

Automotive OEM Anti-Corrosion finishing

Specification guide



**MacDermid Enthone and OEM's:
innovation equals proven results**



Anti-Corrosion coatings

Advanced technologies for protection and performance

Get the attention you deserve

As the worldwide leader in Anti-Corrosion Coatings, MacDermid Enthone Industrial Solutions understands exactly what it takes to satisfy our customers' needs: the ability to listen to their challenges and the expertise to provide them with the highest performing solutions possible. Our portfolio comprises of zinc, zinc alloy, trivalent passivates, topcoats and lubricants. These are applied by many of the world's largest surface finishing applicators for aerospace, automotive, construction and electronic components.

OEM	Specification	Zinc Type	Passivate	Topcoat	ZinKlad	
Akebono	AES G 3501-U	Zinc ¹	PERMA PASS 5000	ENSEAL 29	—	
Alstom	AT1-DTFR-150611	BS2, BS3, BS4	Envirozin120	TriPass ELV 6100	None	96
		BS1, BS2, BS3, BS4	Envirozin120/Kenlevel T40	TriPass ELV 6100 / 7000	HydroKlad 40	240
		BS1, BS2, BS3, BS4	Envirozin120	TriPass ELV 7000	TNT 15	250
		BS2, BS3, BS4	Enviralloy Fe	TriPass ELV 7000	None	500
		BS1, BS2, BS3, BS4	Enviralloy Fe	TriPass ELV 6100 / 7000	TNT 15/HydroKlad 40	500
		BS1, BS2, BS3, BS4	Enviralloy Ni 12-15	TriPass ELV 7100	TNT 15	1000 B
		BS2, BS3, BS4	Enviralloy Ni 12-15 /Nispeed	TriPass ELV 7500	None	1000
		BS0,BS1,BS2,BS3,BS4	Enviralloy Ni 12-15	TriPass ELV 7500	TNT 15	1000
		BS0,BS1,BS2,BS3,BS4	Enviralloy Nispeed	TriPass ELV 7500	HydroKlad 40	1000
		DTRF150400-19052016	Envirozin	TriPass ELV Range	JS500	—
BMW	GS 90010 Zn	Zinc ¹	TriPass ELV Range	TNT 15	250	
	GS 90010 ZnFe	Enviralloy Fe	TriPass ELV Range	TNT 15	500	
	GS 90010 ZnNi	Enviralloy Ni 12-15	TriPass ELV Range	TNT 15	1000	
	GS 96001	Almac	TriPass ELV Range	—	—	
Daimler	DBL 8451.15	Zinc ¹	TriPass ELV Range	TNT 15	250	
	DBL 8451.86	Enviralloy Fe	TriPass ELV Range	TNT 15	500	
	DBL 8451.66	Enviralloy Ni 12-15	TriPass ELV Range	TNT 15	1000	
Bosch	0204y24533	Zinc ¹	TriPass ELV Range	ENSEAL 125	—	
Brembo	BDS-11.4	ZINCROLYTE KCL Ni III	PERMA PASS ULTRA IV PLUS	—	1000 ²	
Continental Teves	N5538107	ZINCROLYTE KCL Ni III	PERMA PASS ULTRA III	—	—	
	N5538109	Zinc ¹	TriPass ELV Range	ENSEAL 29	—	
Contitech	ATE N 553 81.07	Zinc ¹	PERMA PASS 5000, 3082	ENSEAL 110	—	
Dana	P 503	Enviralloy Fe	TriPass ELV 2000	TNT 11 / 15	500	
Delphi	DX 551 1314 Code G	Enviralloy Fe	TriPass ELV 2000	HydroKlad 10	500	
	DX 551200	—	PERMA PASS ULTRA III, 3095	ENSEAL C23, 26	—	
	DX 551300	ZINCROLYTE ZnFe	PERMAPASS 7012	ENSEAL C23, 26	—	
	DX 5511330	Enviralloy Ni	TriPass ELV 5100	TNT 12	1000 B	

Anti-Corrosion coatings

Innovation driven by customer need



The OEM connection

MacDermid Enthone fully understands that **OEM's** are at the heart of the innovation process, and our dedicated **OEM** team is 100% focused on engineering specifically designed solutions to meet their every need. We work closely with them to develop the products that not only meet their expectations, but that also help evolve the entire industry. It is a structured approach that yields outstanding results, and has enabled us to deliver the world's most advanced technologies for protection and performance.

