

Coating Resins Oils

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Production Sites



Polynt Group

After the merger on May 2017 the new Polynt Group is a global Company in the Intermediates, Coating and Composite Resins, Thermoset Compounds, Gel-coats and niche Specialties.

This combination enhances the Group's leading position as a global vertically integrated specialty chemicals player, with significant global presence in Europe, North America and Asia, a strategy initiated by Polynt with the successful integration of PCCR and CCP in the last years and now further reinforced by Reichhold's global scale, extensive product portfolio and R&D competencies.

Polynt Group is known for its superior quality and impressive range of products and with its excellent distribution network it can provide first-class service to customers whatever their market. Customer Service and Technical Service teams are renowned for their customer focus, offering the best service even after products have left manufacturing.

The Group strives to keep customers satisfied, assisting them in producing premium quality products every time they use its products.

Product innovation is important for the Group's business and it's the reason for which it constantly works with customers to find solutions to problems.

Introducing new or improved products ensures that Polynt Group continue not only to deliver what the market wants and needs, but also when it is wanted and needed.

Polynt Composites Canada, Inc. Brampton (ON) - Drummondville (QC)

Polynt Composites USA Inc. Carpentersville (IL) - Chatham (VA) -Ennis (TX) - Forest Park (GA) - Houston (TX) - Marshall (TX) - North Kansas City (MO) - Orlando (FL) - Sandusky (OH)

Solvents – Abbreviations

A100, S	Aromatic 100	
A150, R	Aromatic 150	
DGBE, G5	Diethylene Glycol n-Butyl Ether	
DMC	Dimethyl Carbonate	
DPDME, G8	Dipropylene Glycol Dimethyl Ether	
DPM	Dipropylene Glycol Monomethyl Ether	
EEP, A7	Ethyl 3-Ethoxypropionate	
EGBE, G4	Ethylene Glycol Monobutyl Ether, Butyl Cellosolve	
EGPE, EP, G6	Ethylene Glycol Monopropyl Ether	
EtOAc	Ethyl Acetate	
EtOH, E	Ethyl Alcohol	
G	Glycol and Glycol Ether	
i-BuOH, B1	Isobutyl Alcohol	
IBIB	Isobutyl Isobutyrate	
IPA, D	Isopropyl Alcohol	
Isopar G	Isoparaffin Solvent	
LAMS, ML	Low Aromatic Mineral Spirits	
MAK, K4	Methyl Amyl Ketone	
MEK, K1	Methyl Ethyl Ketone	
MIBK, K2	Methyl Isobutyl Ketone	
МО	Odorless Mineral Spirits	
МРК, КЗ	Methyl Propyl Ketone	

MS, M	Mineral Spirits
n-BuAc, A4	n-Butyl Acetate
n-BuOH, B	n-Butyl Alcohol
n-PrOH	n-Propyl Alcohol
NMP, MP	n-Methyl-2-Pyrrolidone
PCBTF, E1	para-Chlorobenzotrifluoride (Oxsol® 100)
PGME, G3	Propylene Glycol Monomethyl Ether
PMA, A6	Propylene Glycol Monomethyl Ether Acetate
PnP, G2	Propoxy Propanol
s-BuOH, B2	Secondary Butyl Alcohol
t-BuAc, E2	t-Butyl Acetate
т	Toluene
TEA	Triethyleneamine
DMEA	Dimethyl Ethanol Amine
NH3	Ammonia
ТРМ, Т8	Tripropylene Glycol Monomethyl Ether
VM&P, V	VM&P Naphtha
VMS, E3	Volatile Methylsiloxane
w	Water
x	Xylene
z	Mixed Solvents
6X3	Rule 66

