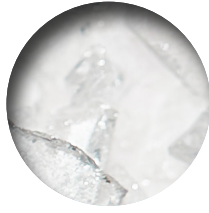


Alymers[®]



INOPOLTM

**Passion
Challenge
Pride**

80+

Worldwide Customers

22+

CAGR(%) / Sales
Revenue, 2018~2021

15+

CAGR(%) / Expenditure
on R&D, 2018~2021

**EcoVadis
Gold**

Rating in Corporate
Social Responsibility

INOPOL

10+

Number of Products
over 1,000 MT / Y

The INOPOL Way

Our Strengths

- On time delivery
- Procurement Excellence
- Quality control
- Custom-made service
- Fast communication
- Proactive investment in R&D

Our Philosophy

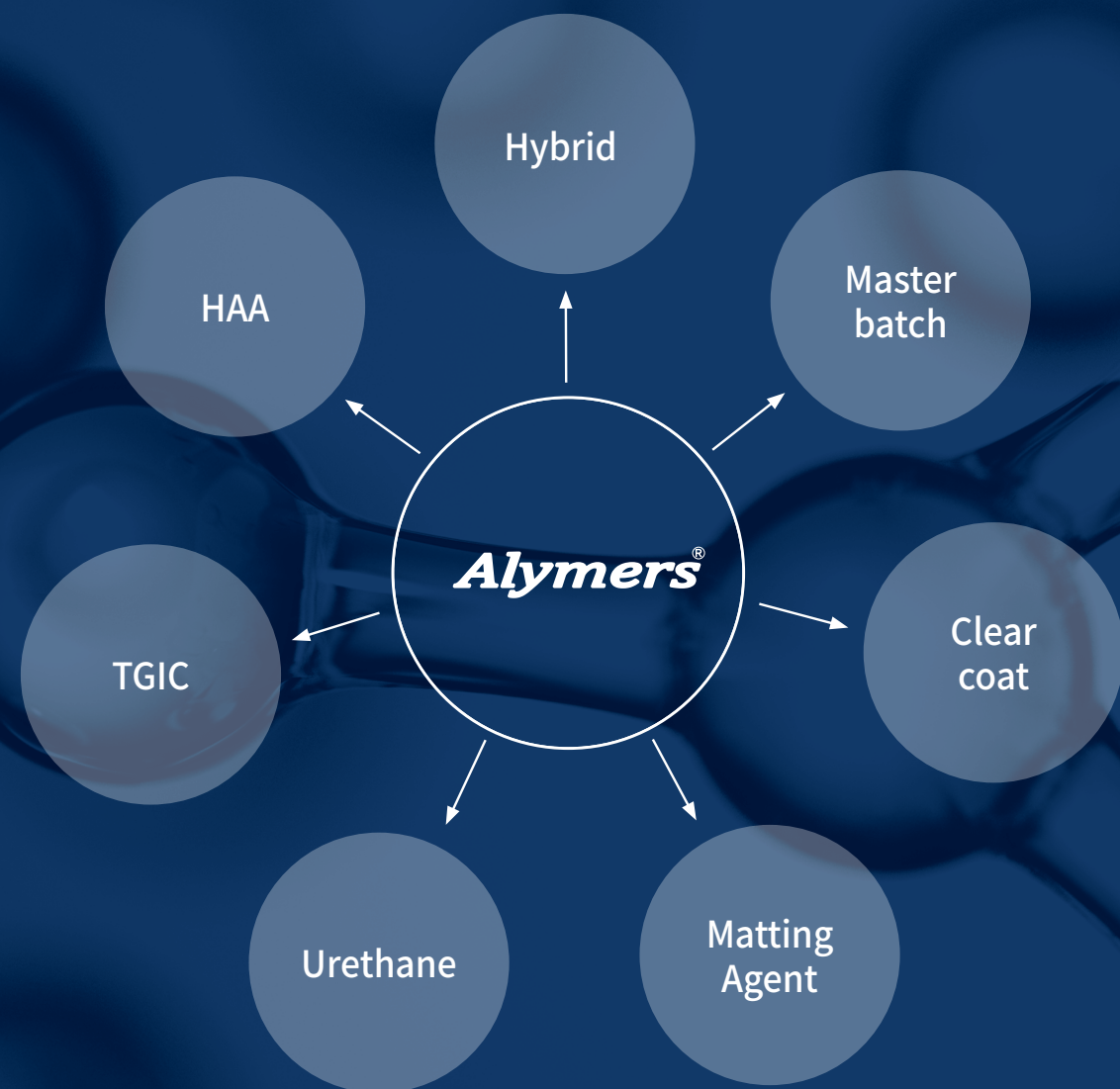
- We create dynamic company culture to meet customer satisfaction
- We build long-term relationships with customers to grow
- We protect the environment and improve the community.