OEM	Specification	Zinc Type	Passivate	Topcoat	ZinKlad
Federal Mogul	PDMS-A4.1	CLZ-970	PERMA PASS 3082	ENSEAL 29	—
FCA	PS-1207	Zinc ¹	PERMA PASS 5000	—	—
	PS-12182 (EXP)	Enviralloy Ni 12-15	TriPass ELV 5100 ³	TNT 12	1000 B
	PS-12182 (HG)	Enviralloy Ni 12-15	TriPass ELV 5100 ³	TNT 08 Bk / TNT 11	1000 B
	PS-50031 (EXP)	Enviralloy Ni 12-15	TriPass ELV 5100 ³	TNT 12	1000 B
	PS-50031 (HG)	Enviralloy Ni 12-15	TriPass ELV 5100 ³	TNT 08 Bk / TNT 11	1000 B
	PS-50031	Enviralloy Ni 12-15	TriPass ELV 3000 G	TNT 12	1000
	PS-8814	Zinc ¹	TriPass ELV Range	ENSEAL 29	—
	PS-8956	Zinc ¹	TriPass ELV Range	JS500	—
	PS-10509	Zinc ¹	TriPass ELV Range	JS600	—
Ford	WSS M21P40 S440	Envirozin/Kenlevel	TriPass ELV Range	None	96
	WSS M21P51-A1	Enviralloy Ni	TriPass ELV Range	None	1000
	WSS M21P51-A2 S450	Enviralloy Ni	TriPass ELV Range	TNT 12	1000
	WSS M21P51-A3 S450L	Enviralloy Ni	TriPass ELV Range	TNT 08	1000
	WSS M21P51-A4	Enviralloy Ni	TriPass ELV Range	TNT F103	1000
	WSS M21P51-A5 S450B	Enviralloy Ni	TriPass ELV Range	TNT12	1000
	WSS M21P51-A6 S450BL	Enviralloy Ni	TriPass ELV Range	TNT 08	1000 B
	WSS M21P52-A1 S437U	Envirozin/Kenlevel	TriPass ELV Range	None	96
	WSS M21P52-A2 S437	Envirozin/Kenlevel	TriPass ELV Range	TNT 15	250
	WSS M21P52-A3 S437M	MacuGuard	TriPass ELV Range	TNT 15	250 M
	WSS M21P52-A4 S437L	Envirozin/Kenlevel	TriPass ELV Range	TNT 08	250
	WSS M21P17-B1	Zinc ¹	PERMA PASS ULTRA III	ENSEAL C23	—
	WSS M21P17-B1 S443	ZINCROLYTE 191 NS (NS-K)	PERMA PASS 7012	—	—

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Advanced technologies for protection and performance

