

 **BASF**

We create chemistry

AQACeII[®] HIDE 6299 na

Opaque Polymer for
Architectural Coatings



AQACell[®] HIDE 6299 na

Reduce formulated cost without impacting opacity

AQACell HIDE 6299 na improves TiO₂ spacing and scatters light, enabling formulators to reach the same level of opacity with less TiO₂. By offsetting TiO₂, AQACell delivers a lower total cost of formulation without compromising performance. Further savings can be gained by using AQACell in conjunction with Acronal[®] PLUS 4670, our state-of-the-art 100% acrylic latex with superior TiO₂ efficiency.

Features

- Reduce formulated cost by replacing up to 10%-15%* TiO₂ and achieve equal hiding power
- Broad formulation latitude
- Interior/exterior
- Ammonia-free
- APEO-free
- Low odor

*Greater levels may be possible depending on formulating techniques

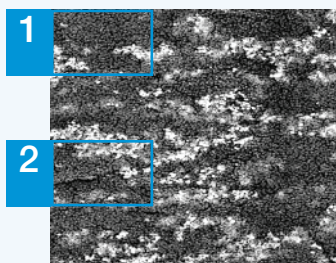
Properties

Dispersion type	Anionic
Solids content	~ 30 wt-%
pH value	8.1 – 9.5
Encapsulated H ₂ O	~ 22.2 wt-%
Solids by volume	~ 51.5%
Viscosity ¹	≤ 200 mPa*s
MFFT	> 80 °C
Specific gravity (wet polymer)	~ 1.025 g/cm ³
Specific gravity (dry polymer)	~ 0.590 g/cm ³
VOC (ASTM Method D 6886)	<10 g/l (0.27%)

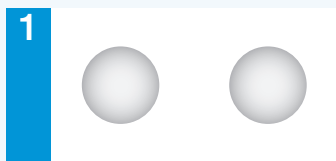
¹ DIN EN ISO 3219 (23 °C, 250 1/s)

Less TiO₂ needed for the same performance

TiO₂ inefficiency in standard paint formulations



TiO₂ clusters develop as paint cures

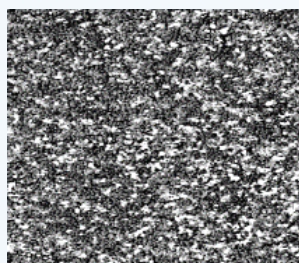


Areas with low TiO₂ concentration lead to reduced hiding power (blank spaces)

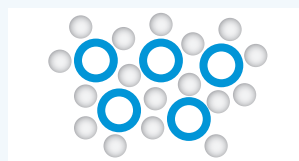


TiO₂ clusters create inefficiencies (crowding)

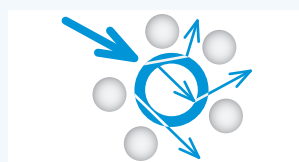
How does AQACell HIDE 6299 na help?



AQACell optimizes TiO₂ distribution



Improved TiO₂ spacing



Encapsulated air scatters light

AQACell[®] HIDE 6299 na

Formulation Guidelines

AQACell HIDE 6299 na can replace 10-15% of the TiO₂* in a paint formulation without compromising hide or the performance of the coating. This allows the formulator to reduce the overall raw material cost of the formulation while maintaining quality.

Additives

Avoid the use of raw materials with aromatic content (found in some plasticizers and solvents) as they may affect the integrity of the hollow sphere resulting in reduced hide and lower efficiency.