Definitions

% NVM	Nonvolatile material expressed as a percent of the
% NVV	Nonvolatile material expressed as a percent of the
Eq. Wt.	Molecular weight divided by functionality, the latter of the material. Expressed based on a solids basis.
р Н	Degree of acidity or alkalinity of a solution expresse
Particle Size	Average diameter of a distribution of particles, usual
Tg	Temperature at which the non-crystalline portion of material. Generally an indication of the flexibility an
MFFT	Minimum temperature at which an applied coating powdery appearance of film and film integrity, by te
Oil Type	Synthetic or naturally occurring vegetable material
Wt/Gal	Mass per volume of polymer as supplied expressed
Viscosity	Measurement of a polymer's resistance to flow exp
Reduced Viscosity	Measured viscosity (as defined previously) at a spe supplied.
Color	Measurement of the light reflectance of a polymer i being water white.
Acid Value (solids)	Number of milligrams of KOH required to neutralize
OH Value	Hydroxyl value – number of milligrams of KOH equ equivalent weight is given by 56,100 divided by the
Solvents	Dilution solvents used to achieve the desired visco

Trademarked Brands

ACRYLAMAC®, AROLON®	Solution Acrylics
ALCURE®	Polymeric Isocyana
AQUAMAC®, AROLON®, SYNTHEMUL®	All Acrylic, Self-Cros
ARCHEMIS®	High Solids Long Oi
AROFLINT®	Non-Isocyanate 2K
BECKOSOL AQ®	Alkyd Emulsions
CARBAMAC®, UROTUF®	Oil Modified Uretha
CHEMACOIL®	Conventional Vinyl
DURAMAC®, BECKOSOL®	Alkyds, Flat Alkyds,
DURAMAC®, KELSOL®	Water-Reducible All
HYDREAU®	Polyester Dispersion
MACOPOL®, AMBERLAC®	Copolymer Resins
POLYMAC®, FINE-CLAD®, FINE-TONE®	Powder Polyesters
POLYMAC®, AROPLAZ®	Liquid Polyesters
EPOTUF®	Epoxy Resins, Epo>
REZIMAC®, EPOTUF®	Epoxy Esters
REZIMAC®, BECKOSOL®	Silicone-Modified ar

e total weight of the resin solution.

e total volume of the resin solution.

being the number of a given reactive group present on an average molecule 3.

sed on a relative scale of 1 to 14 with 7 being neutral.

ally expressed in microns or nanometers.

of a polymer is transformed from a viscous rubbery state to a brittle glass-like and hardness of a finished paint film.

g forms a continuous film, as evidenced by the visual lack of cracking or testing the film on a temperature gradient plate.

I that contributes fatty acids used in producing alkyd resins.

ed in pounds per gallon.

pressed in Gardner-Holdt units or centipoises.

ecified percent weight solids typically lower than the solids of the polymer as

in liquid form expressed in Gardner units on a relative scale of 1 to 14 with 1

te the free acids in one gram of polymer solids.

uivalent to the hydroxyl groups available per gram of polymer. The hydroxyl e hydroxyl value.

osity.

ate Curatives

osslinking, Styrene Acrylic, and Vinyl Acrylic Latex

Dil Alkyds

Systems

anes, Uralkyds, Moisture Cure Urethanes, and Polyurethane Dispersions

Oxazoline-Modified Esters

, and Thixotropic Alkyds

lkyds

ons

oxy Curing Agents

and Phenolic-Modified Alkyds

Oils

PRODUCT	% SOLIDS (WEIGHT)	% SOLIDS (VOLUME)	DENSITY (LBS/GAL)	SOLVENTS	VISCOSITY (G - H)	GARDNER COLOR (MAXIMUM)
LONG OIL						·
ADMEROL® 75-M-70	70	_	7.61	MS	S - V	11
ADMEROL® 351-M-70	70	_	7.80	MS	Z - Z ₂	13
ESSKOL® Y - Z	100	_	8.11	_	Y - Z	8

8	Flexible dicyclopentadiene linseed copoly and for Federal Specification TT-V-81f Alu
2	Dicyclopentadiene soya copolymer for me
17	Linseed OIL-MODIFIED with maleic anhyo



lymer which meets the requirements for many state aluminum paint specs Juminum Vehicle and TT-V-121g Spar varnish.

etallic finishes, floor paint, varnishes and sealers

ydride to improve dry time.

