GUIDELINE

Straetmans HighTAC GmbH– INHIBITOR GUIDE



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TACorr *product line*

longtime & multimetal protection

multimetal protection

TACorr G50-50 (waterbased)

Properties:	multimetal corrosion protection for water-based systems
guide formulations:	-
test reports:	TR1
particularity:	-

TACorr G50 (solventbased)

Properties:	multimetal corrosion protection for solvent-based systems
guide formulations:	-
test reports:	technical data sheet
special futures:	-

longterm/multimetal protection improved adhesion and wetting

TACorr MSM (waterbased)

Properties:	multimetal corrosion protection for water-based systems improved adhesion
guide formulations:	HT011
test reports:	TR3
special futures:	-

TACorr MSW (waterbased / special surfaces (e.g. sandblasted aluminum))

Properties:	multimetal corrosion protection for water-based systems improved adhesion
guide formulations:	HT002 & HT015
test reports:	TR3
special futures:	designed for special surfaces like sandblasted aluminum

TACorr G50 S (solventbased)

Properties:	multimetal corrosion protection for solvent-based systems improved adhesion
guide formulations:	-
test reports:	technical data sheet
special futures:	-

multimetal & flashrust corrosion protection

TACorr BNi (waterbased / nitrite containing)

Properties:	longterm & flashrust corrosion protection for water-based systems
guide formulations:	HT014
test reports:	TR5
special futures:	-

TACorr G50 Z (solvent- & water- based / nitrite free)

Properties:	longterm & flashrust corrosion protection for solvent- and water-based systems
guide formulations:	-
test reports:	TR4
special futures:	-

improved adhesion and water resistance

TACorrSil CX2 (silan based / water- and solvent- based)

Properties:	for water-/solvent- based systems improved adhesion and water resistance
guide formulations:	-
test reports:	TR2
special futures:	directly useable

... in process ...

flashproTAC *product line*

flash rust inhibition

flash rust inhibitor

flashproTAC F2M (waterbased / nitrite free)

Properties:	flash rust inhibitor
guide formulations:	HT002 & HT011
test reports:	TR3
particularity:	supports long term corrosion protection

flashproTAC C4E (waterbased / nitrite containing)

Properties:	multimetal corrosion protection for solvent-based systems
guide formulations:	HT015
test reports:	TR6
particularity:	very effective in low dossages

TemProTAC *product line*

temporary & storage protection

The temporary storage rotection

TemProTAC (waterbased)

Properties:	waterbased rinse solution
guide formulations:	-
test reports:	application aids
particularity:	no washing off necessary / direct overpaintable

… in process …

DOSAGE RECOMMENDATION

System	Surface	solvent	FlashprotTAC product line (flash-rust)		TACorr product line (long term & multi metal protection)							TACorrSil product line (adhesion)
			F2M	C4E	G50 Z	G50	G50-50	G50 S	MSM	MSW	Bni	CX2
			nitrite free	nitrite containing	nitrite free						nitrite containing	silan containing
			*Combination with TACorr is recommended		*Combination with flashrust inhibitor is recommended							*Combination with flashrust inhibitor is recommended
epoxy	iron/steel	wb	+++ 0.5 - 1.0 % * TAC or MSM	+++ 0.1 - 0.5 % * TAC or MSM	+++ 0.8 - 1.2 % -		+ 1.0 - 2.0 % * C4E or F2M		+++ 1.0 - 2.0 % * C4E or F2M	++ 1.0 - 2.0 % * C4E or F2M	+++ 0.8 - 1.2 % -	+++ 1.0 - 2.0 % * C4E or F2M
	aluminum		++ 0.3 - 0.8 % * TAC or MSW	++ 0.1 - 0.3 % * TAC or MSW	+ 0.8 - 1.0 % -		++ 1.0 - 2.0 %		++ 1.0 - 2.0 %	+++ 1.0 - 2.0 %	++ 0.8 - 1.0 % -	+++ 1.0 - 2.0 % * C4E or F2M
	sandblasted aluminum		+ 0.3 - 0.8 % * TAC or MSW	+ 0.1 - 0.3 % * TAC or MSW			+ 1.0 - 2.0 %		+ 1.0 - 2.0 %	+++ 1.0 - 2.0 %	+/- 0.5 - 1.0 %	+++ 1.0 - 2.0 % * C4E or F2M
	nonferrous metals		+/- 0.5 - 1.0 % * TAC or G50-50	+/- 0.1 - 0.5 % * TAC or G50-50	++ 0.8 - 1.2 % -		+++ 1.0 - 2.0 % * C4E or F2M		+++ 1.0 - 2.0 % * C4E or F2M	+++ 1.0 - 2.0 % * C4E or F2M	++ 0.8 - 1.2 % -	+++ 1.0 - 2.0 % * C4E or F2M
	iron/steel	sb			+++ 0.8 - 1.2 % -	+ 1.0 - 2.0 % -		+ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % * C4E or F2M
	aluminum				+ 0.8 - 1.0 % -	++ 1.0 - 2.0 % -		++ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % * C4E or F2M
	sandblasted aluminum					+ 1.0 - 2.0 % -		+ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % * C4E or F2M
	nonferrous metals				++ 0.8 - 1.2 % -	++ 1.0 - 2.0 % -		++ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % * C4E or F2M
polyurethane	iron/steel	wb	++ 0.4 - 0.8 % * TAC or MSM	+++ 0.1 - 0.3 % * TAC or MSM	++ 0.6 - 1.0 % -		+ 1.0 - 2.0 % * C4E or F2M		+++ 1.0 - 2.0 % * C4E or F2M	++ 1.0 - 2.0 % * C4E or F2M	+++ 0.8 - 1.2 % -	+++ 1.0 - 2.0 % * C4E or F2M
	aluminum		++ 0.3 - 0.8 % * TAC or MSW	++ 0.1 - 0.3 % * TAC or MSW	+ 0.6 - 1.0 % -		++ 1.0 - 2.0 %		++ 1.0 - 2.0 %	+++ 1.0 - 2.0 %	++ 0.8 - 1.0 % -	+++ 1.0 - 2.0 % * C4E or F2M
	sandblasted aluminum		+ 0.3 - 0.8 % * TAC or MSW	+ 0.1 - 0.3 % * TAC or MSW			+ 1.0 - 2.0 %		+ 1.0 - 2.0 %	+++ 1.0 - 2.0 %	+/- 0.5 - 1.0 %	+++ 1.0 - 2.0 % * C4E or F2M
	nonferrous metals		+/- 0.4 - 0.8 % * TAC or G50-50	+/- 0.1 - 0.5 % * TAC or G50-50	++ 0.6 - 1.0 % -		+++ 1.0 - 2.0 % * C4E or F2M		+++ 1.0 - 2.0 % * C4E or F2M	+++ 1.0 - 2.0 % * C4E or F2M	++ 0.8 - 1.2 % -	+++ 1.0 - 2.0 % * C4E or F2M
	iron/steel	sb			+++ 0.8 - 1.2 % -	+ 1.0 - 2.0 % -		+ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % * C4E or F2M
	aluminum				+ 0.8 - 1.0 % -	++ 1.0 - 2.0 % -		++ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % * C4E or F2M
	sandblasted aluminum					+ 1.0 - 2.0 % -		+ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % * C4E or F2M
	nonferrous metals				++ 0.8 - 1.2 % -	++ 1.0 - 2.0 % -		++ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % * C4E or F2M

