

# Araldite<sup>®</sup> PT 810 Resin

## Product Description

Araldite<sup>®</sup> PT 810 is a high performance tri-functional epoxy resin (triglycidyl isocyanurate, TGIC). It exhibits excellent weathering characteristics and is used in many applications where gloss retention and color stability are important. Araldite<sup>®</sup> PT 810 has the epoxy characteristics of excellent adhesion and chemical resistance. Its multi-functionality imparts high heat-distortion- temperatures and good thermal aging characteristics. In addition, formulations based on Araldite<sup>®</sup> PT 810 have excellent mechanical and electrical properties.

## Applications

- Powder coatings especially: Architectural
- Lawn and garden Automotive Adhesives
- Electrical, especially LED displays

## Features

- Good gloss retention and color stability
- Very good adhesion, mechanical properties and chemical resistance
- High heat distortion temperatures and good thermal aging characteristics
- Good arc and tracking characteristics
- Good retention of all of these properties after weathering
- Excellent gloss and color stability after over-baking

## Typical Properties\*

Property	Value
Appearance	White opaque pellets
Epoxy Value, eq./kg)	0.93 - 1.00
Epoxy equivalent, g/eq.	100 - 108
Density @ 20°C, g/cm <sup>3</sup>	1.19
Softening point, °C	86 - 96
Total chlorine, max. wt %	1.2

\*Typical properties are based on Huntsman's test methods. Copies are available upon request.

## Processing

### White Gloss Enamel Starting Formulations (parts by weight)

Product	1	2	3
Araldite® PT 810	70	70	70
Crylcoat 3301 (UCB)	930	-	-
Crylcoat 430	-	930	-
Uralac P2400 (DSM)	-	-	930
TiO <sub>2</sub>	500	500	500
Flow Agent	10	10	10
Benzoin (BASF)	2	2	2

### Additional formulations (parts by weight)

Product	1	2	3	4	5
Uralac P 3900 (DSM)	930	930	930	930	-
Griesta P 7304	-	-	-	-	930
Araldite® PT 810	70	70	70	70	70
Modaflow Powder II (Solutia)	10	10	10	10	10
Benzoin (BASF)	2	2	2	2	2
Tiona R-CL-66 (Millennium)	-	500	500	500	500
Kronos 2160 (Kronos)	500	-	-	-	-
Tinuvin 900 (Ciba)	-	-	10	-	-
Tinuvin 440 (Ciba)	-	-	10	-	-
Matting Agent DT 3329-1	-	-	-	83	-

## Typical Physical Properties

Unless otherwise stated, the data were determined with typical production batches using standard test methods. They are typical values only, and do not constitute a product specification.

### White Gloss Enamel cured coating properties

Property	Test Method	1	2	3
Impact Resistance, (Reverse), in·lb	ASTM D2794	140	160	120
Erichsen Indentation, mm	DIN 53 156	10	10	10
Cross-Cut Adhesion	ASTM D3359	5B	5B	5B
Gloss 60°, %	ASTM D523	92	92	90

### 45° South Florida Exposure data

Property	1	2	3	4	5
Initial					
Gloss 60°, %	89	90	88	11	89
3 Months					
Gloss 60° - Unwashed, %	83	84	81	11	84
Gloss 60° - Washed, %	89	90	91	12	90
Change in color	No change	No change	No change	Slight yellow	No change
6 Months					
Gloss 60° - Unwashed, %	80	80	78	9	80
Gloss 60° - Washed, %	89	90	90	12	91
Change in color	No change	No change	No change	Slight gray	No change
12 Months					
Gloss 60° - Unwashed, %	75	83	75	8	77
Gloss 60° - Washed, %	89	90	88	11	89
Change in color	Slight gray	Slight yellow	Slight gray	Slight gray	Slight gray
18 Months					
Gloss 60° - Unwashed, %	40	71	43	0	71
Gloss 60° - Washed, %	59	77	60	0	84
Change in color	Slight gray	Slight yellow	Slight gray	Slight gray	Slight gray
24 Months					
Gloss 60° - Unwashed, %	17	21	5	0	39
Gloss 60° - Washed, %	35	53	19	0	55
Change in color	Slight gray Medium	Slight yellow	Slight gray Slight	Slight gray Slight	Slight gray Slight
Chalking					

## Storage

**Araldite® PT 810 Resin** is supplied in 55 pound bags. It should be stored in a dry place, in the sealed original container, at temperatures between 2°C and 20°C (36°F and 68°F). Under these storage conditions, the product has a shelf life of **18 months** (from date of manufacture). Storage at temperatures in excess of 30°C (86°F) may impair the flow properties of powder coatings incorporating Araldite® PT 810 (orange peel). The product should not be exposed to direct sunlight.

## **Precautionary Statement**

Huntsman Advanced Materials Americas LLC maintains up-to-date Safety Data Sheets (SDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.

### **First Aid!**

Refer to SDS as mentioned above.

**KEEP OUT OF REACH OF CHILDREN**

**FOR PROFESSIONAL AND INDUSTRIAL USE ONLY**

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