Alymers[®]

100% solid polyester resins in pale granule status made from the polymerization of acids and glycols being used as the major raw materials for powder coatings

Inomid[™]

A Hydroxyalkylamide crosslinker for the formulation of durable outdoor powder coatings



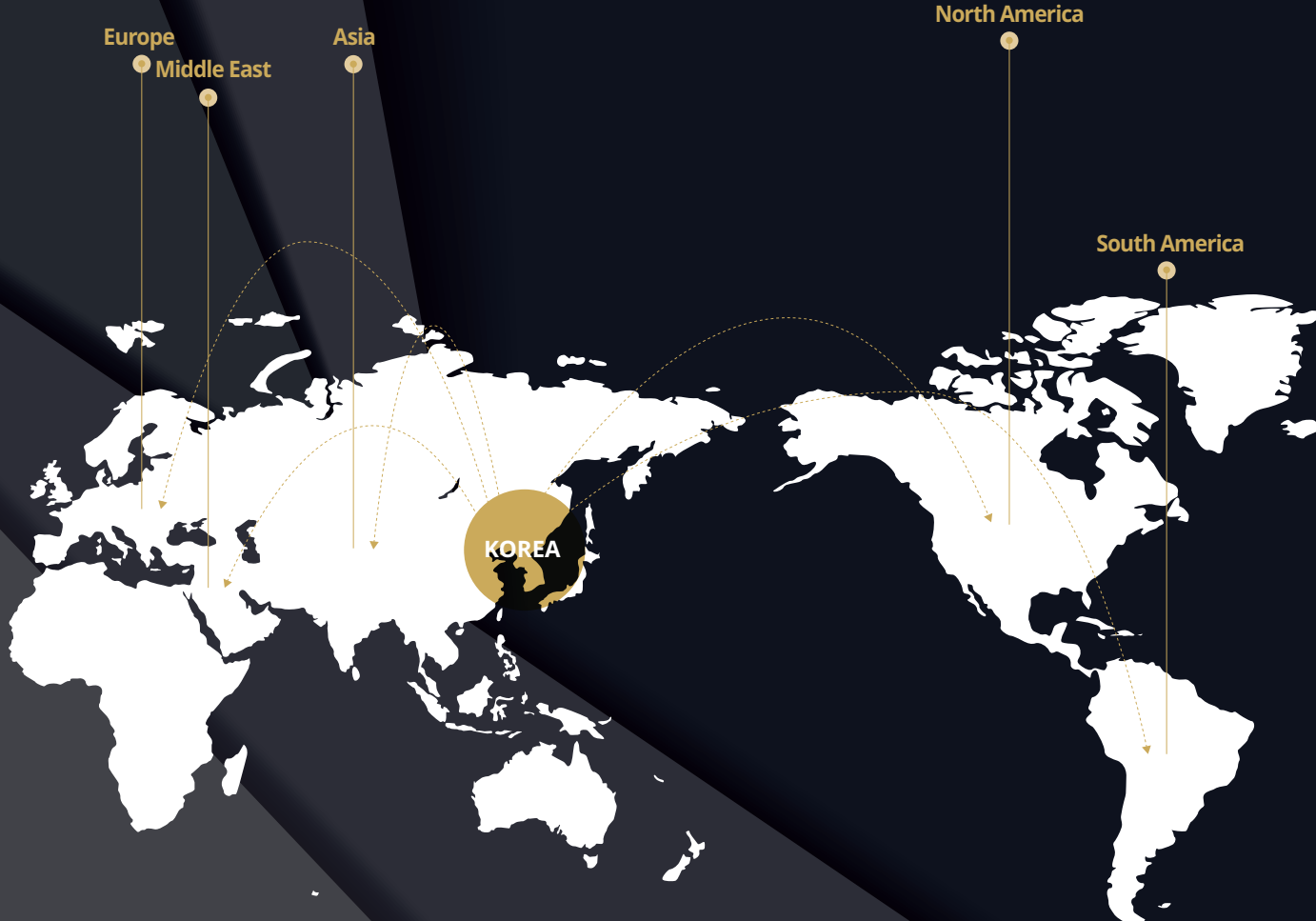
Global Support

INOPOL HAS BEEN GROWING WITH CUSTOMERS

INOPOL is a global supplier of the highest quality polyester resins dedicated to the use of powder coatings. We offer a wide range of products to help our valued customers enhance their productivity, quality, and performance satisfying various needs and environmental responsibility.

We have been growing rapidly, being the leading powder coating resin supplier in Korea today, together with our clients based on the solid partnership since 2012 by providing customized solutions and services to each and every business partner thereby we move forward developing new opportunities for the powder coating industry.

We continue to strive for the highest level of customer satisfaction with a commitment to collective sustainability in consistent resin quality and technological development. Our product developments and improvements are focused on fulfilling evolving needs and requirements across the globe.



Sustainability Rating



Our rating in Corporate Social Responsibility from EcoVadis



- 1 ISO 9001 - Quality Management System Certificate
