Product Data Sheet
Uracron™ CY499 E-75

Low viscosity type of hydroxy acrylic resin for high solid coatings

Applications
Automotive:
- two component high solid
- stoving top coats
- forced drying

General industrial:
- machinery paints
- off shore and industrial coatings

Principal properties
- adhesion
- solids content
- weathering resistance
- chemical resistance

Dilutability

Xylene	complete
Solvesso 100/150[1)]	limited
n-Butyl acetate	complete
1-Methoxy 2-propyl acetate	complete
Methyl ethyl ketone	complete

Compatibility

Uracron CY430, CY468, CR226	complete
Uracron CY450, CY433, CY474	complete
Maprenal MF821, MF822[2)]	complete
Cellulose nitrate, ½ sec.	complete
Cellulose acetate butyrate (Eastman types 320-0.1, 381-0.5, 531-1 and 551-0.2)	complete
Polyisocyanate (aliphatic, aromatic, cycloaliphatic)	complete

[1)] Exxon Chemicals
[2)] Ineos

Delivery form:
75% solids in Butylacetate

Product specifications

Property	Range	Unit	TM
Viscosity, 23°C	6.0 - 7.5	Pa.s	2013
Colour, APHA	0 - 35	-	2017
Solids content	74 - 76	%	2022
Appearance	clear	-	2265
Acid value, on solid	4 - 8	mg KOH/g	2401

Other product data

Property	Value	Unit	TM
Density, 23°C	ca. 1100	kg/m³	2160
Flash point	ca. 23	°C	2800
Hydroxyl content, on solid	ca. 4.2	%	2432

Test methods
Test methods (TM) referred to in the tables are available on request.

Storage guidelines
The resin should be stored indoors in the original, unopened and undamaged containers in a dry place at storage temperatures between 5°C and 30°C. Exposure to direct sunlight should be avoided.

Shelf life
Under the stipulated storage conditions, the anticipated shelf-life is 730 days from last quality control date, as stated in the Certificate of Analysis.

Material safety
A material safety data sheet of the products is available on request.

Starting formulations
Starting formulations are available on request.

Product Data Sheet
Uracron™ CY499 E-75

Recommendations for formulation and use

- Uracron CY499 can be forced dried at 60-80°C or baked at 130°C for 20 minutes.
- The drying at ambient temperature is not sufficient. It can be improved by the addition of Uracron CY468 XF up to 20% solid on solid.
- Addition of cycloaliphatic polyisocyanate, such as Vestanat IPDI-T1890[1)] or Desmodur Z4470[2)] replacing 10-20% of the total isocyanate, also improves drying at 20°C.
- For optimum drying and pot life, it is recommended to use a mixture of Dibutyltindilaurate (DBTL) and zinc naphthenate or amine. Recommended amounts:
    - DBTL 0,001-0,02% on solid binder
    - Zinc naphtenate 0.1 - 0.3 on solid binder
    - Amine Catalyst 0.05 - 0.2% on solid binder
- When dispersing organic or inorganic pigments, it is recommended to use a pigment wetting agent.
- In clear coats, it is advised to add a UV absorber in combination with a HALS (Hindered Amine Light Stabiliser). Suggested amount is 1% on solid resin of a 50:50 mixture.
- Small quantities of silicon oil and flow improving agents are necessary to improve flow and mar resistance.
- Metallic base coats can be formulated with cellulose acetate butyrate in mixing ratio 40/60-50/50.
- Medium solid metallic base coats, at spraying viscosity 18-22 seconds, can be made using low viscosity type cellulose acetate butyrate.
- The addition of melamine resin, up to 10% on total binder, is recommended for OEM base coats.

[1)] Evonik
[2)] Covestro