Glossary

Abrasion	Wearing away of a surface in service by action such as rubbing, scraping or erosion.	
Abrasion Resistance	The ability of a coating to resist being worn away and to maintain its original appearance and structure when subjected to rubbing, scraping or erosion.	
Acid Number or Value	The number of milligrams of KOH required to neutralize the free acids in 1 gram of polymer.	
Aftertack	Film defect in which the coated surface, having once reached a tack-free stage, subsequently develops a sticky condition.	
Anti-sintering	The property of reducing sintering.	
Architectural Coatings	Coatings intended for on-site application to interior or exterior surfaces of residential, commercial, institutional or industrial buildings – as opposed to industrial coatings. Protective and decorative finishes applied at ambien temperatures.	
Baking	The process of drying or curing a coating by the application of heat in excess of 65°C / 150°F. When below this temperature, the process is referred to as forced drying.	
Block Resistance	Resistance to the undesirable sticking together of two painted surfaces when pressed together under normal conditions or under specified conditions of temperature, pressure, and relative humidity.	
Blocked Isocyanate	An isocyanate material in which the isocyanate groups (NCO) are blocked from carrying out their normal chemical reactions by already having been reacted, either with a specific blocking agent or with themselves. In the latter case the blocked isocyanate is referred to as a uretdione type, because the NCO groups have linked themselves together to produce uretdione linkages. Common blocking agents are \mathcal{E} -caprolactam and triazole.	
Blocking Agent	A chemical, such as <i>E</i> -caprolactam, that reacts reversibly with isocyanate groups (NCO) such that at temperatures below the deblocking temperature it is covalently bonded to the NCO groups, thereby preventing these groups from reacting with anything else. At temperatures above the deblocking temperature, the blocking agent is released from the NCO groups thus allowing them to react with, for example, the hydroxyl groups of the surrounding polyester resin.	
Blush, Blushing, "Bloom"	Film defect which appears as a milky opalescence as the film dries; can be a temporary or permanent condition. It is generally caused by rapid evaporation, moisture, or incompatibility.	
Brush Drag	Resistance encountered when applying a coating by brush.	
Brushability	The ability or ease with which a coating can be brushed.	
Catalyst	An additive that speeds up a chemical reaction, such as curing, but takes no part in the reaction.	
Chalk Resistance	The ability of a coating to resist the formation of a friable powder on the surface of its film caused by the disintegration of the binding medium due to degradative weather factors.	
Chip Resistance	The ability of a coating or layers of coatings to resist total or partial removal, usually in small pieces, as a result of impact by hard objects or from wear during service.	
Compatibility	Capacity of coatings from either different sources or of different compositions to be combined and applied so as to yield no visible or mechanically measurable differences in the cured film or application properties.	
Conventional Solids	For the purposes of this reference guide, any material that is less than 70% solids. There may be exceptions.	
Copolymer	A polymer consisting of molecules containing large numbers of units of two or more chemically different types in irregular sequence.	
Corrosion Resistance	The ability of a substance to resist deterioration because of reaction with its environment.	
Cracking	Generally, the splitting of a dry paint or varnish film, usually as a result of aging or flexing.	
Crosslinking	Applied to polymer molecules, the setting up of chemical links between the molecular chains to form a three- dimensional or network polymer generally by covalent bonding. Crosslinking generally toughens and stiffens coatings. Thermosetting materials crosslink under the influence of heat and catalysis and, in some cases, electromagnetic radiation.	
Cure	To change the properties of a polymeric system by chemical reaction into a final, more stable, usable condition by the use of heat, radiation or reaction with chemical additives.	
D.O.I. (Distinctness of Image)	The sharpness with which image outlines are reflected by the surface of an object.	
DCO	Dehydrated Castor Oil	
Deblocking Tempera- ture	The temperature at which the thermally reversible reaction between a blocking agent and an isocyanate group (NCO) begins to produce significant quantities of freed NCO groups available for reaction. The higher the temperature a blocked isocyanate is above its deblocking temperature, the more NCO groups are made available, and the faster crosslinking reactions can be. Conversely, when an isocyanate is below its deblocking temperature, no NCO groups are available for reaction.	