- 2 ISO 14001 - Environmental Management System Certificate
- 3 ISO 45001 - Occupational Health and Safety Management System Certificate

Product Portfolio

Hybrid

	50/50 AV ~ 90	55/45 AV~65	60/40 AV~63	70/30 AV~40	75/25 AV~30	80/20 AV~24
200°C	HC5004		HC6001	HC7002	HC7007	
			HC6011	HC7006		
				HC7010		
180°C	HC5801	HC6812	HC6803	HC7802		HC8820
	HC5802	HC6841	HC6805	HC7807		
	HC5803		HC6805T	HC7810		
	HC5811		HC6809	HC7815		
	HC5823		HC6819	HC7816		
			HC6826	HC7819		
170°C	HC5601		HC6604			
			HC6712			
160°C	HC5604		HC6611	HC7605		
150°C	HC5501					
140°C	HC5401					
130°C	HC5301					

HAA

	97.5/2.5 AV ~21	97/3 AV ~26	96.5/3.5 AV ~29	96/4 AV ~30	95/5 AV ~39	93/7 AV ~55	90/10 AV ~75
200°C					PC2013		
190°C					PC2010		
	● PC1817	● PC1803	PC1802	PC1809	PC2801	● PC8802	● PC8804
180°C		● PC1808	PC1807	PC1814	PC2808		● PC8808
		● PC1818	PC1813	PC1828	PC2812		
		● PC1824	PC1821	PC1841	PC2815		
		● PC1831	● PC1832		PC2820		
					PC2829		
					PC2831		
					PC2834		
					PC2846		
					PC2871		
					PC2871T		
160°C				PC2872			
			PC1601	PC2604	PC8601		
				PC2605			
				PC2607			
				PC2608			
155°C						● PC8502	

TGIC

	93/7 AV ~40	96/4 AV ~25	90/10 AV ~55
200°C	TC3003	● TC4004	TC8001
	TC3004	● TC4008	● TC8010
	TC3005		
	TC3006		
	TC3007		
	TC3009		
	TC3011		
	TC3014		
	TC3015		
	TC3016		
180°C	TC3021		
	TC3031		
	TC3801		
	TC3802		
160°C	TC3824		
	TC3601		
	TC3605		
150°C	TC3606		
140°C	TC3502		
	TC3401		