System	Surface	solvent	flashpenTAC product line		TACorr product line							TACorrSil product line
			F2M	C4E	G50 Z	G50	G50 50	G50 S	MSM	MSW	Bni	CX2
			nitrite free	nitrite containing	nitrite free						nitrite containing	silan containing
			*Combination with TACorr is recommended		*Combination with flashrust inhibitor is recommended							*Combination with flashrust inhibitor is recommended
acrylate	iron/steel	wb	+++ 0.5 - 1.0 % * TACorr MSM	+++ 0.1 - 0.5 % * TACorr MSM	+++ 0.8 - 1.2 % -		+ 1.0 - 2.0 % *C4E or F2M		+++ 1.0 - 2.0 % *C4E or F2M	++ 1.0 - 2.0 % *C4E or F2M	+++ 0.8 - 1.2 % -	+++ 1.0 - 2.0 % *C4E or F2M
	aluminum		++ 0.3 - 0.8 % * TACorr MSW	++ 0.1 - 0.3% * TACorr MSW	+ 0.8 - 1.0 % -		++ 1.0 - 2.0 %		++ 1.0 - 2.0 %	+++ 1.0 - 2.0 %	++ 0.8 - 1.0 % -	+++ 1.0 - 2.0 % *C4E or F2M
	sandblasted aluminum		+ 0.3 - 0.8 % * TACorr MSW	+ 0.1 - 0.3% * TACorr MSW			+ 1.0 - 2.0 %		+ 1.0 - 2.0 %	+++ 1.0 - 2.0 %	+/- 0.5 - 1.0 %	+++ 1.0 - 2.0 % *C4E or F2M
	nonferrous metals		+/- 0.5 - 1.0 % * TACorr G50-50	+/- 0.1 - 0.5 % * TACorr G50-50	++ 0.8 - 1.2 % -		+++ 1.0 - 2.0 % *C4E or F2M		+++ 1.0 - 2.0 % *C4E or F2M	+++ 1.0 - 2.0 % *C4E or F2M	++ 0.8 - 1.2 % -	+++ 1.0 - 2.0 % *C4E or F2M
	iron/steel	sb			+++ 0.8 - 1.2 % -	+ 1.0 - 2.0 %		+ 1.0 - 2.0 %				+++ 1.0 - 2.0 % *C4E or F2M
	aluminum				+ 0.8 - 1.0 % -	++ 1.0 - 2.0 % -		++ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % *C4E or F2M
	sandblasted aluminum					+ 1.0 - 2.0 % -		+ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % *C4E or F2M
	nonferrous metals				++ 0.8 - 1.2 % -	++ 1.0 - 2.0 % -		++ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % *C4E or F2M
alkyd	iron/steel	wb	++ 0.4 - 0.8 % * TACorr MSM	+++ 0.1 - 0.3 % * TACorr MSM	+++ 0.6 - 1.0 % -		+ 1.0 - 2.0 % *C4E or F2M		+++ 1.0 - 2.0 % *C4E or F2M	++ 1.0 - 2.0 % *C4E or F2M	+++ 0.8 - 1.2 % -	+++ 1.0 - 2.0 % *C4E or F2M
	aluminum		++ 0.3 - 0.8 % * TACorr MSW	++ 0.1 - 0.3% * TACorr MSW	+ 0.6 - 1.0 % -		++ 1.0 - 2.0 %		++ 1.0 - 2.0 %	+++ 1.0 - 2.0 %	++ 0.8 - 1.0 % -	+++ 1.0 - 2.0 % *C4E or F2M
	sandblasted aluminum		+ 0.3 - 0.8 % * TACorr MSW	+ 0.1 - 0.3% * TACorr MSW			+ 1.0 - 2.0 %		+ 1.0 - 2.0 %	+++ 1.0 - 2.0 %	+/- 0.5 - 1.0 %	+++ 1.0 - 2.0 % *C4E or F2M
	nonferrous metals		+/- 0.4 - 0.8 % * TACorr G50-50	+/- 0.1 - 0.5 % * TACorr G50-50	++ 0.6 - 1.0 % -		+++ 1.0 - 2.0 % *C4E or F2M		+++ 1.0 - 2.0 % *C4E or F2M	+++ 1.0 - 2.0 % *C4E or F2M	++ 0.8 - 1.2 % -	+++ 1.0 - 2.0 % *C4E or F2M
	iron/steel	sb			+++ 0.8 - 1.2 % -	+ 1.0 - 2.0 %		+ 1.0 - 2.0 %				+++ 1.0 - 2.0 % *C4E or F2M
	aluminum				+ 0.8 - 1.0 % -	++ 1.0 - 2.0 % -		++ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % *C4E or F2M
	sandblasted aluminum					+ 1.0 - 2.0 % -		+ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % *C4E or F2M
	nonferrous metals				++ 0.8 - 1.2 % -	++ 1.0 - 2.0 % -		++ 1.0 - 2.0 % -				+++ 1.0 - 2.0 % *C4E or F2M

