File

DEPARTMENT OF MINES AND RESOURCES

BUREAU OF MINES

CANADA



Ottawa, September 28, 1946.

# R E P O R T

of the

ORE DRESSING AND METALLURGICAL LABORATORIES.

Investigation No. 2110.

## Resistance to Fading of Anodized and Dyed Aluminium Sheet.

(Copy No. 4.)

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Background:

A letter dated July 27, 1946, was received from the Canadian Anodized Products Limited, Aurora, Ontario, per R. E. MacDonald, Chemist, requesting that a number of samples of anodized and dyed aluminium sheet be investigated for fading in arclight containing the same types of radiation as sunlight. The conditions under which the samples were anodized were given. The following colours were submitted: gold, black, blue, brown, red, Bordeaux, green.

Investigation:

Each of the samples submitted was cut into two pieces. One piece from each sample was placed in the Weather-Ometer, which was adjusted so that the pieces were not subjected to water spray. Throughout the investigation the temperature was 95° F. The results were as follows:

After 1 day - The green had faded a great deal.

After 2 days - Very little green colour remained.

After 8 days - The gold, red and Bordeaux had faded very slightly.

After 19 days - The black remained unchanged.
The blue was changed little or none.
The brown was slightly faded.
The gold and the red were quite noticeably faded.
The Bordeaux was very noticeably faded.
The green had almost completely disappeared.

Tested and untested pieces of the different samples are shown for comparison on the accompanying card. (It was found impossible to photograph satisfactorily the colour differences in these samples.)

It is concluded that the coloured samples submitted may be arranged in the following order with regard to fading:

Black (best), blue, brown, gold and red, Bordeaux, and green (worst).

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Note:

These Laboratories would appreciate the following information for their files:

(Note, cont'd) -

(1) Name of each colour tested.
(2) Manufacturer of each colour.
(3) Sealing agent used.
(4) Composition, state, etc., of the aluminium used.

If desired, this information would be treated as confidential.

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Figure 1.

NOTE: Differences of colour could not be photographed satisfactorily, therefore samples were mounted on an accompanying card.

Tested

Untested

SAMPLES OF ANODIZED AND DYED ALUMINIUM SHEET,

TESTED AND UNTESTED.