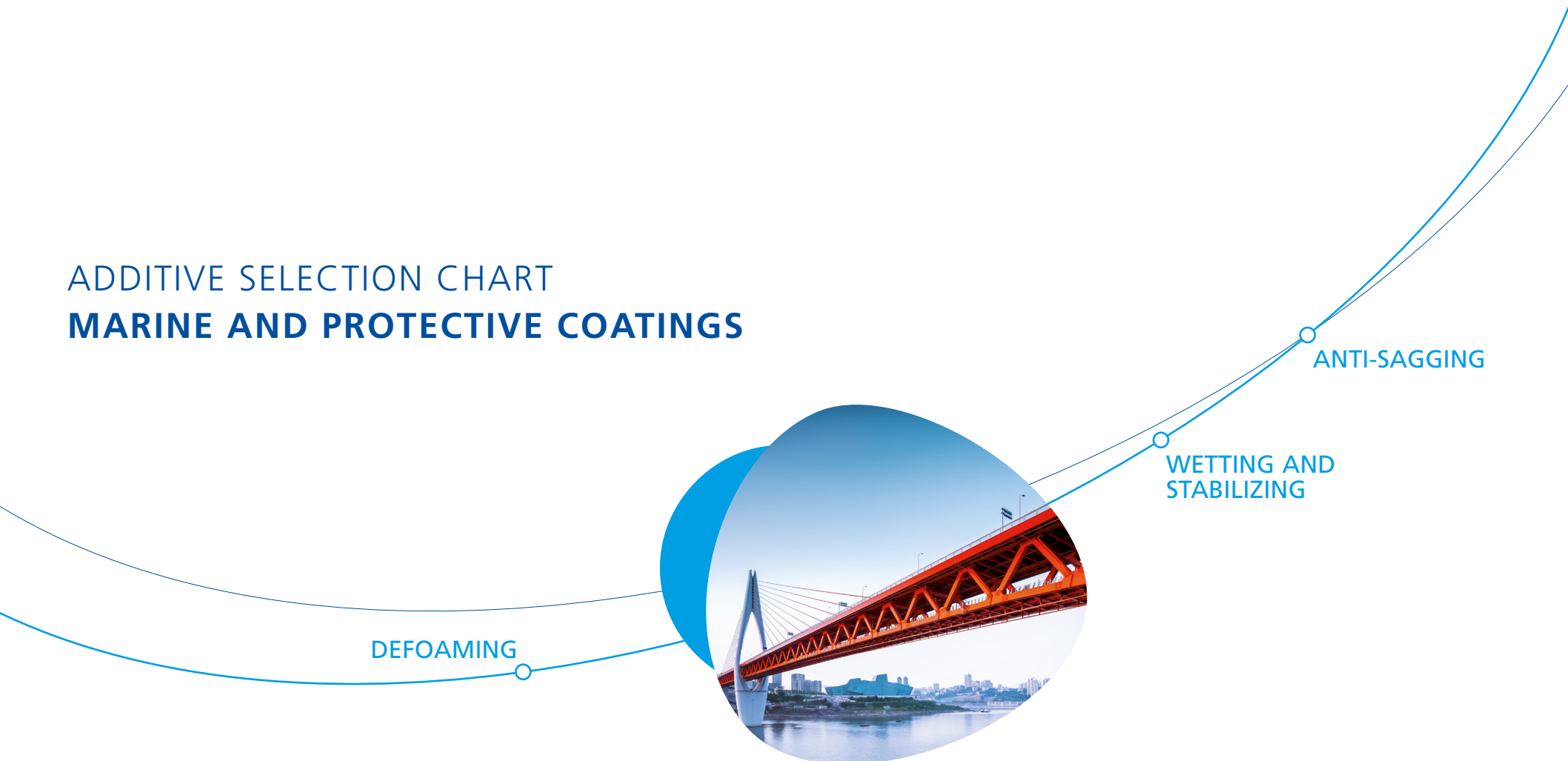


ADDITIVE SELECTION CHART **MARINE AND PROTECTIVE COATINGS**





Aqueous systems

Application	2-pack epoxies, epoxy component	2-pack epoxies, amine component	Polyurethanes	Alkyd dispersions/ water-reducible alkyds	Acrylates	Intumescent coatings
Wetting and dispersing of pigments and fillers	DISPERBYK-2012 ● DISPERBYK-2019 ● DISPERBYK-102 ○ DISPERBYK-2018 ○	DISPERBYK-2055 ● DISPERBYK-2080 ● DISPERBYK-191 ○ DISPERBYK-2012 ○	DISPERBYK-2012 ● DISPERBYK-2015 ● DISPERBYK-190 ○ DISPERBYK-2010 ○	DISPERBYK-2010 ● DISPERBYK-2080 ● DISPERBYK-180 ○ DISPERBYK-190 ○	DISPERBYK-2010 ● DISPERBYK-2080 ● DISPERBYK-2015 ○ DISPERBYK-2018 ○	DISPERBYK-190 ● DISPERBYK-2080 ● DISPERBYK-2012 ○ DISPERBYK-2015 ○
Anti-sagging/ anti-settling	RHEOBYK-440 ● RHEOBYK-7601 ● RHEOBYK-H 7500 VF ● BYK-AQUAGEL 7100 ○ OPTIGEL-CK ○ RHEOBYK-7610 ○	RHEOBYK-440 ● RHEOBYK-M 2600 VF ● OPTIGEL-WA ○ RHEOBYK-7420 CA ○ RHEOBYK-7420 ET ○	RHEOBYK-440 ● RHEOBYK-7420 CA ● RHEOBYK-7420 ET ● RHEOBYK-7601 ● RHEOBYK-7650 ○ RHEOBYK-7670 ○ RHEOBYK-7690 ○ RHEOBYK-H 6500 VF ○ RHEOBYK-H 7625 VF ○	OPTIGEL-W 724 ● RHEOBYK-H 3300 VF ● BYK-AQUAGEL 7100 ○ OPTIGEL-CK ○ RHEOBYK-7650 ○ RHEOBYK-7670 ○ RHEOBYK-7690 ○ RHEOBYK-H 6500 VF ○	RHEOBYK-7601 ● RHEOBYK-7610 ● RHEOBYK-H 7500 VF ● BYK-AQUAGEL 7100 ○ OPTIGEL-CK ○ RHEOBYK-440 ○ RHEOBYK-7650 ○ RHEOBYK-7670 ○ RHEOBYK-7690 ○	RHEOBYK-7600 ● RHEOBYK-7601 ● RHEOBYK-H 7500 VF ● LAPONITE-SL 25 ○ RHEOBYK-7420 CA ○ RHEOBYK-7650 ○ RHEOBYK-7670 ○ RHEOBYK-7690 ○
Defoaming/ air release	Silicone: BYK-024 ● BYK-1789 ● BYK-093 ○ BYK-1780 ○ Silicone-free: BYK-012 ● BYK-1711 ● BYK-011 ○ BYK-1740 ○	Silicone: BYK-024*1 ● BYK-1780*1 ○ Silicone-free: BYK-011 ● BYK-012 ●	Silicone: BYK-028 ● BYK-1789 ● BYK-023 ○ BYK-024 ○ Silicone-free: BYK-011 ● BYK-012 ● BYK-1711 ○	Silicone: BYK-024 ● BYK-028 ● BYK-019*2 ○ BYK-093 ○ Silicone-free: BYK-1640 ● BYK-011 ○ BYK-1711 ○	Silicone: BYK-024 ● BYK-1789 ● BYK-019*2 ○ BYK-028 ○ Silicone-free: BYK-011 ● BYK-012 ● BYK-015 ○ BYK-1711 ○	Silicone: BYK-024 ● BYK-1780 ● BYK-093 ○ BYK-1615 ○ Silicone-free: BYK-012 ● BYK-015 ●
Substrate wetting/ leveling	Silicone: BYK-349 ● BYK-3480 ● BYK-346 ○ BYK-3481 ○		Silicone: BYK-346 ● BYK-349 ● BYK-348 ○ BYK-3455 ○	Silicone: BYK-346 ● BYK-349 ● BYK-348 ○ BYK-3455 ○	Silicone: BYK-349 ● BYK-3480 ● BYK-346 ○ BYK-3481 ○	
Adhesion	BYK-4513 ●	BYK-4513 ●	BYK-4509 ● BYK-4513 ●	BYK-4509 ● BYK-4513 ●	BYK-4509 ● BYK-4513 ●	

● First recommendation ○ Second recommendation Unless otherwise stated, all silicone-containing additives have a cyclic siloxane content (D4, D5, D6) of less than 0.1 % each.