GUIDE FORMULATIONS

HT011 - 2K EP Primer (wb)

System	allnex easy cure system
Color	grey
Mixing ratio	2.5 : 1
Crosslinking	50 %
Surface	Multimetal; tests on steel and aluminum alloys
Preparation	different; for tests on sandblasted and cold rolled

Component A (amin)

Amount	Designation	Function
11.20	demin. water	solvent
under running stirrer		
3.30	ADDITOL® VXW 6208	dispersing additive
0.10	ADDITOL® VXW 6393	defoamer
under running stirrer in listed order		
8.50	Talcum IT-extra	silicate
20.50	Kronos 2190	pigment
0.40	Bayferrox 3920	pigment
1.10	Bayferrox 306	pigment
21.10	Albawhite H90	barium sulfate
4.00	Nubirox 213	anticorrosion pigment
15 min. pre-disperse, then pearl mill (gf<20µm)		
70.20	**subtotal**	
under running stirrer		
0.05	ADDITOL® VXW 6393	defoamer
0.60	Texanol	solvent
mixture		
0.60	ADDITOL® VXW 6388	PU thickener
1.00	Methoxypropanol	solvent
under running stirrer		
24.20	BECKOCURE® EH 2260w/41WA	amine/binder
2.00	**TACorr MSM**	inhibitor
1.35	demin. water	solvent
100.00	**total**	

Component B (epoxi)

Amount	Designation	Function
36.30	BECKOPOX™ EP 2384w/57WA	epoxid/binder
under running stirrer		
0.8	**flashproTAC F2M**	inhibitor
2.9	demin. water	solvent
40.00	**Summe**	

Guide Formulation: **HT011_EP_wb_2k_pri_BC2260_BP2384_MSMf2M_1119**

HT002 - 2K EP Primer (wb)

System	allnex easy cure system
Color	grey
Mixing ratio	2.5 : 1
Crosslinking	50 %
Surface	Multimetal; tests on steel and aluminum alloys
Preparation	different; for tests on sandblasted and cold rolled

Component A (amin)

Amount	Designation	Function
11.20	demin. water	solvent
under running stirrer		
3.30	ADDITOL® VXW 6208	dispersing additive
0.10	ADDITOL® VXW 6393	defoamer
under running stirrer in listed order		
8.50	Talcum IT-extra	silicate
20.50	Kronos 2190	pigment
0.40	Bayferrox 3920	pigment
1.10	Bayferrox 306	pigment
21.10	EWO	barium sulfate
4.00	Nubirox 213	anticorrosion pigment
15 min. pre-disperse, then pearl mill (gf<20µm)		
70.20	**subtotal**	
under running stirrer		
0.05	ADDITOL® VXW 6393	defoamer
0.60	Texanol	solvent
mixture		
0.60	ADDITOL® VXW 6388	PU thickener
1.00	Methoxypropanol	solvent
under running stirrer		
24.20	BECKOCURE® EH 2260w/41WA	amine/binder
2.00	**TACorr MSW**	inhibitor
1.35	demin. water	solvent
100.00	**total**	

Component B (epoxi)

Amount	Designation	Function
36.30	BECKOPOX™ EP 2384w/57WA	epoxid/binder
under running stirrer		
0.8	**flashproTAC F2M**	inhibitor
2.9	demin. water	solvent
40.00	**Summe**	

Guide Formulation: **HT002_EP_wb_2k_pri_BC2260_BP2384_MSWf2M_1119**

HT014 - 2K EP Primer (wb)

System	allnex easy cure system
Color	grey
Mixing ratio	2.0 : 1 with BECKOPOX™ EP 387w/51WA
Crosslinking	50 %
Surface	Multimetal; tests on steel and aluminum alloys
Preparation	different; for tests on sandblasted and cold rolled

Component A (amin)

Amount	Designation	Function
11.20	demin. water	solvent
under running stirrer		
3.30	ADDITOL® VXW 6208	dispersing additive
0.10	ADDITOL® VXW 6393	defoamer
under running stirrer in listed order		
12.00	Aktisil AM	silicate
18.10	Kronos 2190	pigment
0.40	Bayferrox 3920	pigment
1.10	Bayferrox 306	pigment
20.00	Albawhite H90	barium sulfate
4.00	Nubirox 106	anticorrosion pigment
15 min. pre-disperse, then pearl mill (gf<20µm)		
70.20	**subtotal**	
under running stirrer		
0.05	ADDITOL® VXW 6393	defoamer
0.60	Texanol	solvent
mixture		
0.60	ADDITOL® VXW 6388	PU thickener
1.00	Methoxypropanol	solvent
under running stirrer		
24.20	BECKOCURE® EH 2260w/41WA	amine/binder
1.20	**TACorr BNi**	inhibitor
2.15	demin. water	solvent
100.00	**total**	

