



QUALITY CERTIFICATE
According to ASTM B209

Serial No: 202312005003301
Date: 2023-12-10

	ORDER NO.:SH-EC20230719			CONTRACT NO.:SH-EC20230719	
	DESCRIPTION OF GOODS: ALUMINUM CHECKERED PLATE			STANDARD: ASTMB209	
	ALLOY AND TEMPER: 3003H22			DIMENSIONS: 3*1219*2440	
	LOT NO.:22D15110007			NETWEIGHT: 9349.00kgs	
	MECHANICAL PROPERTIES	ULTIMATE STRENGTH	YIELD STRENGTH	ELONGATION	REMARKS
	UNITS	MPa	MPa	%	-----
	Nominal Requirement	117-158	≥82	≥7	
	Test Results	135	118	15	-----

CHEMICAL COMPOSITION %

		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Impurities		Al
Nominal requirement	Min	--	--	0.05	1.00	--	--	--	--	Each	Total	Remainder
	Max	0.60	0.70	0.20	1.50	---	--	0.10	--	0.05	0.15	
Test Results		0.03	0.52	0.10	1.17	--	--	0.01	--	0.05	0.15	



QINGDAO SENHE METALS CO., LTD.

QUALITY CERTIFICATE
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Serial No: 202312005003302

Date: 2023-12-10

CUSTOMER: EMPRESAS CARBONE S.A.	ORDER NO.:SH-EC20230829				CONTRACT NO.:SH-EC20230829		
	DESCRIPTION OF GOODS: ALUMINUM CHECKERED PLATE				STANDARD: ASTMB209		
	ALLOY AND TEMPER: 3003H22				DIMENSIONS: 1.5*1219*2440		
	LOT NO.:22F12010011				NETWEIGHT: 13742.00kgs		
	MECHANICAL PROPERTIES	ULTIMATE STRENGTH	YIELD STRENGTH	ELONGATION	REMARKS		
	UNITS	MPa	MPa	%	-----		
	Nominal Requirement	117-158	≥82	≥6			
	Test Results	130	124	13.8	-----		

CHEMICAL COMPOSITION %

		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Impurities		Al
Nominal requirement	Min	--	--	0.05	1.00	--	--	--	--	Each	Total	Remainder
	Max	0.60	0.70	0.20	1.50	--	--	0.10	--	0.05	0.15	
Test Results		0.05	0.47	0.09	1.15	--	--	0.01	--	0.05	0.15	



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Serial No: 202312005003303

Date: 2023-12-10

CUSTOMER: EMPRESAS CARBONE S.A.	ORDER NO.:SH-EC20231007				CONTRACT NO.:SH-EC20231007		
	DESCRIPTION OF GOODS: ALUMINUM CHECKERED PLATE				STANDARD: ASTMB209		
	ALLOY AND TEMPER: 3003H22				DIMENSIONS: 4.76*1219*2440		
	LOT NO.:22F13050062				NETWEIGHT: 2308.00kgs		
	MECHANICAL PROPERTIES	ULTIMATE STRENGTH	YIELD STRENGTH	ELONGATION	REMARKS		
	UNITS	MPa	MPa	%	-----		
	Nominal Requirement	117-158	≥82	≥8			
	Test Results	124	117	19	-----		

CHEMICAL COMPOSITION %

		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Impurities		Al
Nominal requirement	Min	--	--	0.05	1.00	--	--	--	--	Each	Total	Remainder
	Max	0.60	0.70	0.20	1.50	--	--	0.10	--	0.05	0.15	
Test Results		0.10	0.55	0.11	1.22	--	--	0.02	--	0.05	0.15	