

Materials List for:

# Fabrication of Superhydrophobic Metal Surfaces for Anti-Icing Applications

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## Materials

Name	Company	Catalog Number	Comments
Hydrochloric acid, 37%	SICAL, S.A.	AC07411000	used for acid etching
1H,1H,2H,2H-Perfluorodecyltriethoxysilane, 97%	Sigma-Aldrich	658758	used for silanization with FAS-17
Dupont AF1600	Dupont	D10389631	used for fluropolymer deposition
FC-72	3M, Fluorinet	1100-2-93	used for fluropolymer deposition (fluorocarbon solvent)
Cerium(III) chloride heptahydrate, 99.9%	Sigma-Aldrich	228931	used for Ceria coating deposition
Hydrogen peroxide solution, 30%	Sigma-Aldrich	H1009	used for Ceria coating deposition
Stearic acid, ≥98.5%	Sigma-Aldrich	S4751	used for Ceria coating deposition
Ethanol	SICAL, S.A.	16271	used throughout
Acetone	SICAL, S.A.	1090	used throughout
Aluminum sheets 0.5mm	MODULOR (Germany)	125993	substrates used through
Micro-90 concentrated cleaning solution	Sigma-Aldrich	Z281506	
Ultra pure Milli-Q water	Millipore	discontinued	used throughout
Plasma Etcher/Asher/Cleaner EMITECH K1050X	Aname	K1500XDEV-001	used throughout
PCC software	AMETEK	discontinued	software controlling the high speed camera Phantom MIRO 4
High Speed Camera Phantom Miro 4	AMETEK	discontinued	used for bouncing drop experiments
Open Loop PLμ 2.32	UPC-CD6 & Sensofar Tech S.L.	version 2.32	Software controlling PLμ Confocal Imaging Profiler
PLμ-Confocal Imaging Profiler 2300	Sensofar Tech S.L.	discontinued	used for roughness measurements
TABER 5750 LINEAL ABRASER	TABER	5750	used for lateral abrasion tests
Abbrasive sand: ASTM 20-30 SAND C778	U.S. SILICA COMPANY (USA)	1-800-635-7263	used for abrasive particile impact tests
Ozone cleaner: PSDP-UV4T, Digital UV Ozone System	Novascam	discontinued	UV-ozone degradation test
Peristaltic Pump GILSON 312, France	GILSON (France)	discontinued	used for water dripping test
Nylon thread	Dracon fishing line, Izorline internacional, inc. (USA)	discontinued	used for ice adhesion tests
Digital force gauge (ZTA-200N, ZTA Series	IMADA (USA)	370199	used for ice adhesion tests
Motorized test stand I, MH2-500N-FA	IMADA (USA)	366942	used for ice adhesion tests
Force Recorder Professional	IMADA (USA)	version 1.0.2	software provided by IMADA to register the force

HYGROCLIP XD - STANDARD PROBE	Rotronic	discontinued	Temperature and humidity probe
HW3 Lite software	Rotronic	version 2.1.2	Software controlling the HYGROCLIP Probe