Component B (epoxi)

Amount	Designation	Function
45,40	BECKOPOX™ EP 387w/51WA	epoxid/binder
under running stirrer		
4,60	demin. water	solvent
50.00	**Summe**	

Guide Formulation: **HT014_EP_wb_2k_pri_BC2260_BP387_BNi_1119**

HT015 - 2K EP Primer (wb)

System	allnex easy cure system
Color	grey
Mixing ratio	2.0 : 1 with BECKOPOX™ EP 387w/51WA
Crosslinking	50 %
Surface	Multimetal; tests on steel and aluminum alloys
Preparation	different; for tests on sandblasted and cold rolled

Component A (amin)

Amount	Designation	Function
11.20	demin. water	solvent
under running stirrer		
3.30	ADDITOL® VXW 6208	dispersing additive
0.10	ADDITOL® VXW 6393	defoamer
under running stirrer in listed order		
12.00	Aktisil AM	silicate
18.10	Kronos 2190	pigment
0.40	Bayferrox 3920	pigment
1.10	Bayferrox 306	pigment
19.60	Albawhite H90	barium sulfate
4.00	Nubirox 106	anticorrosion pigment
15 min. pre-disperse, then pearl mill (gf<20µm)		
70.20	**subtotal**	
under running stirrer		
0.05	ADDITOL® VXW 6393	defoamer
0.60	Texanol	solvent
mixture		
0.60	ADDITOL® VXW 6388	PU thickener
1.00	Methoxypropanol	solvent
under running stirrer		
24.20	BECKOCURE® EH 2260w/41WA	amine/binder
2.00	**TACorr MSW**	inhibitor
0.40	**flashproTAC C4E**	inhibitor
1.35	demin. water	solvent
100.00	**total**	

Component B (epoxi)

Amount	Designation	Function
45.40	BECKOPOX™ EP 387w/51WA	epoxid/binder
under running stirrer		
4.6	demin. water	solvent
50.00	**Summe**	

Guide Formulation: **HT015_EP_wb_2k_pri_BC2260_BP387_MSWC4E_1119**

TEST REPORTS

TACorr G50-50 //TR1_TACorr G50-50_Multi metal protection_wb

Corrosion of	Salt **Spray** Test (*passive surface*)	Salt **Water** Test (*passive surface*)	Salt **Spray** Test (emerized surface)	Salt **Water** Test (emerized surface)	**TACorr G50-50** Salt **Spray** Test (emerized surface)	**TACorr G50-50** Salt **Water** Test (emerized surface)
Al 1050						
Resistance	40 h	150 h	48 h	48 h	350 h	350 h
Al 5005						
Resistance	200 h	100 h	48 h	48 h	350 h	350 h
Al 6016						
Resistance	40 h	100 h	24 h	24 h	72 h	100 h
Al 6082						
Resistance	200 h	200 h	24 h	24 h	72 h	100 h

Corrosion of	Salt **Spray** Test (*passive surface*)	Salt **Water** Test (*passive surface*)	Salt **Spray** Test (emerized surface)	Salt **Water** Test (emerized surface)	TACorr G50-50 Salt **Spray** Test (emerized surface)	TACorr G50-50 Salt **Water** Test (emerized surface)
Al 7075						
Resistance	24 h	100 h	1 h	2 h	48 h	200 h
Cu						
Resistance	100 h	100 h	10 h	10 h	72 h	72 h
CuSn8 (bronze)						
Resistance	24 h	100 h	10 h	10 h	72 h	72 h
CuZn27 (brass)						
Resistance	20 h	150 h	10 h	100 h	100 h	100 h

TACorr G50-50 //TR1_TACorr G50-50_Multi metal protection_wb

Corrosion of	Salt **Spray** Test (*passive surface*)	Salt **Water** Test (*passive surface*)	Salt **Spray** Test (emerized surface)	Salt **Water** Test (emerized surface)	**TACorr G50-50** Salt **Spray** Test (emerized surface)	**TACorr G50-50** Salt **Water** Test (emerized surface)
Zn						
Resistance	10 h	200 h	2 h	120 h	10 h	120 h
DX51 hot zinc dipped steel						
Resistance	200 h	200 h	no sandblasting possible	no sandblasting possible	200 h	200 h
DC01 galvanized steel (zinc on surface)						
Resistance	20 h	48 h	no sandblasting possible	no sandblasting possible	100 h	100 h

Test was applied by dipping the panels into 1 % microemulsion of **TACorr G50-50** in water.
TACorr G50-50 contains 40 % of the polymer **TACorr G50** plus 10 % Triethanolamine and 50 % water.
The drying of the panel at room temperature is advisable.

