



# RESINS FOR ROAD MARKING PAINTS



**EAGLE CHEMICALS**<sup>TM</sup>  
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# RESINS FOR ROAD MARKING PAINTS

EAGLE CHEMICALS offers a range of high quality resins for reliable road markings solutions, to meet all national / international standards, that suits every surface type and operational performance requirement, temperature, humidity, wind speed, and barometric readings ,this range includes:



## THERMOPLASTIC ACRYLIC RESINS

### PROPERTIES

Product	Solid $\pm$ 2	Type of Solvent	Acid Value (per solid)	Viscosity Gardener @25°C	Color Hazen
<b>AC-EAGLE(TP-60T60)</b>	60	Toluene	5-10	Z4-Z5	50 Max.
<b>AC-EAGLE (TP-60x60)</b>	60	Xylene	5-10	Z4-Z5	50 Max.

### GUIDE FORMULATION

Raw material	Kg	Remarks
AC-EAGLE (TP-60T60) 60%	280.0	Thermoplastic acrylic resin
Benton paste 38	20.0	Rheology modifier
BYK 101	6.0	Dispersing agent
TiO <sub>2</sub>	200.0	
EJ2	400.0	CaCO <sub>3</sub> 20 $\mu$
DOP	10.0	Plasticizer
Iso-Butanol	40.0	
Toluene	44.0	
Total	1000.0	

### NOTES

- At first we compose a solution of the resin without pigment, and carbonate, and apply the varnish over crystal to check if the film formation is correct.
- If the film formation is correct, repeat the test, but with pigmented paint. Also over crystal, to check the hardness and the abrasion resistance that must be very high.
- Addition of plasticizer offers good resistance to the abrasion as it helps good film formation
- The recommended plasticizer is Di-cyclo-hexyl-phthalate or Di-octyl-phthalate and not Di-butyl-phthalate or chlorinated paraffin, to ensure that the film remains with superficial tack carrying no dirt resistance
- To ensure good adhesion and dirt resistance in very high temperature and even if the asphalt is not well prepared we have to add Isopropanol or Isobutanol to prevent the paint solvent to attack the asphalt .

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## WATERBORNE ACRYLIC EMULSIONS

**EAGA CRYL-6050** is a water borne, EPEO free all-acrylic binder that suits applications in marginal conditions of temperature, humidity and air flow.

### ADVANTAGES

- Superior yellowing resistance with continuous outdoor UV radiation.
- Very fast drying in high humidity, low temperature and poor air flow allowing short open traffic time.
- Environmentally acceptable, formulated to V.O.C.s as low as 80 g/l meeting or exceeding most regulations for traffic marking paints.
- Better retention of glass beads helping paints to retain their flexibility on aging.
- Easier, safer cleanup that can be done using water and mild solvents or detergents with excellent wash-off resistance and good dirt pick-up resistance.
- Increased worker safety , exposure to volatile organic solvents is greatly reduced.
- Significantly reduces disposal costs as waterborne acrylic paints can be solidified easily and disposed of as nonhazardous waste

### GUIDE FORMULATION

Raw Material	Remarks	Traffic paint* 60% PVC	
		White	Yellow
EAGA CRYL-6050	Binder	323.650	337.430
WD-EAGLE (AS 4/40)45%	Wetting and dispersing agent	0.004	0.005
Sulfinol CT-136	non-ionic wetting agent	0.002	0.002
Drew L-493	Defoamer	0.002	0.002
Titanium dioxide	Inorganic white pigment - enameled	71.050	14.820
Calcium carbonate	Oil absorption= 7,5 & 5,5 microns	540.430	555.600
Yellow 65 or 75	Organic pigment	----	23.700
Mix. the all ingredients above with a slight vortex (1000 -1500 RPM) for about 15 minutes. Slight vortex prevent break down of the emulsion and avoid skin and gel particles formation then add:			
Methanol		21.300	22.220
Texanol	Coalescent agent	16.130	16.810
Drew L-493	Defoamer	0.002	0.002
Natrosol 250HR	Hydroxyethylcellulose thickener +2% water	0.009	0.009
Water		27.413	29.370
TOTAL		1000.000	1000.000

If necessary to adjust the PH > 9,6 only with ammonia.

\* These paints formulations are using in combination of glass beads on the surface during application

## SHORT ALKYD RESIN / CHLORINATED RUBBER

### SDA-EAGLE (SX 35-18/50) 60%

### PROPERTIES

Solid ± 2	60
solvent composition	xylene
Type of oil	sunflower or soya bean
Modifications	chain stopped
Acid value	12 max.
OH content % approx	3
Viscosity Gardener @ 25°C	Y-Z at 50%
Viscosity cP@25°C	1800 at 50%
Color Gardner	6 max.

### ADVANTAGES

- Provides extra durability and increases dirt resistance
- Has high resistance to rub, scratch
- Performs well under suspect surface conditions
- Dries more consistently under a wider variety of ambient conditions
- Helps extending the striping season because they can be used in cooler weather

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