Urethane

	40/60 OHV ~305	47/53 OHV ~270	67/33 OHV ~110	80/20 OHV ~47	87/13 OHV ~40
200°C	● UC9002	● UC9000	UC9004	UC9009	● UC9001
			UC9021	UC9019	UC9007
					UC9008
					UC9015
					UC9016
					● UC9035

Acrylic

Matting Agent	AC2100
Clearcoat	AC2205 / AC2211 / AC2212

Masterbatch

Catalyst	TC001 / TC003
Tribo additive	AC3002
Flow aid	AC3005 / AC3006

INOMID HAA Hardener

Hardener (Hydroxyalkylamide crosslinker)	AH 001
---	--------

● For matting Systems

Alymers[®]

CONTENTS

Alymers	13
Hybrid	14
HAA	16
TGIC	18
Urethane	20
Acrylic	22
Masterbatch	23
Gloss Control System	24
Inomid	26
HAA Hardener	27
Health, Safety and Product Handling	28

Resin Categories

Hybrid	Carboxyl terminated polyester resins designed for use with epoxy crosslinker
HAA	Carboxyl terminated polyester resins designed for use with hydroxy alkyl amide
TGIC	Carboxyl terminated polyester resins designed for use with triglycidyl isocyanurate
Urethane	Hydroxyl terminated polyester resins designed for use with externally blocked isocyanates or uretdiones
Masterbatch	A mixture containing a high concentration of a specific additive dispersed in a polyester matrix
Clearcoat	Epoxide containing acrylic resins designed for use with dodecanedioic acid
Matting Agent	Epoxide containing acrylic hardeners designed for use with carboxylated polyester resins

Hybrid

For Epoxy Cured Powder Coatings

Curing temperature		High ← → Low	
Ratio	Alymers		
80/20	HC8820		
75/25	HC7007		
	HC7002	HC7802	HC7605
70/30	HC7006	HC7807	
	HC7010	HC7810	
		HC7815	
		HC7816	
		HC7819	
60/40		HC7823	
	HC6001	HC6803	HC6604 HC6611
	HC6011	HC6805	HC6712
		HC6805T	
		HC6809	
		HC6819	
		HC6826	
55/45		HC6890	
		HC6812	
		HC6841	
50/50	HC5004	HC5802	HC5801 HC5601 HC5604 HC5501 HC5401 HC5301
		HC5803	
		HC5811	
		HC5823	

○ good ● very good ● excellent

Item code (Alymers)	Ratio (PE/EP)	Cure schedule 10min x object T(°C)	Acid Value	Viscosity (Poise, at 200°C)	approx. Tg (°C)	Flow	Resistance to			
							Overbake	Gas oven	Impact	MEK rub
HC5301	50/50	130	65-75	30-40	54	○				○
HC5401	50/50	140	60-70	15-35	59				●	○
HC5501	50/50	150	65-75	45-65	60				○	○
HC5604	50/50	160	65-75	15-29	55	○			●	○
HC5601	50/50	170	65-75	65-105 @175°C	57	○	○		○	○
HC5801	50/50	180	67-77	65-105 @175°C	58	○	●		●	○
HC5803	50/50	180	65-75	85-145 @175°C	61	○	●		●	○
HC5811	50/50	180	67-77	65-105 @175°C	56	○	●		●	○
HC5823	50/50	180	55-65	20-40	60	○	○		●	
HC5802	50/50	180	55-65	80-120 @175°C	59	●	●			○
HC5004	50/50	200	80-90	25-39	65	○			●	○
HC6812	55/45	180/(12min)	55-65	20-30	60	○	○		●	○
HC6841	55/45	180	55-65	20-30	60	●	○		○	○
HC6604	60/40	170	43-53	17-27	58	○				
HC6611	60/40	160	48-56	20-40	55	○				○
HC6712	60/40	170	53-63	20-40	58	○				○
HC6803	60/40	180	47-53	33-47	58	○			●	
HC6805	60/40	180	47-55	30-50	57	○		○	●	
HC6805T	60/40	180	48-56	30-50	61	○		○	●	
HC6809	60/40	180	45-55	10-20	53	○			○	
HC6819	60/40	180	42-48	33-47	60	○	●		●	
HC6826	60/40	180	45-55	33-47	60	○	○		●	
HC6890	60/40	180	45-55	40-60	62	○			●	
HC6011	60/40	200	47-53	28-48	59	○			●	○
HC6001	60/40	200	48-56	28-48	57	●		○		○
HC7605	70/30	160	27-33	45-65	57	○	○		●	
HC7802	70/30	180	30-40	30-40	59	○			○	
HC7807	70/30	180	28-34	40-60	60	○	●		●	
HC7810	70/30	180	27-35	35-55	57	○	●		○	
HC7815	70/30	180	30-36	40-60	57	○	●		●	
HC7816	70/30	180	30-38	50-70	63	○	○		●	
HC7819	70/30	180	27-33	45-65	60	○	●	○	●	
HC7823	70/30	180	28-34	35-65	56	○			●	
HC7002	70/30	200	27-35	35-65	58	●			○	
HC7006	70/30	200	28-34	35-55	58	○		○	●	
HC7010	70/30	200	30-36	50-70	59	○	○			
HC7007	75/25	200	24-30	75-95	60	●		○		
HC8820	80/20	180	16-24	80-100	57				●	