Further information/contact www.hightac.de

1K styrene/acrylic DTM Systems

24 h SST wet adhesion - System A

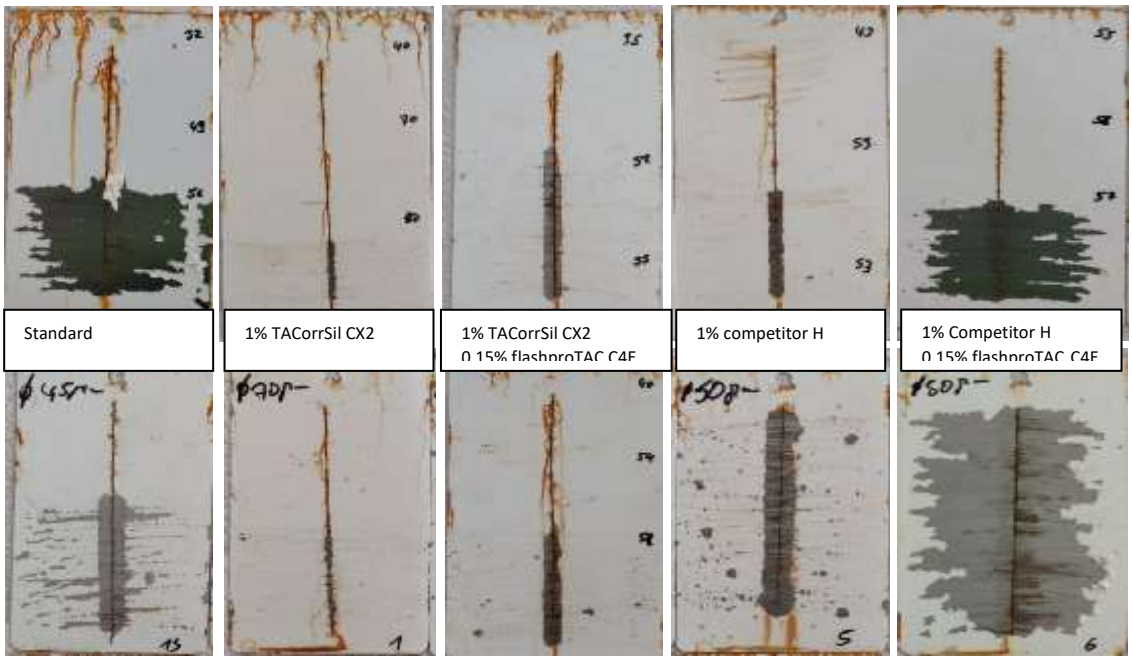
1.) The coating sample is applicated on a Test panel
2.) After drying for 24h you make a Saltspray test
3.) After 24h SST you scratch at the scrape and compare the subsurface migration

test Number	inhibitor	surface	application
Standard	-	cold rolled steel (OC Gardobond) cold rolled steel (Q-Panel)	Spraygun
A1	+ 1 % **TACorrSil CX2**	cold rolled steel (OC Gardobond) cold rolled steel (Q-Panel)	Spraygun
A2	+ 1 % Competitor H	cold rolled steel (OC Gardobond) cold rolled steel (Q-Panel)	Spraygun
A3	+ 1 % **TACorrSil CX2** + 0,15 % **flashproTAC C4E**	cold rolled steel (OC Gardobond) cold rolled steel (Q-Panel)	Spraygun
A4	+ 1 % Competitor H + 0,15 % **flashproTAC C4E**	cold rolled steel (OC Gardobond) cold rolled steel (Q-Panel)	Spraygun

24 h SST wet adhesion - System A

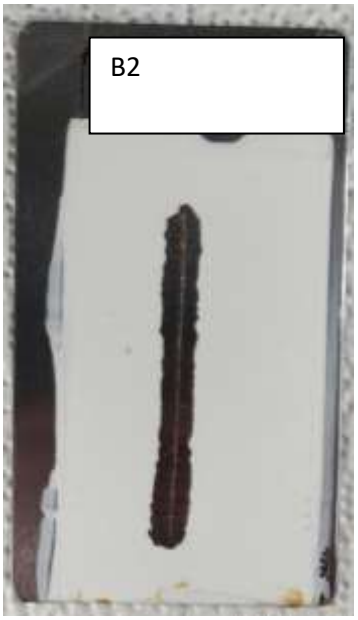
OC Gardobond

Q- Panel



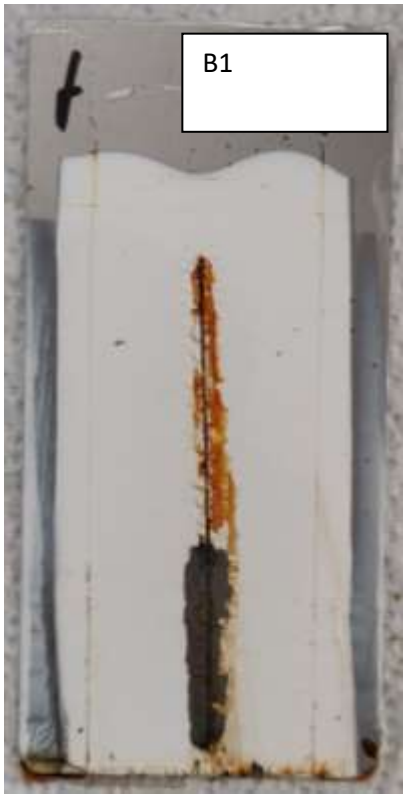
24 h SST wet adhesion - System B

test Number	inhibitor	surface	application
Standard	-	cold rolled steel (Q-Panel)	300 µm squeegee
Reference	+ 1.9 % Competitor A + 0.5 % Competitor A (fri)	cold rolled steel (Q-Panel)	300 µm squeegee
B1	+ 1 % **TACorrSil CX2**	cold rolled steel (Q-Panel)	300 µm squeegee
B2	+ 1 % **TACorrSil CX2** + 0,15 % **flashproTAC C4E**	cold rolled steel (Q-Panel)	300 µm squeegee



200 h saltspray test - System C

test Number	inhibitor	surface	application
Reference	-	cold rolled steel (Q-Panel)	300 µm squeegee
B1	+ 1 % **TACorrSil CX2**	cold rolled steel (Q-Panel)	300 µm squeegee
B2	+ 1 % Competitor H	cold rolled steel (Q-Panel)	300 µm squeegee



2K polyurethane automobile primer/filler

Stone chip resistance of coatings

- After Humidity Test
- on phosphate Steel
- DIN EN ISO 20567-1
- characteristic value: <2

