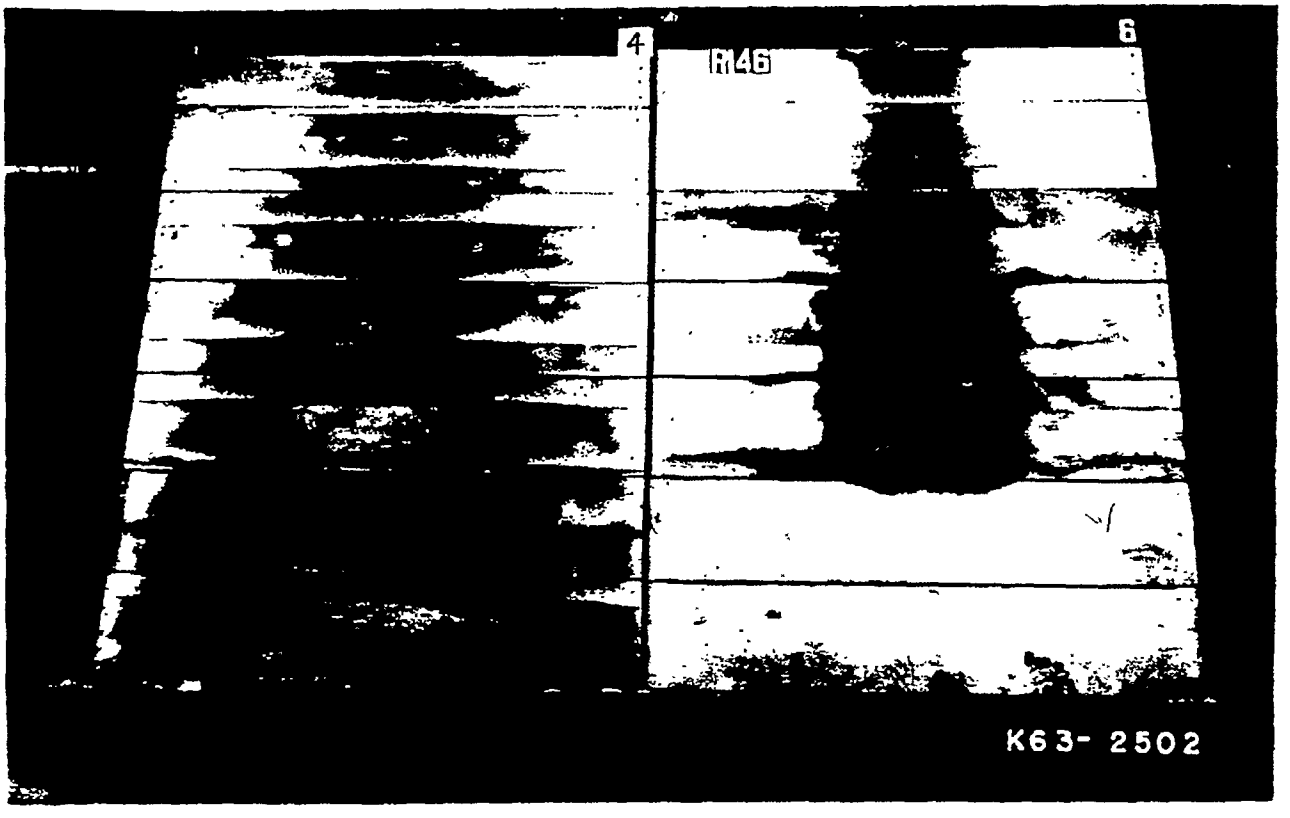
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