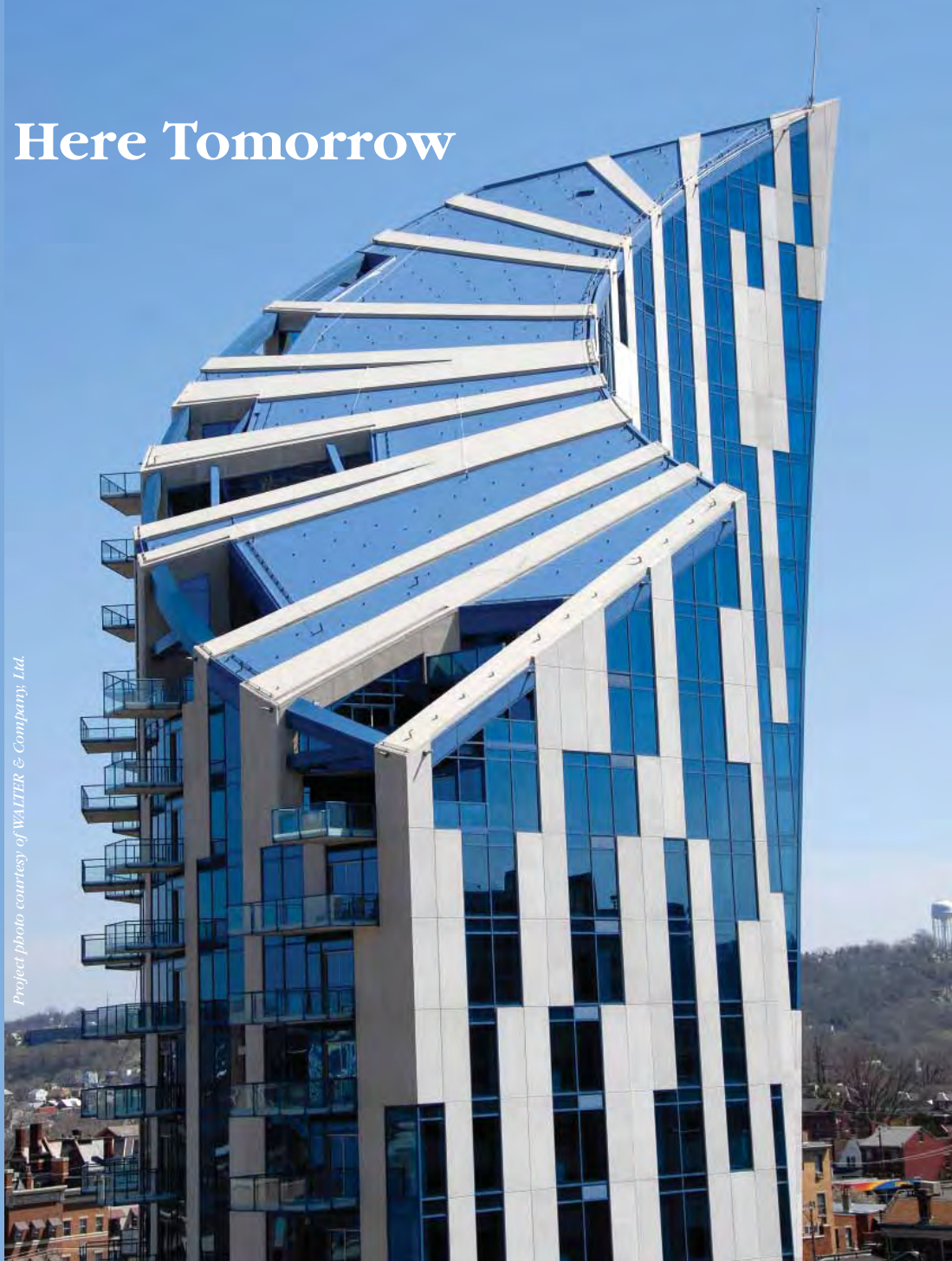


Here Today Here Tomorrow

Project photo courtesy of WALTER & Company, Ltd.



Hylar[®] 5000 PVDF
Resins For Architectural Coatings

Solvay
Solexis





Hylar® 5000

The Ultimate in Coating Performance and Durability

A building investment—whether you build it, maintain it, or own it—represents a significant asset. You can protect this asset and add years of service to its life by choosing architectural coatings containing 70% Hylar® 5000 PVDF. Made from UV-resistant fluoropolymer resins, PVDF coatings have successfully outperformed all other metal coatings for over 40 years, while closely maintaining their original color and beauty.