HAA

For HAA Cured Powder Coatings

Curing temperature		High ← → Low		
Grade	Alymers			
General industrial		PC1802	PC1601	
		PC1803	PC2604	
		PC1807	PC2605	
		PC1808		
		PC1813		
		PC1814		
		PC1817		
		PC2812		
		PC2820		
		PC8802		
Architectural		PC1809	PC2607	
		PC1831	PC2608	
		PC1832	PC8601	
		PC2801		
		PC2808		
		PC2815		
		PC2829		
		PC2846		
		PC2871		
		PC2871T		
Super Durable	PC2013	PC2010	PC1818	PC8502
			PC1821	
			PC1824	
			PC1828	
			PC1841	
			PC2831	
			PC2834	
			PC2834	
			PC2834	
			PC2834	

● For matting Systems

○ good ◐ very good ● excellent

Item code (Alymers)	Ratio (PE/EP)	Cure schedule 10min x object T(°C)	Acid Value	Viscosity (Poise, at 200°C)	approx. Tg (°C)	Flow	Degassing	Resistance to				Dry- blend Matte
								Overbake	Gas oven	Impact	MEK rub	
General Industrial												
PC1601	96.5/3.5	160(15min)	23-29	110-140	64		●	○	○	○		
PC1802	96.5/3.5	180	20-28	38-52	56	○	●	○	○	○		
PC1807	96.5/3.5	180	20-28	50-70	60	○	●	○		○		
PC1813	96.5/3.5	180	19-25	45-65	56	○	●	○				
PC1814	96/4	180	22-28	40-60	58		●	○		○	○	
PC1817	97.5/2.5	180	15-21	80-110	57	●	○	●				●
PC1803	97/3	180	18-24	60-90	58	○	●	○	○	○		●
PC1808	97/3	180	20-26	70-100	62		●	○	○	○		●
PC2604	95/5	160	30-36	35-55	60	○	●	○	○	○	○	○
PC2605	95/5	160	30-36	35-55	58	○	○	○	○	○	○	○
PC2812	95/5	180	32-38	25-35	58	○	○	○	○	○	○	○
PC2820	95/5	180	31-37	30-40	60		○	○	○	○	○	○
PC8802	93/7	180	45-55	35-55	68			○	○	○	○	○
PC8804	90/10	180	65-75	15-25	60			○	○	○	○	○
Architectural												
PC1831	97/3	180	17-23	75-115	60		○	○	○	○	○	○
PC1832	96.5/3.5	180	21-27	85-115	62		○	○	○	○	○	○
PC1809	96/4	180	23-27	85-125	68		○	○	○	○	○	○
PC2607	95/5	160	33-39	65-85	59		○	○	○	○	○	○
PC2608	95/5	160	29-35	55-75	59		○	○	○	○	○	○
PC2801	95/5	180	30-36	30-45	58	○	○	○	○	○	○	○
PC2808	95/5	180	32-38	25-45	60	○	○	○	○	○	○	○
PC2815	95/5	180	32-38	28-42	60	○	○	○	○	○	○	○
PC2829	95/5	180	30-38	35-55	67		○	○	○	○	○	○
PC2846	95/5	180	31-37	33-47	63	○	○	○	○	○	○	○
PC2871	95/5	180	32-38	25-35	58	○	○	○	○	○	○	○
PC2871T	95/5	180	32-38	25-35	61	○	○	○	○	○	○	○
PC2872	95/5	180	32-38	28-42	58	○	○	○	○	○	○	○
PC8601	93/7	160	49-55	23-43	53	○	○	○	○	○	○	○
PC8808	90/10	180	64-74	15-35	60							○
Super Durable												
PC1818	97/3	180	17-23	20-30	57	○	○	○	○	○	○	○
PC1824	97/3	180	17-23	27-47	58	○	○	○	○	○	○	○
PC1821	96.5/3.5	180	23-29	33-47	58	○	○	○	○	○	○	○
PC1828	96/4	180	24-30	20-30	60	○	○	○	○	○	○	○
PC1841	96/4	180	24-30	33-47	60	○	○	○	○	○	○	○
PC2010	95/5	190	28-34	28-42	62	○	○	○	○	○	○	○
PC2013	95/5	200	30-36	15-25	64	○	○	○	○	○	○	○
PC2831	95/5	180	29-35	35-55	62	○	○	○	○	○	○	○
PC2834	95/5	180	32-38	15-25	61	○	○	○	○	○	○	○
PC8502	90/10	155	65-75	50-70	64			○	○	○	○	○