OEM	Specification	Zinc Type	Passivate	Topcoat	ZinKlad
General Motors	16730 (EXP)	Enviralloy Ni 12-15	TriPass ELV 5100 ³	TNT 12	1000 B
	3044	Envirozin/Kenlevel	TriPass ELV 1500 LT	HydroKlad SI	240
	3044	Zinc ¹	IMMUNOX 3K	ENSEAL 26	—
	3044 N	Envirozin/Kenlevel	TriPass ELV 2000	None	96
	3044 X	Envirozin/Kenlevel	TriPass ELV 1500 LT	HydroKlad SI	240
	3044 X / 3044 G	Envirozin/Kenlevel	TriPass ELV 2000	TNT 15	250
	3044 XH / 3044 GH	MacuGuard	TriPass ELV 2000	TNT 15	250 M
	4700	ZINCROLYTE ZnNi	PERMA PASS 3095	ENSEAL C22	—
	4700	ZINCROLYTE ZnFe	PERMA PASS 5000	ENSEAL 26	—
	4700	ZINCROLYTE ZnFe	PERMA PASS 7012	ENSEAL C22	—
	4700 Type B	ZINCROLYTE KCl-Ni	PERMA PASS ULTRA IV PLUS	ENSEAL 1303	—
	4700 /4700 Code G	Enviralloy Fe	TriPass ELV 2000	TNT 15 / HK 10	500
	4700 Type B ⁴	Enviralloy Ni 12-15	TriPass ELV 2000	TNT 12 / 15	1000
	4700 Type B Code G ⁴	Enviralloy Ni 12-15	TriPass ELV 2000	TNT 12 / 15	1000
	Honda	MFZn2-C	Zinc ¹	PERMA PASS 3095	—
MFZnNi1C,K		ZINCROLYTE ZnNi	PERMA PASS 3095	ENSEAL C23	—
Harman Automotive	1807978 (A)1 (C & D)	Envirozin / Kenlevel	TriPass ELV Corroblue	TNT 15	96
	1807978 (B)1	Envirozin / Kenlevel	TriPass ELV 2000	None	250
	2383391(A & B)	Enviralloy Ni 12-15	TriPass ELV 2000	None	1000
JLR	STJLR.50.5046-A3	Envirozin / Kenlevel	TriPass ELV Range	TNT 15	250
	STJLR.50.5046-A3	MacuGuard	TriPass ELV Range	TNT 15	250 M
	STJLR.50.5058.A1	Enviralloy Ni 12-15	TriPass ELV Range	None	1000
	STJLR.50.5058.A2 SJ50	Enviralloy Ni 12-15	TriPass ELV Range	TNT 08	1000
	STJLR.50.5058.A3 SJ50L	Enviralloy Ni 12-15	TriPass ELV Range	TNT 12	1000
	STJLR.50.5058.A4 SJ50B	Enviralloy Ni 12-15	TriPass ELV Range	TNT 12	1000 B
John Deere	JDM-15	Envirozin / Kenlevel	TriPass ELV Range	TNT 18	250
	JDM-15X1	Enthobrite Zinc	PERMA PASS 3300	—	—
	JDM-15X1	Enthobrite Zinc	PERMA PASS 3098	ENSEAL 1303 Ni	—
Navistar	CEMS G-20, Class 8A	Envirozin / Kenlevel	TriPass ELV 5100 LT	TNT 15	250
	CEMS G-22, Class ZNi-C5	Enviralloy Ni 12-15	TriPass ELV 2000	TNT 15	1000
	CEMS G-22, Class ZNi-B2	Enviralloy Ni 12-15	TriPass ELV 5100 LT v2	TNT 15	1000 B

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Innovation driven by customer need



OEM	Specification	Zinc Type	Passivate	Topcoat	ZinKlad
PSA	PS-1207	Zinc ¹	PERMA PASS 5000	—	—
	PS-8814	Zinc ¹	TriPass ELV Range	ENSEAL 29	—
	B15 4101	Envirozin / Enviralloy	TriPass ELV Range	TNT 15	—
	B15 4102	Enviralloy Ni 12-15	TriPass ELV 3000 / 5100	TNT 15	1000 B
Renault	01-71-001	Envirozin / Enviralloy	TriPass ELV Range	TNT 15	—
	01-71-002	Enviralloy Ni 12-15	TriPass ELV 3000/5100	TNT 15	1000 B
TRW	TS 2-21-079 A	Envirozin / Kenlevel	TriPass ELV 1000 / Blue	JS500, JS600, JS2000	250
	TS 2-21-079 A	ZINCROLYTE KCL-Ni III	PERMA PASS 3095/3098	—	—
	TS 2-21-079 A	ZINCROLYTE CLZ-Co	PERMA PASS 7763	ENSEAL 29	—
	TS 2-21-079 A	ZINCROLYTE CLZ-Co	PERMA PASS 7012	ENSEAL 29	—
	TS 2-21-079 A	CLZ-945	PERMA PASS 3082	ENSEAL 29	—
	TS 2-21-079 A	CLZ-945	PERMA PASS 3095	ENSEAL 29, Type 1	—
Volkswagen	TL 217	Envirozin Genesis	TriPass ELV Blue	TNT 11	96
	TL 217	Envirozin Genesis	TriPass ELV 1000	TNT 11	250
	TL 217	Envirozin	PERMA PASS 3098	ENTEK EOD	—
	TL 153	Enviralloy Fe	TriPass ELV 2000	TNT 11	500
	TL 153	Enviralloy Fe	TriPass ELV Black	TNT 11	500 B
	TL 244	Enviralloy Ni	TriPass ELV 2000/3000	TNT 11	1000
	TL 244	Enviralloy Ni	TriPass ELV 5100	TNT 11	1000 B
	TL 194 (c696)	Envirozin / Kenlevel	TriPass ELV 2000	HydroKlad	MG
	TL 194 (c697)	Envirozin / Kenlevel	TriPass ELV 2000	TNT 11	MGL
	TL 155	Almac	TriPass ELV Range	None	—
Volvo	STD-121-006	Enviralloy Ni	TriPass ELV 3000	—	—
	STD-121-006	Enviralloy Ni	TriPass ELV 3000	—	—
	STD-121-006	Enviralloy Range	TriPass ELV Range	TNT 15	—