Superior performance coatings formulated with 70% Hylar® 5000 PVDF resin provide long-life protection against the harsh effects of UV radiation, chemical and airborne pollution, severe weather, and environmental conditions such as salt spray or windborne sand.



Hylar® 5000
surpasses
AAMA 2605
specifications



HYLAR® 5000





Project photo courtesy of WALTER & Company, Ltd.

Metal in today's architectural designs is used in diverse applications for the fabrication of structural and accent components.

70% Hylar® 5000 factory-applied coatings provide the ultimate protection for:

- Composite panels
- Metal Roofs
- Curtain walls
- Facades
- Extrusions
- Column covers
- Louvers
- Decorative components

These coatings ensure a long-lasting, rich, colorful, durable finish and gloss with relatively no visible signs of aging despite years of relentless sun, temperature extremes, and harsh environmental conditions.

Why is Hylar® 5000 PVDF ideal for architectural coatings?

The combination of carbon-fluorine bonds, common to all fluoropolymer materials, with carbon-hydrogen atoms gives polyvinylidene fluoride, or PVDF, its extremely stable structure. Hylar® 5000 PVDF is inherently inert and has the ability to withstand long term UV and gamma radiation resulting in excellent color and gloss retention without chalking. PVDF also resists acids, alkalis and oils. 70% Hylar® 5000 PVDF coatings are also resistant to dirt pickup, however, an annual maintenance cleaning is recommended.

Hylar® 5000 PVDF is used as a base resin for long-life finishing systems. Whether coil coated or sprayed, it is readily applied to metal substrates such as aluminum, aluminized steel, galvanized steel, and Galvalume®.

Hylar® 5000 PVDF Cost Performance — Value that pays off

Beautiful structures benefiting from the protection of Hylar® 5000 PVDF coatings can be found throughout the world, from North America to Europe, Asia to the Mid-East. A wide range of buildings including monumental, commercial, industrial, residential, and institutional have all enjoyed a service life well beyond expectation. Hylar® 5000 has protected them from environmental attack and aging. Hylar® 5000 PVDF coatings can be formulated into a rainbow of colors and finishes to glorify the palette of every architectural designer.

Project photo courtesy of WALTER & Company, Ltd.



40 Years of Unparalleled Results

Other architectural coatings may have the look of a Hylar® 5000 PVDF coating when new. Resin and other coating manufacturers often claim that their non-PVDF coatings will perform as well as PVDF coatings. But when exposure comparisons are evaluated, the inherent long-life characteristics of 70% Hylar® 5000 PVDF coatings outperform high performance polyester, polyester, acrylics, plastisols, thick film urethanes, anodized metal, and FEVE coatings. Hylar® 5000 coatings, blended at the optimal ratio of 70%-30% PVDF to acrylic, maintain their color fastness and gloss longer than all other architectural coatings. Performance of Hylar® 5000 based coatings surpasses AAMA 2605 requirements.

The question for architectural specifiers, and building owners is simple—when Hylar® 5000 PVDF coatings will deliver up to 40 years of consistent service, why would anyone choose a coating that will need replacement 3-4 times during the building's lifetime?

While other coatings may cost less initially, they cannot compare to the superior cost performance of a 70% Hylar® 5000 PVDF coating. Buildings protected by PVDF coatings for over 40 years are still in place retaining their new-like appearance. The re-coating costs of other systems, over the life of the structure, make Hylar® 5000 coating a smart choice. The value Hylar® 5000 brings to the building investment—long service life, beauty and ease of maintenance—makes it the wise choice for all involved.

Performance Test	AAMA 2605
Min. Film Thickness	1.2 mils
Crosshatch Adhesion	Dry, wet and boiling 100%
Direct Impact Resistance	0.1 inch deformation. Minor crack/No pick-off
HCl Resistance (10%)	15-minute spot. No blister or color change
Mortar Resistance	24-hour surface contact. No adhesion or residue
Detergent Resistance	72-hour immersion No change or loss of adhesion
Humidity Resistance	4000 hours 100% humidity #8 blister size maximum
Salt Spray Resistance Scribed	4000 hours 5% solution Min. 7 on scribe, 8 on field
Pencil Hardness	F (minimum)
Abrasion Resistance (1/mil)	40 (minimum)
Nitric Acid Vapor Resistance	30-minute exposure <5 ΔE color change
Window Cleaner Resistance	24-hour spot test No visual change
Weathering	10 yrs Florida: <5 ΔE maximum color change 50% gloss retention min. 8 chalk min. (6 on whites) 10% film erosion max.