*1 If silicone-containing additives are used in the amine component, it is recommended to check the storage stability due to the increased pH value.

*2 Cyclic siloxane content ≥ 0.1 %.



Solvent-borne and solvent-free systems (1/2)

Application	2-pack epoxies, conventional	2-pack epoxies, solvent-free	2-pack polyurethanes	2-pack polyaspartics	Ethyl silicates
Wetting and dispersing of pigments and fillers	ANTI-TERRA-U ● BYK-9076 ● DISPERBYK-110 ● DISPERBYK-2152*4 ●	ANTI-TERRA-U 100 ● BYK-9076 ● DISPERBYK-111 ● DISPERBYK-2152*4 ●	DISPERBYK-163*4 ● DISPERBYK-2155*4 ● DISPERBYK-110 ○ DISPERBYK-2055 ○	DISPERBYK-2152*4 ● DISPERBYK-2155*4 ● DISPERBYK-2013 ○ DISPERBYK-2055 ○	ANTI-TERRA-U ● DISPERBYK-103 ● BYK-9076 ○ DISPERBYK-102 ○
Anti-sagging/ anti-settling*3	CLAYTONE-MPZ ● GARAMITE-1958 ● RHEOBYK-430 ○ RHEOBYK-7410 ET ○	GARAMITE-1958 ● RHEOBYK-100 ● GARAMITE-7305 ○	CLAYTONE-MPZ ● RHEOBYK-7410 ET ● CLAYTONE-40 ○ RHEOBYK-430 ○	CLAYTONE-APA ● GARAMITE-7303 ● CLAYTONE-40 ○ RHEOBYK-430 ○	CLAYTONE-MPZ ● GARAMITE-1958 ○ GARAMITE-7303 ○
Defoaming/ air release	Silicone: BYK-085 ● BYK-1810 ● BYK-1815 ● BYK-A 530 ● BYK-1796 ○ BYK-1799 ○ BYK-1811 ○ BYK-1816 ○ BYK-1818 ○ Silicone-free: BYK-1790 ● BYK-1794 ● BYK-054 ○ BYK-054 T ○	Silicone: BYK-085 ● BYK-1799 ● BYK-1810 ● BYK-1815 ● BYK-1796 ○ BYK-1811 ○ BYK-1816 ○ BYK-1818 ○ Silicone-free: BYK-1765 ● BYK-1794 ○ BYK-A 535 ○ BYK-A 535 T ○	Silicone: BYK-088 ● BYK-1810 ● BYK-1815 ● BYK-1880 ● BYK-077 ○ BYK-1811 ○ BYK-1816 ○ BYK-1818 ○ Silicone-free: BYK-054 ● BYK-054 T ● BYK-1794 ● BYK-1790 ○	Silicone: BYK-1796 ● BYK-1799 ● BYK-1810 ● BYK-1815 ● BYK-085 ○ BYK-1811 ○ BYK-1816 ○ BYK-1818 ○ Silicone-free: BYK-1790 ● BYK-054 ○ BYK-054 T ○	Silicone: BYK-323*5 ●
Optimization of surface properties (substrate wetting, leveling)	Silicone: BYK-378*5 ● BYK-3760 ● Silicone-free: BYK-392 ○ BYK-397 ○	Silicone: BYK-333 ● BYK-378*5 ○ Silicone-free: BYK-397 ● BYK-356 ○	Silicone: BYK-333 ● BYK-3760 ● BYK-320 ○ Silicone-free: BYK-397 ○	Silicone: BYK-323*5 ● BYK-3760 ● BYK-378*5 ○ Silicone-free: BYK-358 N ○	Silicone: BYK-323*5 ● Silicone-free: BYK-3550 ●
Surface protection	BYK-SILCLEAN 3701*5 ●		BYK-SILCLEAN 3700 ●		
Adhesion	BYK-4511 ●		BYK-4510 ● BYK-4512 ●	BYK-4511 ●	

● First recommendation ○ Second recommendation Unless otherwise stated, all silicone-containing additives have a cyclic siloxane content (D4, D5, D6) of less than 0.1 % each.

*3 To improve the rheological properties of organoclays and fumed silica, please contact TSMarineProtective.BYK.Wesel@altana.com.

*4 Also available as (organo) tin-free variant ("TF"). Information on tin-free variants can be found in the brochure B-AN 1 at www.byk.com/en/service/downloads/technical-brochures.