TGIC

For TGIC Cured Powder Coatings

18

Curing temperature		High ← → Low			
Grade	Alymers				Low
General industrial	TC3016	TC3802	TC3601	TC3502	TC3401
	TC4004	TC3606			
	TC4008				
	TC8010				
	TC3003	TC3801			
Architectural	TC3004	TC3824			
	TC3009				
	TC3011				
	TC3014				
	TC3021				
	TC3031				
	Super Durable	TC3005	TC3605		
TC3006					
TC3007					
TC3015					
TC8001					

● For matting Systems

○ good ● very good ● excellent

Item code (Alymers)	Ratio (PE/TGIC)	Cure schedule 10min x object T(°C)	Acid Value	Viscosity (Poise, at 200°C)	approx. Tg(°C)	Flow	Resistance to					Dry-blend Matte
							Overbake	Gasoven	Impact	MEKrub	Blooming	
General Industrial												
TC3401	93/7	140	29-35	30-50	62			●				●
TC3502	93/7	150	28-34	30-40	62			●				●
TC3601	93/7	160	30-36	28-42	60	○			●	○		
TC3606	93/7	160	30-36	33-47	63	○	●	○	●	○		
TC3802	93/7	180	30-36	35-65	67		●	○	●			
TC3016	93/7	200	28-36	40-60	65	○	●	●	●			
TC4004	96/4	200	17-25	85-115	68	○	●	○	○			●
TC4008	96/4	200	18-24	85-115	62	○	●	○	●	○	○	●
TC8010	90/10	200	45-55	50-80	70		●	●	●	○		●
Architectural												
TC3801	93/7	180	30-40	35-65	63		●		●	○		
TC3824	93/7	180	32-38	65-85	70		●	●	○	●		
TC3003	93/7	200	30-38	35-55	68		●	●	●	●		
TC3004	93/7	200	30-36	35-55	67	○	●	●	●	○		
TC3009	93/7	200	30-38	35-55	64	○	●	●	●	○		
TC3011	93/7	200	28-36	35-55	62	○	●	○	●	○	○	●
TC3014	93/7	200	31-37	35-55	59	○	●	●	●	○		
TC3021	93/7	200	30-38	35-55	67	○	●	○	●	○		
TC3031	93/7	200	30-38	40-60	67	○	●	●	●			
Super Durable												
TC3605	93/7	160	30-36	28-42	63			●				●
TC3005	93/7	200	32-38	14-30	62	○	●	●		○		●
TC3006	93/7	200	29-35	35-65	64	○	●	●		○		●
TC3007	93/7	200	31-37	33-47	64	○	●	●		○		●
TC3015	93/7	200	32-38	15-25	62	○	●	●		○		●
TC8001	90/10	200	45-55	35-65	64			●		●		●