Project photo courtesy of WALTER & Company, Ltd.





Painting the Future Green

PVDF coatings are a proven way to reduce energy usage and costs. PVDF coatings stay attractive longer than any other architectural coating because they resist environmental forces that can attack lesser products. And because they keep their good looks and protect their substrates, the investment in PVDF pays off year after year.

Cool Metal Roofs

Hylar® 5000 is a critical component of coatings used in cool metal roofing systems, formulated with special inorganic pigments by Solvay Solexis licensees into paint systems that have high solar reflectance. The increased reflectance of infrared radiation reduces surface temperature and heat load via conduction into the building. Cooling requirements can be dramatically cut back as a result, leading to up to 40% lower utility costs and possible equipment cost savings due to reduced cooling capacity. Lower electricity consumption results in reduced emissions and improvements in the environment.

Cool metal roofs painted with Hylar® 5000 PVDF paint systems retain their solar reflectance longer than other paint systems due to superior resistance to photo-chemical degradation and excellent dirt shedding. Choosing a cool metal roofing paint system with Hylar® 5000-based coatings will retain a building's aesthetics, energy efficiency and its value for many years. Use of cool metal roofs with a Hylar® 5000-based finish can contribute multiple points toward LEED certification of new construction or renovation projects. More information on this topic is available at www.coolmetalroofing.org.





Project photo courtesy of WAITER & Company, Ltd.