*5 Cyclic siloxane content ≥ 0.1 %. Information on variants with a cyclic siloxane content (D4, D5, D6) of less than 0.1 % can be found in the brochure B-G 6 at www.byk.com/en/service/downloads/technical-brochures.



Solvent-borne and solvent-free systems (2/2)

Application	Alkyds	Polysiloxanes	Fluorocarbons	Chlorinated rubber, vinyl resins, TPA	Intumescent coatings
Wetting and dispersing of pigments and fillers	ANTI-TERRA-U ● DISPERBYK-108 ● ANTI-TERRA-203 ○ DISPERBYK-102 ○	DISPERBYK-2152* ⁴ ● BYK-9076 ○ BYK-P 104 S ○ DISPERBYK-110 ○	DISPERBYK-161* ⁴ ● DISPERBYK-2025 ● DISPERBYK-110 ○ DISPERBYK-2055 ○	DISPERBYK-118 ● DISPERBYK-142 ● DISPERBYK-145 ○ DISPERBYK-180 ○	ANTI-TERRA-U ● BYK-P 104 S ● DISPERBYK-2070 ○ DISPERBYK-2152* ⁴ ○
Anti-sagging/anti-settling* ³	CLAYTONE-40 ● GARAMITE-1958 ● RHEOBYK-100 ● RHEOBYK-7411 CA ○	RHEOBYK-100 ● RHEOBYK-7410 ET ●	CLAYTONE-AF ● RHEOBYK-430 ● GARAMITE-1958 ○ RHEOBYK-7410 ET ○	CLAYTONE-AF ● RHEOBYK-7410 ET ● GARAMITE-1958 ○	RHEOBYK-7410 ET ● GARAMITE-1958 ○ RHEOBYK-100 ○ RHEOBYK-430 ○
Defoaming/air release	Silicone: BYK-A 530 ● BYK-1810 ● BYK-1815 ● BYK-077 ○ BYK-1799 ○ BYK-1811 ○ BYK-1816 ○ BYK-1818 ○ Silicone-free: BYK-054 ● BYK-054 T ●	Silicone: BYK-085 ● BYK-1760 ● BYK-1810 ● BYK-1815 ● BYK-1811 ○ BYK-1816 ○ BYK-1818 ○ Silicone-free: BYK-054 ● BYK-054 T ● BYK-1790 ● BYK-1794 ○	Silicone: BYK-085 ● BYK-1799 ● BYK-1810 ● BYK-1815 ● BYK-088 ○ BYK-1811 ○ BYK-1816 ○ BYK-1818 ○ Silicone-free: BYK-1790 ● BYK-054 ○ BYK-054 T ○ BYK-1794 ○	Silicone: BYK-077 ● BYK-1810 ● BYK-1815 ● BYK-1811 ○ BYK-1816 ○ BYK-1818 ○ Silicone-free: BYK-054 ● BYK-054 T ●	Silicone: BYK-081 ● BYK-085 ● BYK-1810 ● BYK-1815 ● BYK-1811 ○ BYK-1816 ○ BYK-1818 ○ Silicone-free: BYK-1794 ●
Optimization of surface properties (substrate wetting, leveling)	Silicone: BYK-320 ● Silicone-free: BYK-354 ● BYK-390 ○ BYK-392 ○	Silicone: BYK-331* ⁵ ● BYK-320 ○ Silicone-free: BYK-358 N ●	Silicone: BYK-310 ● BYK-331* ⁵ ● BYK-320 ○	Silicone: BYK-310 ● BYK-331* ⁵ ● BYK-333 ● Silicone-free: BYK-399 ●	
Surface protection					
Adhesion	BYK-4510 ● BYK-4512 ●				

● First recommendation ○ Second recommendation Unless otherwise stated, all silicone-containing additives have a cyclic siloxane content (D4, D5, D6) of less than 0.1 % each.

*³ To improve the rheological properties of organoclays and fumed silica, please contact TSMarineProtective.BYK.Wesel@altana.com.

*⁴ Also available as (organo) tin-free variant ("TF"). Information on tin-free variants can be found in the brochure B-AN 1 at www.byk.com/en/service/downloads/technical-brochures.

*⁵ Cyclic siloxane content ≥ 0.1 %. Information on variants with a cyclic siloxane content (D4, D5, D6) of less than 0.1 % can be found in the brochure B-G 6 at www.byk.com/en/service/downloads/technical-brochures.

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