



Technical Data Sheet

PAL - 6103 X 60 ACRYLATED ALKYD RESIN

PAL - 6103 X 60 acrylated modified alkyd resin. It is developed for fast drying interior / exterior durable air drying coatings. It could be used as hydroxyl functional base resin, in two pack urethane systems. Similarly, with MF resin or blocked isocyanate, it could be cross linked at higher temperatures, in one pack stoving systems.

Features

- Cost effective versatile resin
- Very good compatibility with pure acrylic resins, chlorinated rubber resins, polyurethane resins
- Quick drying with very good acid & alkali resistance
- Reasonably good exterior durability

Applications

- Excellent substitute for chlorinated rubber coatings
- Quick drying coatings with reasonably good exterior durability for exterior structures such as pipelines, tanks etc. The durability could be boosted by imparting few parts of pure acrylic resin in paint formulations.
- Paint formulator can develop excellent coatings for Ship side paints, Container coatings, Low bake primers & Top coat for chasis
- Hydroxy terminated base resin for general purpose two pack polyurethane application

Physical Properties

Sr. No.	Property	Unit	Specification
i)	Appearance	Visual	Light Yellow Viscous Liquid
ii)	Colour (Gardner Scale)	Gardner	10 Max
iii)	Viscosity in 40 % xylene @ 30° C	sec	20 - 30
iv)	Specific Gravity @25° C	gm /cm ³	0.96 - 0.98
v)	Flash Point (Closed Cup)	°C / °F	28 / 82
vi)	N.V.M [1 hr @120° C]	%	60 ± 2
vii)	Hydroxyl Value (As such)	mg KOH / g	24 - 30
viii)	Hydroxyl Equivalent Weight	g / eq.	2100

Curing Properties

1. Air Drying Systems	
Recommended Solvent	Xylene, C IX, Butanol
Recommended Driers	Ca , Co & Zr
Surface Dry	10 Mins
Tack Free	45 Mins
Hard Dry	Over Night
2. Two Pack Urethane Systems	
Recommended OH Equivalent for Two Pack Urethane Systems	2100



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Starting Formulations Based on PAL - 6103 X 60 (Acrylated Resin)

I) Quick Drying Enamel

Sr. No	Raw Material	Percentage
i)	Titanium Dioxide	20.00
ii)	Dispers BYK - 110	0.20
iii)	PAL - 6103 X 60 %	50.00
iv)	CLP – 65 %	2.00
v)	BYK - 410	0.60
vi)	Calcium Drier	0.40
vii)	Cobalt Drier	0.60
viii)	Zirconium Drier	0.60
xi)	BYK - 310	0.20
x)	Xylene	15.40
xi)	C – IX	8.00
xii)	Butanol	2.00
Total		100.00

Paint Properties

Sr. No.	Properties	Specification
i)	V.O.C.	528 g / lit
ii)	P.V.C. in Dry Film	13 %
iii)	Pigment / Resin Ratio by Volume	1 : 6.6
iv)	Solid by Weight	52 %
v)	Mix Viscosity	100 ± 20 sec at 30° C

Curing Properties

Sr. No.	Properties	Specification
i)	Surface Dry	30 min at 30° C
ii)	Tack Free	90 min at 30° C

II) Starting Formulation of Polyurethane Paint based on PAL-6103 x 60 & Aliphatic Isocyanate

Base composition

Sr.No	Raw Material	Percentage
1	Titanium Rutile	20.00
2	Dispersing agent	0.20
3	UV – Stabilizer	0.20
4	PAL-6103 x 60	48.00
5	Slip agent	0.20



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6	Thixotropic agent 10 %	3.00
7	Xylene	2.40
8	Butyl acetate	4.00
9	Solvent C-IX	8.00
10	Ethyl cellosolve acetate	4.00

Hardener composition		
11	Aliphatic Isocynate x 75 %	4.25
12	Butyl acetate	5.75
	Total	100.00

Paint Properties

Specific Gravity :- 1.10 \pm 0.04 kg / ltr
Viscosity :- 50 \pm 20 Sec in B4 cup at 30°C
Drying Time :- SD - 20 \pm 5 Minutes
TD - 120 \pm 30 Minutes
Gloss at 60 deg. :- 78--82
S.V.R. :- 35
Mixing ratio :- Base : Hardener
9 part : 1 Part

Handling & Storage

Handling: Avoid use of electric band heater or application of direct flame to container. It can cause explosion & fire.

Storage: Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

Disclaimer

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