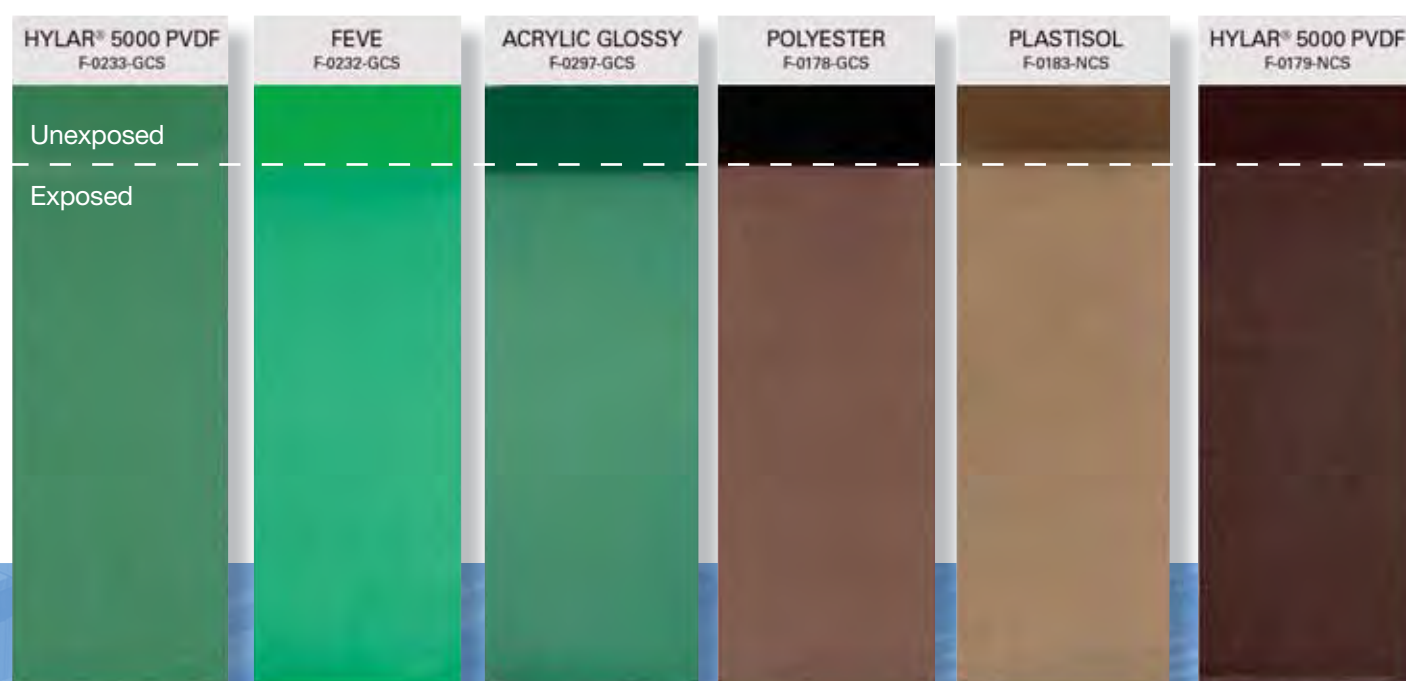


A Rigorous Qualification Process

To ensure exceptional quality and integrity, Hylar® 5000 coatings are available only through approved licensees. License applicants must submit to a rigorous two-year qualification process which ensures their production capabilities, quality assurance procedures, and technical expertise. Only the best coating producers become Hylar® 5000 licensees. To obtain a list of worldwide licensees and to learn more about the long lasting protection of Hylar® 5000, contact Solvay Solexis at (800) 221-0553 or visit www.solvaysolexis.com.

Exposure Proves Hylar® 5000 is Superior

The panels shown below were exposed for ten years at an independent test-fence facility in southern Florida, positioned at a 45° angle facing south. By comparing the difference in the upper, covered portion of each panel to the exposed section beneath, it is easy to see the superior weatherability of Hylar® 5000-based coatings over other resin systems.



Solvay Solexis – World Leader in PVDF Resins

Hylar® 5000 is a product of Solvay Solexis which traces its PVDF expertise to its Pennwalt Corporation and Ausimont legacy. Solvay Solexis produces a significant proportion of the world's PVDF coatings for architectural coatings. We are a member of Solvay, an international group active in chemistry, headquartered in Brussels. Among the benefits of our deep portfolio is a diversified global presence as well as an integrated value chain from raw materials to finished products.

Architectural coatings formulated with 70% Hylar® 5000 resin:

- 40+ years of durability
- Available in coil and spray applied formulation from licensees
- Superior performance
- Chemically resistant
- Unmatched color and gloss retention
- Wide range of colors
- Unparalleled cost performance
- Non-chalking
- UV resistant
- Environmentally responsible
- Surpasses AAMA-2605
- Excellent post-forming (OT bend)
- May be applied to numerous substrates
- Ease of maintenance



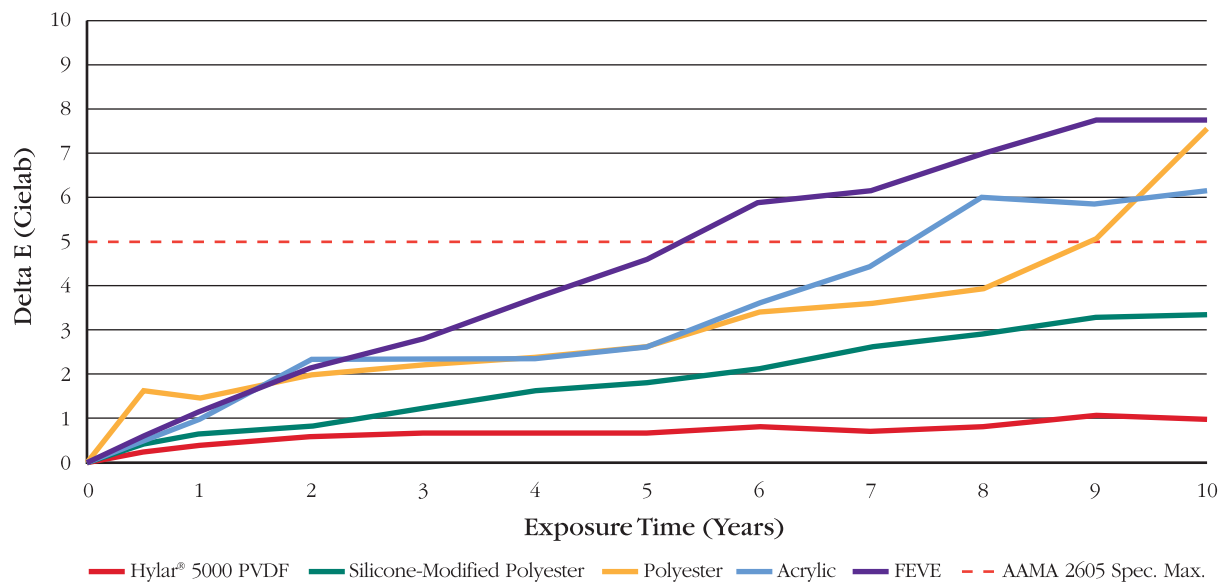
Specifying Hylar® 5000

To specify Hylar® 5000 write: Finish type: A factory applied, baked on finish containing 70% Hylar® 5000 PVDF resin, supplied by a Solvay Solexis Hylar® 5000 licensee and applied by an applicator approved by the paint manufacturer. This coating shall be certified to meet AAMA 2605 performance specifications and certified by the paint manufacturer to contain Hylar® 5000 resin.