19

Urethane

For Isocyanate or Uretdione Cured Powder Coatings

Curing temperature		High	←—————→		Low
Grade	Alymers				
General industrial	UC9002				
	UC9004				
	UC9007				
	UC9008				
	UC9009				
	UC9015				
	UC9019				
	UC9021				
	UC9035				
Super Durable	UC9000				
	UC9001				
	UC9016				

● For matting Systems

○ good ● very good ● excellent

Item code (Alymers)	Ratio (PE/NCO)	Cure schedule 10min x object T(°C)	Hydroxyl Value	Viscosity (Poise, at 200°C)	approx. Tg (°C)	Flow	Resistance to				One-shot Matte	
							Overbake	Gas oven	Impact	MEK rub		Blooming
General Industrial												
UC9002	40/60	200	265-305	50-70	55							●
UC9004	67/33	200	90-110	25-35	55	○	○	●		●	●	
UC9021	67/33	200	90-110	20-30	57	●		●		●	●	
UC9007	87/13	200	31-39	55-75	58			●	●		●	
UC9008	87/13	200	31-39	70-90	63	○		●			●	
UC9015	87/13	200	30-40	95-125	66	○		●		○	●	
UC9035	87/13	200	32-38	85-115	63	○		●		○	●	●
UC9019	80/20	200	33-47	45-75	57	●		●	●	●	●	
UC9009	80/20	200	35-45	40-60	62	○		●	○	●	●	
Super Durable												
UC9000	47/53	200	220-270	35-65	56							●
UC9001	87/13	200	24-32	30-50	61			●			●	●
UC9016	87/13	200	27-33	40-60	61			●			●	●

Acrylic

Masterbatch

22

Acrylic Resins

Item code (Alymers)	Type	EEW (g/eqiv.)	Tg (°C)	Description
AC2100	GMA Acrylic	600-670	Approx. 85	Acrylic matte hardener for full matte effects of one-shot process with PE resin
AC2205	GMA Acrylic	460-540	Approx. 54	A glycidyl functional acrylic resin suitable for automotive wheel clears.
AC2211	GMA Acrylic	520-580	Approx. 60	A glycidyl functional acrylic resin with a higher molecular weight and Tg.
AC2212	GMA Acrylic	510-570	Approx. 50	A glycidyl functional acrylic resin suitable for automotive wheel clears and trim with excellent outdoor durability.

23

Masterbatch (PE resin containing additive)

Item code (Alymers)	Type	Acid Value	Viscosity (Poise, at 200°C)	Tg (°C)	Description
TC001	Masterbatch	30-36	27-37	Approx. 59	Masterbatch with 5% of a cure accelerator in a carboxylated polyester resin.
TC003	Masterbatch	30-36	30-40	Approx. 60	Masterbatch with 10% of a cure accelerator in a carboxylated polyester resin.
AC3002	Masterbatch	Max.4	50-80	Approx. 60	Masterbatch with 5% of a tribo additive in a hydroxylated polyester.
AC3005	Masterbatch	Max.5	18-32	Approx. 57	Flow aid Masterbatch for powder coatings. A hydroxylated polyester resin containing 15% of an acrylic polymer.
AC3006	Masterbatch	Max.6	28-42	Approx. 57	Flow aid Masterbatch for powder coatings. A hydroxylated polyester resin containing 10% of an acrylic polymer.

