

26 October, 2005

Astec Paints Australasia Pty Ltd
262 Marion Road
NETLEY SA 5037

Attention: Mr Mark Waters

REPORT 05MAAD09735 – Part 2

CLIENT REFERENCE: Request

TITLE: Astec B.C.A Test

SAMPLE IDENTIFICATION: Astec Energy Star Tilesield

WORK REQUESTED: Determine colour classification according to BCA 3.12.1.2 clause 5.

INVESTIGATING OFFICER(S): Natalie Powell

Monty Luke
Laboratory Manager
Materials Services

1. INTRODUCTION

Mark Waters of Astec Paints Pty Ltd supplied reflectance and emittance data of Astec Energy Star Tilesield samples of various colours to the Amdel Materials Services Laboratory. It was requested that Amdel should carry out calculations to determine the colour classification according to B.C.A 3.12.1.2 clause 5. The samples supplied for evaluation were identified as follows.

- ❖ Astec Energy Star Tilesield
- ❖ Astec Energy Star colours

2. PROCEDURE

The sample data supplied were inserted into the American Cool Roof Rating Council ASTM E 1980-01 calculator. Standard solar conditions of Solar Flux = 1000W/m² Ambient Air Temp = 310K (37°C), Ambient Sky Temp = 300K (27°C) and no conductive heat transfer were used for all calculations. Each sample used the Emittance value for Astec Energy Star Tilesield white base of 0.90.

3. RESULTS

- ❖ Colour Classifications

The results of the calculations of the Astec Energy Star Tilesield sample were as follows.

<u>Colour</u>	<u>Solar Absorbance</u>	<u>BCA Classification</u>
White Base	0.106	Light
8068 C/B Heritage Red	0.625	Dark
8069 Red Iron Oxide	0.610	Dark
8070 Terracotta	0.576	Dark
8071 Clay Tone	0.533	Light
8072 Warm Clay	0.405	Light
8073 Tuscany	0.340	Light
8074 C/B Ironbark	0.594	Dark
8075 Pioneer	0.712	Dark
8076 Regal Brown	0.614	Dark
8077 Yallara Brown	0.630	Dark
9078 C/B Weathered Copper	0.609	Dark
8079 Charcoal	0.672	Dark

<u>Colour</u>	<u>Solar Absorbance</u>	<u>BCA Classification</u>
8080 C/B Slate Grey	0.597	Dark
8082 Nimbus	0.645	Dark
8083 C/B Beige	0.457	Light
8084 Merino	0.317	Light
8085 Off White	0.253	Light
8086 Sandalwood	0.233	Light
8087 C/B Smooth Cream	0.215	Light
8088 Mocca	0.424	Light
8089 Stone	0.311	Light
8098 Carraige Green	0.754	Dark
8099 Bruns Green	0.741	Dark
8100 Mist Green	0.560	Dark
8101 C/B Rivergum	0.555	Dark
8102 Olive Green	0.606	Dark
8103 Blue Grass	0.640	Dark
8104 Botanic	0.721	Dark
8105 French Green	0.461	Light
8108 C/B Mountain Blue	0.745	Dark
8081 C/B Birch Grey	0.378	Light
8094 Quarry	0.402	Light
8095 Mid Biscuit	0.305	Light
8097 Light Latte	0.291	Light
8106 C/B Saltbush	0.442	Light
8107 Cobalt	0.662	Dark
8110 Pewter	0.393	Light
8111 Autumn	0.391	Light
8112 Chino	0.394	Light
8091 Broken White	0.187	Light
8092 Neutral White	0.215	Light

<u>Colour</u>	<u>Solar Absorbance</u>	<u>BCA Classification</u>
8093 Pale Biscuit	0.246	Light
8096 Light Cream	0.213	Light
809 Gull Grey	0.317	Light