1) ENTHOBRITE/ Envirozin/ Kenlevel

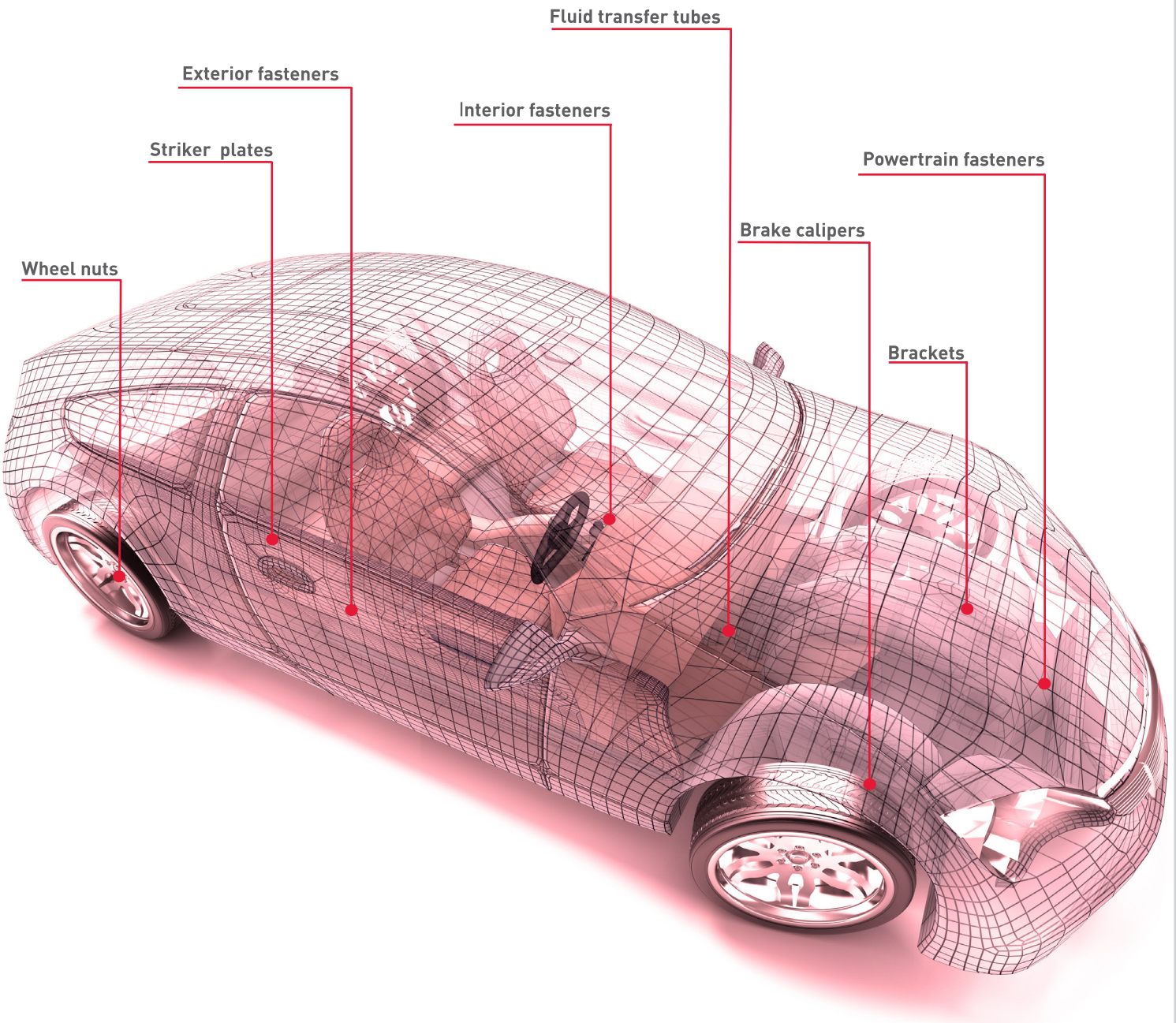
2) ZinKlad Brake 1000

3) Plus TriPass ELV post dip

4) 4700 Type B and 4700 Type B Code G

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MacDermid Enthone
INDUSTRIAL SOLUTIONS

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