Glossary

DFT	Dry film thickness
Dry	A film is considered dry when using m
Dry-Through	Film is considered dry-through when r occurs when the thumb is borne down the plane of the film.
Dry-to-Touch	A film is considered dry-to-touch wher touching the film, and film does not ru
DTM (Direct-to-Metal)	Refers to coatings applied directly to a
Edge Coverage	A powder coating's ability to flow over
Enamel	Topcoat that is characterized by its ab may also include lower degrees of glo
Equivalent Weight	The equivalent weight of a material is number of a given reactive group pres coating powders, the resin equivalent polyesters) or 56,100 divided by the re solids basis.
Exempt Solvent	Any solvent that has not been declare
Extruder	A device used to melt-mix plastics and to achieve a homogeneous mixture.
FDA	Food and Drug Administration
Flash Point	Lowest temperature of a liquid at whic the surface of the liquid or within the v
Glass Transition Temperature (Tg)	The temperature at which materials in or from a soft rubbery state to a harde
НАР	Hazardous Air Pollutant
High Drink	A resin is said to be high drink when, a solids at a given viscosity.
High Solids	For the purposes of this reference gui
HDODA	Hexanediol diacrylate
HQMME	Hydroquinone monomethyl ether
Hybrid Powder Coating	A powder coating whose binder comp "60/40" polyester/epoxy hybrid for exa 40 wt/% epoxy. The functional groups given wt/% ratios of each resin.
Impact Fusion	The tendency for particles of powder of mechanical impact during transport
Inhibitor	A negative catalyst which prevents or
Isocyanate	A material containing NCO groups tha Commonly those used in coating pow
Lacquer	Coating composition which is based o solvent that dries primarily by solvent
Long Oil Alkyd	Alkyd resin containing more than 60%
Medium Oil Alkyd	Alkyd of medium oil content, usually c
Melt Mixing	A predominant process for the manufa pigments, fillers, additives, resins and
MFFT (Minimum Film Forming Temperature)	The minimum temperature at which an of cracking or powdery appearance of
Modified Alkyd	Modified alkyds are those in which the vegetable oil fatty acids are typical.
Oligomer	A polymer composed of molecules co

noderate pressure, it feels firm to the touch.

no distortion of the film (i.e., loosening, detachment, wrinkling, etc.) /nward while simultaneously turning the thumb through an angle of 90° in

en it no longer adheres to the finger. The finger leaves no marks after ub up appreciably when finger is lightly rubbed across the surface.

an uncoated, non-primed metal substrate.

r, build and adhere to sharp corners, angles and edges.

bility to form a smooth surface; originally associated with a high gloss but oss.

s its molecular weight divided by its functionality, the latter being the esent on an average molecule of the material. For polyester resins for it weight is given by 56,100 divided by the resin acid value (for carboxyl resin hydroxyl value (for hydroxyl polyesters). Expressed based on a

ed photochemical reactive by any of several regulatory agencies.

nd/or powder coatings. An extruder utilizes heat and mechanical kneading

ich it gives off sufficient vapor to form an ignitable mixture with the air near vessel used.

n general change from either a hard glassy state to a softer, rubbery state, ler glassy state.

, as solvent is added, there is a slow viscosity reduction, enabling lower

ide, any material that is 70% solids or higher. There may be exceptions.

ponent is a blend of two different resins, such as polyester and epoxy. A ample, would have a resin component comprising 60 wt/% polyester and s on each resin are balanced so as to fully react with each other at the

coatings to agglomerate, fuse together, or build up on surfaces, because rtation within the powder application equipment.

retards an undesirable chemical reaction.

at are available for reaction with a variety of other functional groups. wders are polymeric in nature so as to increase their functionality. on synthetic thermoplastic film-forming material dissolved in organic

t evaporation.

% of oil in solids.

containing from 40-60% of oil in solids.

facture of powder coatings involving the continuous compounding of the d curing agents at elevated temperatures.

an applied coating forms a continuous film, as evidenced by the visual lack of film and film integrity, by testing the film on a temperature gradient plate. ne polybasic acid is substituted in part by a monobasic acid, of which the

ontaining only two, three or a few repeating structural units.