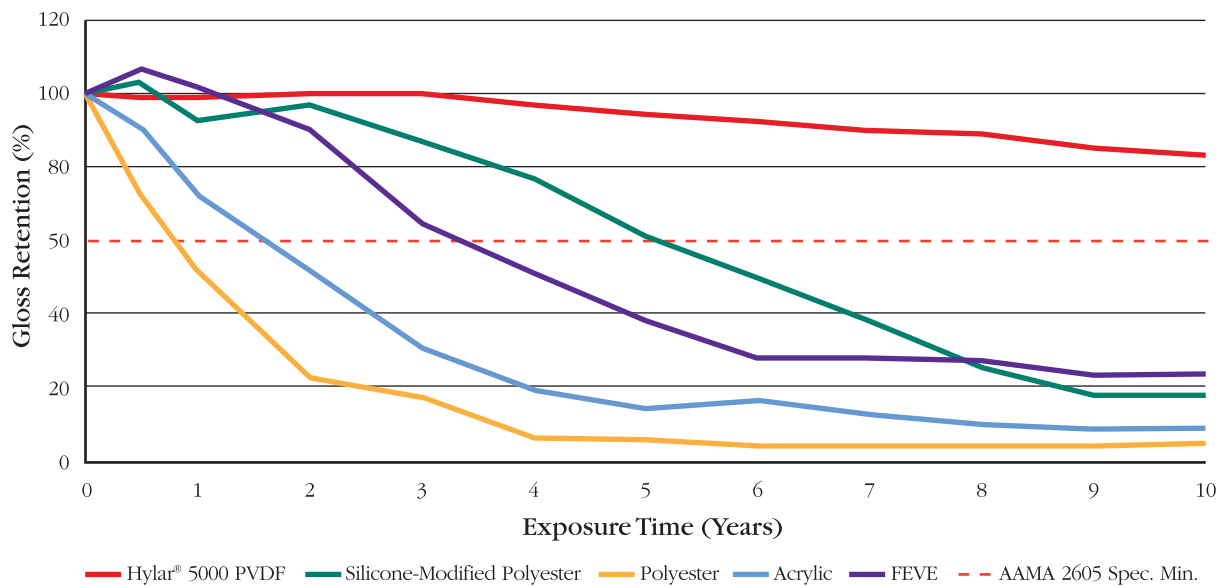
A list of global licensed paint manufacturers using Hylar® 5000 can be found at www.solvaysolexis.com.



45° South Florida Exposure of Coatings / Color Change



45° South Florida Exposure of Coatings / Gloss Retention



Comparative Properties and Performance Chart - Coil Coating Topcoats

Generic Coating Type (Topcoat Only)

Physical and Resistance Properties	ASTM Method	Plastisol	Solution Acrylic	
Impact Resistance	D2794	5	2	
Mar Resistance	D3363, D2197	3	4	
Metal Marking Resistance	No method	3	4	
Resistance to Pressure Mottling in Coil	D3003	3	4	
Solvent (MEK) Resistance	D5402	N/A	4	
Grease and Oil Resistance	D5402, D1308	4	3	
Stain Resistance	No method	3	4	
Resistance to Acidic/Caustic Conditions	D2248, D1308	5	3	
Resistance to Water Immersion	D870	4	4	
Humidity Resistance	D1735, D2247, D4585, G60	4	4	
Abrasion Resistance	D4060, D968	5	3	
Resistance to Industrial Pollution	D1308, G87	5	3	
Corrosion Resistance (Salt Spray)	B117, G85	4	3	
Flexibility/Drawability	D2794, D3281, D4145, D522, D4146	5	2	
Dry Heat Resistance	No method	5	3	
Gloss Retention 10 years Florida, 45° South	G7, D1014, D523	2-3	3	
Chalk 10 years Florida, 45° South	G7, D1014, D4214	2-3	3	
Color Retention 10 years Florida, 45° South	G7, D1014, D2244	2-3	3	

5 = Excellent, 4 = Very Good, 3 = Good, 2 = Fair, 1 = Poor

	Polyester		Silicone Polyester	Poly-vinylidene Fluoride (PVDF)	Acrylic Latex	Polyurethane
	Interior Use Only	Exterior Use				
	3-5	3	3	4	3	4
	4	4	4	3	3	3
	4	4	4	3	4	3
	4	4	4	3	3	3
	3-5	5	5	3	4	3
	3-5	4	4	4	3	3
	3-5	4	4	4	3	3
	3-4	4	3	4	3	3
	4	3	4	4	4	3
	4	4	4	4	2	3
	3-5	4	3	4	2	4
	3	3	3	4	3	3
	4	4	4	3	3	4
	3-5	3	2	4	3	4
	4	4	4	4	4	5
	N/A	3-4	4	5	3-4	3-4
	N/A	3-4	4	5	3-4	3-4
	N/A	3-4	4	5	3-4	3-4

Europe/Italy

World Headquarters

Solvay Solexis S.p.A.