Gloss Control System

Dryblend systems for HAA Powder Coatings

Gloss (60°)	General Industrial	Architectural	Super Durable
< 40GU	PC8802 + PC1803	PC8808 + PC1832	PC8502 + PC1829
< 30GU	PC8808 + PC1808	PC8808 + PC1831	PC8502 + PC1818
< 20GU	PC8804 + PC1817	PC8804 + PC1818	
< 10GU		PC2801 + AC2100 (acrylic one-shot)	

Dryblend systems for TGIC Powder Coatings

Gloss (60°)	General Industrial	Architectural	Super Durable
< 35GU	TC8006 + TC4004	TC8010 + TC3015	TC8001 + TC3015
< 25GU	TC8010 + TC4004	TC8001 + TC4008	
< 5GU		TC3031 + AC2100 (acrylic one-shot)	

One-shot matte systems for Urethane Powder Coatings

Gloss (60°)	General Industrial	Architectural	Super Durable
< 30GU	UC9002 + UC9035 (18.5 / 81.5)	UC9002 + UC9001 (15.4 / 84.6)	UC9000 + UC9001 (23.9 / 76.1)
< 20GU	UC9002 + UC9035 (23 / 77)	UC9002 + UC9001 (21.5 / 78.5)	UC9000 + UC9001 (29.8 / 70.2)
< 10GU	UC9002 + UC9035 (38.5 / 61.5)	UC9002 + UC9001 (38.5 / 61.5)	UC9000 + UC9001 (35.1 / 64.9)

* Remark: The cure schedule for all gloss control systems is 10min x 200°C based on substrate temperature.

HAA Hardener



Resin Category

INOMID	Hydroxyalkylamide crosslinker for the formulation of durable outdoor powder coatings
--------	--

HAA Hardener

Item code (Inomid)	Type	Hydroxyl Value	Water Content(%)	Melting Point(°C)	Description
AH 001	Hardener	640 - 740	Max. 1	Min.120	Crosslinking agent for durable outdoor powder coatings

Health, Safety and Product Handling

Standard Packaging

[General] 25kg / bag, 875kg / pallet

[Acrylic] 20kg / bag, 700kg / pallet

[HAA Hardener] 25kg / bag, 750kg / pallet

* Different packing size is available upon request



Storage & Handling

The resin should be stored in dry, cool, and well-ventilated places preferably below 25°C.

- 1 Keep away from heat sources and direct sunlight.
- 2 Do not stack more than two pallets.



Shelf Life

Under the recommended storage conditions, the shelf life of the resin is 12 months from the shipment date. The resin older than 12 months, after the shipment, it is recommended to check the properties before use.



Safety

Dust may be irritating. Prevent dusty conditions. Pouring of dry powder may create static electricity and a source of ignition.

Be advised to install ground equipment to prevent electrical sparks. Dust may be explosive when mixed with air. Don't use near sparks or open flame. Use only with adequate ventilation.



Think with
Professionality

Act with
Reliability

Work with
Sustainability



Safety

Safety comes always first. We believe all incidents are preventable and our safety culture and performance are continuously improved by our HSE policy.

Professionality

We never stop studying new technology and knowledge. We research and develop for better quality and more eco-friendly products in order to meet our valuable customers' needs.

Integrity

We always strive to achieve our goals ethically. With Ecovadis Gold medal, we expect transparent and respectful interactions between management, employees, and our business partners, consistent with our Code of Business Integrity.



Environmental protection is one of the key values in our business; the protection of ecosystems and their constituent parts from changes associated with human activities. Basically powder coating technologies have contributed to zero VOC emission by replacing traditional liquid paints containing organic solvents that may lead to any form of pollution. Our research and development has been pursuing technological solutions that help make our environment cleaner and that meet environmental regulations.

Head Office

11F (West Point Building), 133, Hwamyongsindosi-ro, Buk-gu, Busan, 46524 Republic of Korea
T. +82-51-796-9999 F. +82-51-796-9909 E. inopol-sm@inopol.com

Factory/R&D Center

16, Jungongeopdanji-gil, Gyesong-myeon, Changnyeong-gun, Gyeong-nam, 50340 Republic of Korea
T. +82-55-520-9000



inopol-sm@inopol.com