Glossary

Particle Size	The average diameter of a distribution of particles, usually expressed in microns or nanometers.
PVC (Pigment Volume	Ratio of the volume of pigment to the volume of total nonvolatile material (i.e., pigment and binder) present in a
Concentration)	coating.
Pinholes	Film defect characterized by small pore-like flaws in a coating that extend entirely through the applied film and have the general appearance of pin pricks when viewed by reflective light.
Post Cure Embrittle- ment	A process whereby a cured coating exhibits increasing embrittlement and decreasing impact resistance with age.
Pot Life	The length of time a paint material is useful after its original package is opened or after catalyst or other ingredients are added.
Powder Coating	Finely divided particles of organic polymer that generally contain pigments, fillers and additives and which remain finely divided during storage under suitable conditions.
Precatalyzed	Usually refers to a resin that has a catalyst already added by the resin manufacturer. This ensures complete mixing of the catalyst with the resin and results in a resin that reacts faster than the uncatalyzed material.
Primer	The first complete coat of paint of a painting system applied to a surface.
Profile	Surface contour of a blast-cleaned or substrate surface, viewed from the edge.
Reactive Diluent	A viscosity reducer for coatings that has low volatility and will become a permanent part of the coating through chemical reaction.
Sagging	Downward moving of a paint film between the times of application and setting, resulting in an uneven coating having a thick lower edge.
Salt Spray Test	Test applied to metal finishes to determine their anticorrosive properties, involving spraying of common salt (sodium chloride) solution on the surface of a coated steel panel.
Shelf Life	The period of time for which a material can normally be stored and still be in a usable condition.
Short Oil Alkyd	Alkyd resin containing less than 40% oil in solids.
Sintering	The tendency of some powder coatings to agglomerate over time, often due to being stored too long at too high a temperature.
Skydrol® Resistance	Product is resistant to hydraulic fluid Skydrol.
Surface Dry	The premature drying of the surface of a liquid coating film so that the under portion is retarded in drying.
Syneresis	The separation of liquid from a gel.
Tack-Free	Freedom from tack of a coating after suitable drying time.
T-Bend Flexibility Test	Simple method for determining the flexibility of coatings by bending a coated metal test strip over itself. A panel is bent and pressed flat by means of a jig to achieve a 180° bend.
Telegraphing	Brush marks or other irregularities in the previous coat or substrate that show through the cured topcoat.
Tg	The temperature at which materials in general change from either a hard glassy state to a softer, rubbery state, or from a soft rubbery state to a harder glassy state.
TGIC (Triglycidyl Isocyanurate)	A curing agent for powder coating resins containing carboxyl groups.
ТМА	Trimellitic anhydride
Two-Component Paint	A coating that is manufactured in two components that must be maintained separately until shortly before use.
Uretdione	A material containing uretdione linkages. These linkages are produced by two NCO groups reacting with each other. The original NCO groups are then no longer available for reaction and are termed "blocked." The reaction is reversible, such that the application of sufficient heat will cause the regeneration of the original NCO groups, which can then react. The advantage of this type of blocking is that there is no release of any blocking agent.
VOC (Volatile Organic Compound)	Any organic compound that participates in atmospheric photochemical reactions; that is, any organic compound other than those that the EPA designates as having negligible photochemical reactivity.
Weathering	Behavior of paint films when exposed to natural weather or accelerated weathering equipment, characterized by changes in color, texture, strength, chemical composition or other properties.
Yellowing	Development of a yellow color on aging.
Yellowing Resistance	The resistance a coating has to turning yellow due to, for example, extended cure times at high temperature, or the use of direct gas-fired curing ovens.

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This brochure is intended to provide a comprehensive list of the products and services available from all business sectors in which are active the companies and/or corporations controlled, directly or indirectly, by Specialty Chemicals International Ltd (hereinafter referred to as «Polynt Group»). The information, recommendations, answers and/or opinions contained herein (which must be intended only for explanatory purposes) are aimed to assist customers on the basis of our technical and scientific knowledge as of today, taking into account that our products are intended for sale to industrial and commercial customers. However we require customers to inspect and test our products before use and to satisfy themselves as to contents and suitability for their applications: nothing herein shall constitute or shall be deemed to be any other warranty or a representation, express or implied, including merchantability or fitness for a particular purpose or results to be obtained from the use of such information, nor shall be taken or construed as infringing of any existing patents. Product names in capital letters are registered trademarks of the relevant member

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