Viale Lombardia 20,
20021 Bollate (MI), Italy
Tel: +39.02.3835.1
Fax: +39.02.3835.2129

Piazzale Donegani, 5/6
15047 Spinetta Marengo (AL), Italy

North America/USA

Solvay Solexis, Inc.

10 Leonard Lane
West Deptford, NJ 08086 USA
Tel: +1.856.853.8116
Fax: +1.856.853.6405

800 Greenback Road
Wilmington, DE 19808

1006 Farm Road
Orange, TX 77630

South America/Brazil

Solvay Solexis Ltda.

Rua Urussui, 300-4º andar
CEP: 04542-903
São Paulo-SP-Brazil
Tel: +55.11.3708.5179
Fax: +55.11.3708.5283

ASIA/China

Solvay (Shanghai) Co., Ltd.

Bldg. 7, No. 899, Zu Chong Zhi Road
Zhang Jiang Hi-Tech Park
Shanghai 201203 P.R. China
Tel: +86.21.5080.5080
Fax: +86.21.5080.7925

Japan

Solvay Solexis K.K.

4th Floor, Toranomon 30 Mori Bldg.
2-2 Toranomon 3-chome
Minato-ku, Tokyo 105-0001 Japan
Tel: +81.3.5425.4330
Fax: +81.3.5425.4331

Korea

Solvay Solexis Korea

5th Floor Donghwa Bldg. 58-7
Seosomun-Don, Jung-Gu
Seoul 100-736 Korea
Tel: +82.2.756.7224
Fax: +82.2.756.0354

Singapore

Solvay Singapore Pte Ltd.

11 Biopolis Way, 10-10/11 Helios
Singapore 128667
Tel: +65.6438.8886
Fax: +65.6438.8222

Taiwan

Solvay Taiwan Co. Ltd.

1814 International Trade Building
333 Keelung Road, section 1
Taipei, 110, Taiwan
Tel: +886.2.2757.7087
Fax: +886.2.2757.6637

Thailand and Vietnam

Solvay (Thailand) Ltd.

17th Floor, Wave Place
55 Wireless Road
Lumpini, Pathumwan
Bangkok 10330, Thailand
Tel: +66.2655.4445
Fax: +66.2655.4840

India

Solvay Specialties India Private Ltd.

401, Suraj Prakash, 86 Shankar
Ghanekar Marg
Prabhadevi, Mumbai-400 025, India
Tel: +91.22.243.72646
Fax: +91.22.243.76533

Visit our website www.solvaysolexis.com to locate your regional sales representative.

Some applications of this product are regulated or restricted by applicable laws and regulations or by national or international standards and in some cases by our own recommendations, which may among others concern food/feed, water treatment, medical devices or pharmaceuticals, personal care, etc. The buyer and the eventual user, in their sole and entire liability, shall comply with the laws and the regulations applicable to our products, their use and/or to the activity of buyer or the eventual user, and shall respect all applicable standards, recommendations, orders of any relevant authority, as well as all existing patents and intellectual properties rights. The buyer and the eventual user must independently determine the suitability of this product for any particular purpose and its manner of use.

Please contact us for further information on grades developed for a specific end-use.

To our present knowledge, the information contained herein is accurate as of the date of this document. However, we do not make any warranty, express or implied, or accept any liability in connection with this information or its use. This information is for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right. The user alone must finally determine suitability of any information or material for any contemplated use, the manner of use in compliance with relevant legislations and whether any patents are infringed. We reserve our right to make additions, deletions, or modifications to the information at any time without prior notification.

Trademarks and/or other Solvay Solexis, Inc. products referenced herein are either trademarks or registered trademarks of Solvay Solexis, Inc. or its affiliates.

Copyright 2010, Solvay Solexis, Inc. All Rights Reserved.



HYLAR® 5000

**Solvay
Solexis**



a Passion for Progress®