**Greater levels may be possible depending on formulating techniques*

Suggested Formulations

Interior Eggshell Formulation			Interior Semi-Gloss Formulation			Exterior Flat Formulation		
raw materials	lbs	gallons	raw materials	lbs	gallons	raw materials	lbs	gallons
Water	60.00	7.20	Water	75.00	9.00	Water	50.00	6.00
Kronos ⁵ 4311	300.00	15.33	Natrosol ¹ 330 Plus	0.50	0.05	Kronos ⁵ 4311	260.00	13.29
Tamol ⁶ 165A	10.00	1.14	Mix for 10 minutes			Dispex ² CX 4320	8.00	0.87
Hydopalat ² WE 3320	3.00	0.35	Ammonium Hydroxide	1.00	0.13	FoamStar ² ST 2420	2.00	0.28
Foamstar ² ST 2420	1.00	0.14	Tamol ⁶ 165A	5.00	0.57	Hydopalat ² WE 3320	3.00	0.35
Proxel ³ BD 20	2.00	0.22	Foamstar ² ST 2420	2.00	0.28	Proxel ³ BD20	3.00	0.33
Minex ⁴ 4	100.00	4.60	Proxel ³ BD 20	2.00	0.22	Minex ⁴ 4	230.00	10.57
Minex ⁴ 10	30.00	1.38	Minex ⁴ 10	20.00	0.92	Attagel ² 50	4.00	0.20
Attagel ² 50	4.00	0.20	Attagel ² 50	3.00	0.15	Mix 20 minutes		
Mix 20 minutes			Mix 20 minutes			Water	129.95	15.60
Water	89.05	10.68	Water	112.54	13.51	Polyphase ⁷ 663	10.00	1.03
Ammonium Hydroxide	1.00	0.13	Kronos ⁵ 4311	275.00	14.05	Ammonium Hydroxide	1.40	0.19
Polyphase ⁷ 678	3.00	0.31	Foamstar ² ST 2420	2.00	0.28	FoamStar ² ST 2420	2.00	0.28
Foamstar ² ST 2420	2.00	0.28	Polyphase ⁷ 678	3.50	0.36	Acronal ² EDGE 4247	365.00	41.01
Acronal ² Plus 4670	430.00	48.61	Acronal ² Plus 4670	450.00	50.87	Velate ⁸ 368	7.80	0.97
Optifilm ⁸ 400	14.00	1.73	Optifilm ⁸ 400	15.00	1.86	AQACell ² Hide 6299	40.00	4.67
AQACell ² Hide 6299	40.00	4.67	AQACell ² Hide 6299	40.00	4.67	Rheovis ² PE 1331	35.00	4.07
Rheovis ² PE 1331	25.00	2.91	Rheovis ² PE 1331	25.00	2.91	Rheovis ² PU 1191	2.50	0.29
Rheovis ² PU 1191	1.00	0.12	Rheovis ² PU 1191	1.50	0.17	Total	1115.05	100.00
Total	1115.05	100.00	Total	1115.05	100.00	Vol Solids %	41.4	
Vol Solids %	41.1		Vol Solids %	36.7		Wt Solids %	57.2	
Wt Solids %	55.6		Wt Solids %	48.3		PVC %	46.4	
PVC %	36.5		PVC %	24.9		VOC g/L	22	
VOC g/L	0		VOC g/L	0		KU	95 - 105	
KU	90 - 100		KU	90 - 100		ICI	1.0 - 1.4	
ICI	1.0 - 1.4		ICI	1.0 - 1.4		85° Gloss	<5	
60° Gloss	9 - 13		60° Gloss	35 - 45				



AQACell[®] HIDE 6299 na

Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State and Local health and safety regulations, thorough ventilation of the workplace, good skin care and wearing of protective goggles.

Material Safety Data Sheet

Please refer to the most current version of the Material Safety Data Sheet that can be found online at www.basf.us/sds

Storage and Handling Recommendations

AQACell HIDE 6299 na is freeze thaw stable. However, in colder climates it should be protected from freezing to prevent damage from storage tanks, piping, and valves. Care should be taken when heating bulk tanks and supply lines/valves to protect them from freezing. Heating with steam produces localized temperatures that are not recommended. Hydronic heat exchange systems with maximum temperatures not exceeding 125°F is preferred. Heat tracing wires should be kept to the minimum possible temperature to only protect from freezing. If AQACell HIDE 6299 na does freeze the material should be allowed to completely thaw and thoroughly mixed and then it is suitable for use.

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The Dispersions & Resins business of BASF develops, produces and markets a range of high-quality resins, additives, colorants and polymer dispersions worldwide. These raw materials are used in formulations for coatings and paints, printing and packaging products, construction chemicals, adhesives, fiberbondings, nonwovens, and paper manufacturing. With a comprehensive product portfolio and extensive knowledge of the industries we serve, our customers benefit from innovative and sustainable solutions to help them advance their formulations through chemistry. For further information about the Dispersions & Resins business in North America, please visit <http://www.basf.us/dpsolutions>

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