Bad

+ 1% TACorrSil

test number	inhibitor A - Component	inhibitor B - Component	humidity - test		saltspray - test		result
			720 h		720 h		
			cold rolled steel	sandblasted steel	cold rolled steel	sandblasted steel	
HT011	2 % TACorr MSM	*2 % flashproTAC F2M*	blistering: 1-2(S1-2) rust grade: Ri 0	blistering: 1(S1) rust grade: Ri 0	blistering: 0(S0) rust grade: Ri 0 SC 0 mm SM 0.25 mm	blistering: 0(S0) rust grade: Ri 0 SC 0 mm SM 0.10 mm	
HT011 / HT002 without inhibitors	-	-	blistering: 1(S1) rust grade: Ri 0	blistering: 1-2(S2) rust grade: Ri 0	blistering: 0(S0) rust grade: Ri 0 SC 0 mm SM 3.5 mm	blistering: 0(S0) rust grade: Ri 0 SC 0 mm SM 1.5 mm	
HT011 / HT002 Only MSW	2 % TACorr MSW	-	blistering: 0(S0) rust grade: Ri 0	blistering: 1-2(S1-2) rust grade: Ri 0	blistering: 1(S2-3) rust grade: Ri 0 SC 0 mm SM 2.41 mm	blistering: 0(S0) rust grade: Ri 0 SC 0 mm SM 0.1 mm	
HT011 / HT002 Only C4E	0.8 % flashproTAC C4E	-	blistering: 0(S0) rust grade: Ri 0	blistering: 0(S0) rust grade: Ri 0	blistering: 0(S0) rust grade: Ri 0 SC 0 mm SM 3 mm	blistering: 0(S0) rust grade: Ri 0 SC 0 mm SM 0 mm	

24h SST wet adhesion – 2K HS AC solvent born Coating

1.) 400 µm of coating is scrape on a cold rolled steel panel (QD)
2.) After drying for 24h you make a Saltspray test
3.) After 24h SST you scratch at the scrape and compare the subsurface migration

test Number	inhibitor	surface	application
Reference (with zink phosphate)	-	cold rolled steel (Q-Panel)	300 µm squeegee
Reference (without zink phosphate)	-	cold rolled steel (Q-Panel)	300 µm squeegee
HS 2 (without zink phosphate)	+ 1 % **TACorr G50 Z**	cold rolled steel (Q-Panel)	300 µm squeegee

Reference
(with zink phosphate)

Reference
(without zink phosphate)

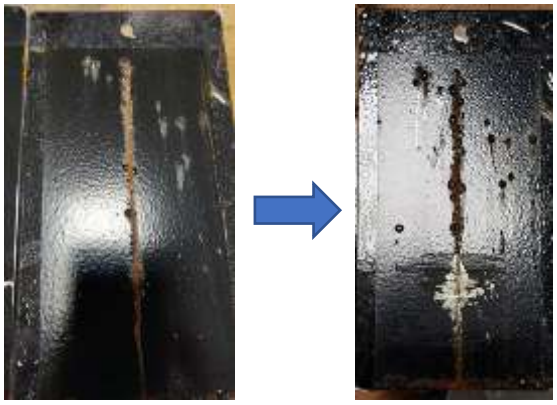
HS 2

2K HS AC solvent born Coating

750 h Saltspray Test

test Number	inhibitor	surface	application
HS 1 (zink phosphate)	**+ 1 % TACorr G50 Z**	phosphated steel	Spraygun
HS 2 (without zink phosphate)	**+ 1 % TACorr G50 Z**	phosphated steel	Spraygun

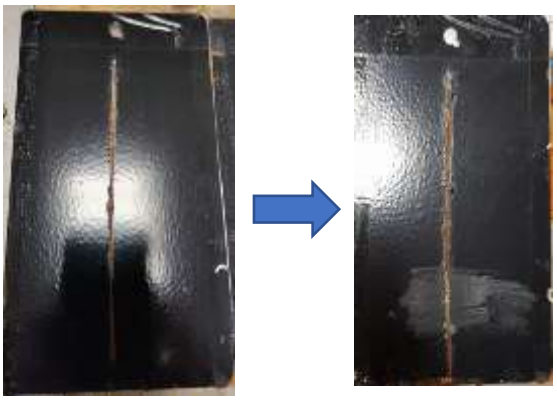
HS 1 (zink phosphate)



500 h
Saltspray-test

… scatched after 750 h
Saltspray-test

HS 2 (without zink phosphate)



500 h
Saltspray-test

… scatched after 750 h
Saltspray-test

2K HS AC solvent born Coating

1000 h Humidity Test

test Number	inhibitor	surface	application
HS 1 (zink phosphate)	**+ 1 % TACorr G50 Z**	phosphated steel	Spraygun
HS 2 (without zink phosphate)	**+ 1 % TACorr G50 Z**	phosphated steel	Spraygun

HS 1 (zink phosphate)

HS 2 (without zink phosphate)

Bucked Test – alkyd dispersion (water based)

4.) 400 µm of coating is scrape on a half of cold rolled steel panel (QD)
5.) Then it is placed to one third in a container filled with water and sealed
6.) After drying overnight, rust formation is assessed

test Number	inhibitor	surface	application
Reference	-	cold rolled steel (Q-Panel)	300 µm squeegee
W 10	+ 1 % **TACorr G50 Z**	cold rolled steel (Q-Panel)	300 µm squeegee

Reference

W 10

24h SST wet adhesion – alkyd dispersion (water based)

4.) 400 µm of coating is scrape on a cold rolled steel panel (QD)
5.) After drying for 24h you make a Saltspray test
6.) After 24h SST you scratch at the scrape and compare the subsurface migration

test Number	inhibitor	surface	application
Reference	-	cold rolled steel (Q-Panel)	300 µm squeegee
W 10	+ 1 % **TACorr G50 Z**	cold rolled steel (Q-Panel)	300 µm squeegee

Reference

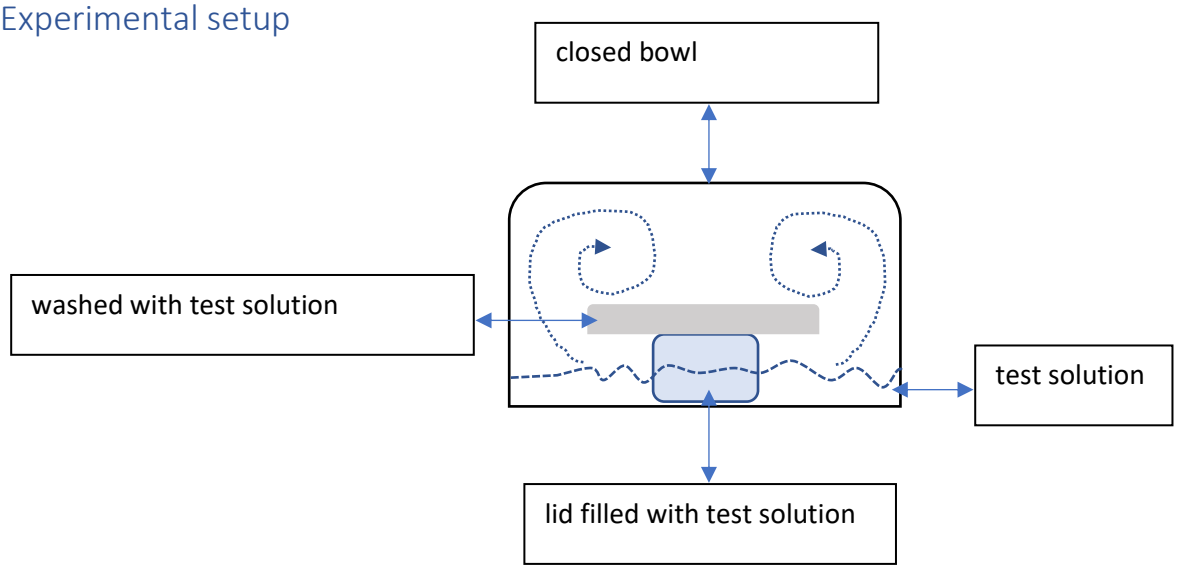
W 10

T

Temporary corrosion protection in water based industrial cleaner

test Number	Inhibitor (in the concentrate)	surface	application
Reference	-	sandblasted steel	4% concentrate in Water
SG 7	+ 7 % **TACorr G50 Z**	sandblasted steel	4% concentrate in Water

Experimental setup



Temporary corrosion protection in water based industrial cleaner

Saltspray tests

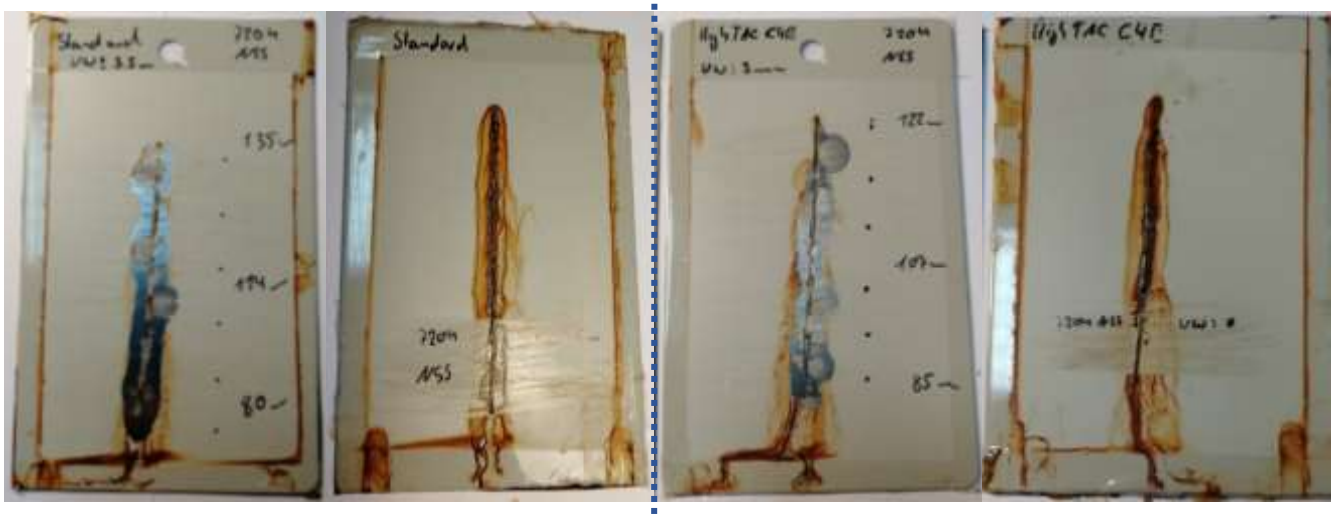
Based on our 2K EP Guide Formulation "002_2K EP…"

test number	*Inhibitor A - Component*	*B - Component*	*Inhibitor B - Component*	*substrate*
HighTAC C4E	*0.8% flashproTAC C4E*	BECKOPOX™ EP 2384w/57WA	-	*cold rolled steel (QD) sandblasted steel*

Sample	Dft	Storage	Test	Duration	Results	Standard (without Inhibitor)
cold rolled steel (QD)	100-150 µm	10 days at room temperature	**salt spray test (NSS)** **blistering:** DIN EN ISO 4628-2 **rust grade**: DIN EN ISO 4628-3 **subsurface corrosion (SC):** 0 mm **subsurface migration (SM):** < 2mm	720 h	**blistering:** 0(S0) **rust grade:** Ri 0 **SC:** 0 mm **SM:** 3.0 mm	**blistering:** 0(S0) **rust grade:** Ri 0 **SC:** 0 mm **SM:** 3.5 mm
sandblasted steel	100-150 µm	10 days at room temperature	**salt spray test (NSS)** **blistering:** DIN EN ISO 4628-2 **rust grade**: DIN EN ISO 4628-3 **subsurface corrosion (SC):** 0 mm **subsurface migration (SM):** < 2mm	720 h	**blistering:** 0(S0) **rust grade:** Ri 0 **SC:** 0 mm **SM:** 0 mm	**blistering:** 0(S0) **rust grade:** Ri 0 **SC:** 0 mm **SM:** 1.5mm

720 h Saltspray Test

cold rolled | sandblasted | cold rolled | sandblasted



Humidity tests

Based on our 2K EP Guide Formulation "002_2K EP…"

test number	*Inhibitor A -Component*	*B - Component*	*Inhibitor B - Component*	*substrate*
HighTAC C4E	*0.8% flashproTAC C4E*	BECKOPOX™ EP 2384w/57WA	-	*cold rolled steel (QD) sandblasted steel*

Sample	Dft	Storage	Test	Duration	Results	Standard (without Inhibitor)
cold rolled steel (QD)	100-150 µm	10 days at room temperature	**Humidity test (HT)** **blistering:** DIN EN ISO 4628-2 **rust grade**: DIN EN ISO 4628-3	720 h	**blistering:** 0(S0) **rust grade:** Ri 0	**blistering:** 1(S1) **rust grade:** Ri 0
sandblasted steel	100-150 µm	10 days at room temperature	**Humidity test (HT)** **blistering:** DIN EN ISO 4628-2 **rust grade**: DIN EN ISO 4628-3	720 h	**blistering:** 0(S0) **rust grade:** Ri 0	**blistering:** 1-2(S2) **rust grade:** Ri 0

720 h humidity test

Saltspray tests

Based on our 2K EP Guide Formulation "NC2260_ …"

test number	*Inhibitor A - Component*	*B - Component*	*Inhibitor B - Component*	*substrate*
NC2260DB	*2.0%* **TACorr MSW** *0.4%* **flashproTAC C4E**	BECKOPOX™ EP 387w/52WA	-	*cold rolled steel (QD)*

Sample	Dft	Storage	Test	Duration	Results	Standard (without Inhibitor)
cold rolled steel (QD)	100 µm	10 days at room temperature	**salt spray test (NSS)** **blistering:** DIN EN ISO 4628-2 **rust grade**: DIN EN ISO 4628-3 **subsurface corrosion (SC):** 0 mm **subsurface migration (SM):** < 2mm	1440 h	**blistering:** 0(S0) **rust grade:** Ri 0 **SC:** 0 mm **SM:** 1.6 mm	**blistering:** 0(S0) **rust grade:** Ri 0 **SC:** 0 mm **SM:** 2.4 mm

1440 h Saltspray Test

cold rolled steel

cold rolled steel

Humidity tests

Based on our 2K EP Guide Formulation "NC2260_ …"

test number	*Inhibitor A - Component*	*B - Component*	*Inhibitor B - Component*	*substrate*
NC2260DB	*2.0% TACorr MSW* *0.4% flashproTAC C4E*	BECKOPOX™ EP 387w/52WA	-	*cold rolled steel (QD)*

Sample	Dft	Storage	Test	Duration	Results	Standard (without Inhibitor)
cold rolled steel (QD)	100 µm	10 days at room temperature	**Humidity test (HT)** **blistering:** DIN EN ISO 4628-2 **rust grade**: DIN EN ISO 4628-3	1000 h	**blistering:** 0(S0) **rust grade:** Ri 0	**blistering:** 0(S0) **rust grade:** Ri 0

1000 h humidity test

cold rolled steel

cold rolled steel

saltspray tests

Based on our 2K EP Guide Formulation "NC2260DIN12944-6_ …"

test number	*Inhibitor A - Component*	*B - Component*	*Inhibitor B - Component*	*substrate*
NC2260DIN12944-6	*1.2% TACorr BNi*	BECKOPOX™ EP 387w/52WA	-	*cold rolled steel (QD)*

Sample	Dft	Storage	Test	Duration	Results	Standard (without Inhibitor)
cold rolled steel (QD)	100 µm	10 days at room temperature	**salt spray test (NSS)** **blistering:** DIN EN ISO 4628-2 **rust grade**: DIN EN ISO 4628-3 **subsurface corrosion (SC):** 0 mm **subsurface migration (SM):** < 2mm	1440 h	**blistering:** 0(S0) **rust grade:** Ri 0 **SC:** 0 mm **SM:** 2.4 mm	**blistering:** 0(S0) **rust grade:** Ri 0 **SC:** 0 mm **SM:** 4.8 mm

1440 h saltspray Test

cold rolled steel (Q-panel)

cold rolled steel (Q-panel)

humidity tests

Based on our 2K EP Guide Formulation "NC2260DIN12944-6_ …"

test number	*Inhibitor A - Component*	*B - Component*	*Inhibitor B - Component*	*substrate*
NC2260DIN12944-6	*1.2% TACorr BNi*	BECKOPOX™ EP 387w/52WA	-	*cold rolled steel (QD)*

Sample	Dft	Storage	Test	Duration	Results	Standard (without Inhibitor)
cold rolled steel (QD)	100 µm	10 days at room temperature	**Humidity test (HT)** **blistering:** DIN EN ISO 4628-2 **rust grade**: DIN EN ISO 4628-3	1000 h	**blistering:** 0(S0) **rust grade:** Ri 0	**blistering:** 0(S0) **rust grade:** Ri 0

1000 h humidity test

cold rolled steel

cold rolled steel