

“zero clear”DATA

■HARDNESS TEST

Test Item	Test Result
Pencil hardness	More than 9h

●Testing body/Industrial Res. Inst. Aichi Prefect.

■ABRASION RESISTANT TEST

Test Item	Test Result
Wear resistance inner surface coating film (Number of iterations of the wear=10,000 cycles)	Coating film is not peeled off, without the abrasion

●Testing body/(Foundation of Japan)

Metal Household Inspection Center

●A method of testing/JIS S2010「Aluminium sheet wares」

Placed parallel to the Scotch surface of a commercial sponge scourer.
Manually move the front-rear direction by using a weight of 280g

■HEAT TEST

Test Item	Test Result
Electric furnace (Ambient temperature)	500°C

●Testing body/Aichi Prefecture Industrial
Technical Research Institute

■MEASUREMENT OF VOLUME RESISTIVITY

Test Item	Test Result
Measurement of volume resistivity	2.3~4.8×10 ¹¹ (Degree corresponding to the epoxy resin)

●Testing body/JFE Techno-Research Corporation

■HYGENIC TEST

Test Item	Test Result
Lead	Not be eluted
Cadmium	Not be eluted
Heavy metals	Below the limit
Potassium permanganate consumed	Below the limit of 1ppm

●Testing body/(Foundation of Japan)

Metal Household Inspection Center

●A method of testing/IPC-ES

■ANTIBACTERIAL TEST

Test Item	Initial	24 hours
E. coli	1.0×10 ⁵	<10 (No detection)
St. aureus	1.1×10 ⁵	<10 (No detection)

●Testing body/Kyoto Institute of Microbiology

●A method of testing/JIS Z 2801

Film adhesion method

■COMBUSTION QUALITY TEST

Test Item	24 hours
Combustion quality	Incombustibility
Melt drip resistance	smooth

●Testing body/

Japan Railway Vehicle Mechanical Engineering Association

●A method of testing/Combustion test

■LIQUID TEST

Test Solution	Judgment
Concentrated hydrochloric acid (35%)	○
Concentrated sulfuric acid (98%)	○
Concentrated nitric acid (60%)	○
Aqua regia	○
Concentrated hydrochloric acid+ Concentrated sulfuric acid (1:1)	○
Concentrated nitric acid+ Concentrated sulfuric acid (1:1)	○
Acetic acid (20%)	○
Phosphoric acid (85%)	○
Hydrofluoric acid (46%)	×
Perchloric acid (60%)	○
Saturated solution of sodium hydroxide	○
Aqua ammonia (25%)	○
Saturated solution of potassium permanganate	△
Mixed acid solution of chromic acid	○
Saturated solution of ferric chloride	○
Carbon tetrachloride	○
Petroleum benzene	○
Methyl acetate	○
Ethyl alcohol	○
Chloroform	○
Acetone	○
Xylene	○
Worcestershire sauce	○
Soy sauce	○
Grilled meats sauces	○
Mayonnaise	○
Ketchup	○
Cooking oil	○

●Testing body/

Aichi Prefecture Industrial Technical Research Institute

●A method of testing/JIS K 5600 6-1

Method 3 Equivalent to the intravenous method
Fluid volume : 0.2ml、Test time : 24h

■ACCELERATED WEATHER RESISTANT TEST

Test Item	Test Time	Color Difference ΔE	Glass Level (60°)	Glass Retention (%)
Aluminum	Zero test (White)	0	—	35.7
	500	2.3	34.5	96.6
	Zero test (Black)	0	—	50.8
	500	0.2	50.1	98.6
Glass	Zero clear	0	—	282
	500	0.6	260	92.9
	Zero clear	0	—	147
	500	0.4	140	95.2

●Testing body/S.B. Research Co., Ltd.

●A method of testing/

Accelerated Weathering Test Method

(1) Continuous irradiation

(2) Radiant illumination: 900W/m² (300 to 400nm)

(3) BP temperature: 63°C

(4) Humidity: 50%RH

・Almost no color difference was observed before and after the test even when the product was exposed outdoors to UV rays equivalent to 20 years. Effect by UV rays will hardly occur.



JAPAN TECHNOLOGY

Environment Friendly Coating Technology

zero clear®



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GOGO co., Ltd.

“Zero Clear” Coating

Grease stain, everything can be removed by just water!



JAPAN TECHNOLOGY

Coating process

Preprocessing



Coating



Baking finish

Surface-protection performance

Tough contamination by food and oil that could cause corrosion or stains can be easily removed using only water, and the coating will resist chemicals and acids.

Heat resistance

It is heatproof up to 500 °C.
This can be used various application.



“zero clear” is clear coating.

High hardness/Abrasion resistance

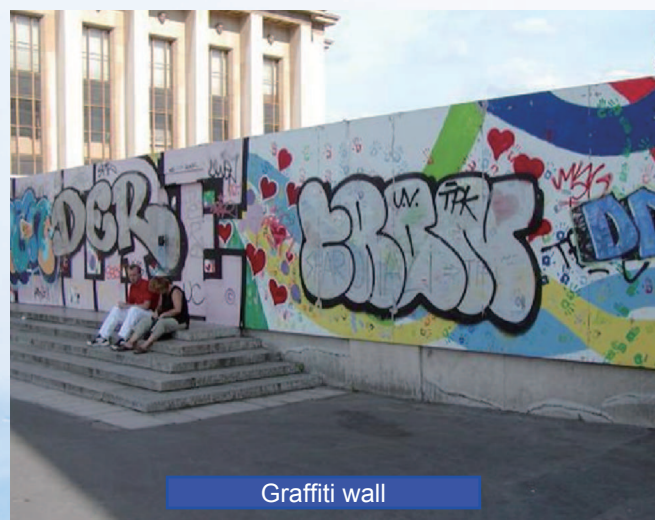
The coating will not come off even when it is rubbed with the Scotch-Brite surface of a scouring pad.

Antimicrobial/antifungal effects

The propagation of bacteria is suppressed, thereby exerting an excellent antimicrobial effect, and powerful protection as well.



“zero tect” is color coating.
This is hydrophilic inorganic coating similar to “zero clear”.



Graffiti wall



Post on subway premises



Graffiti train



Metro platform wall

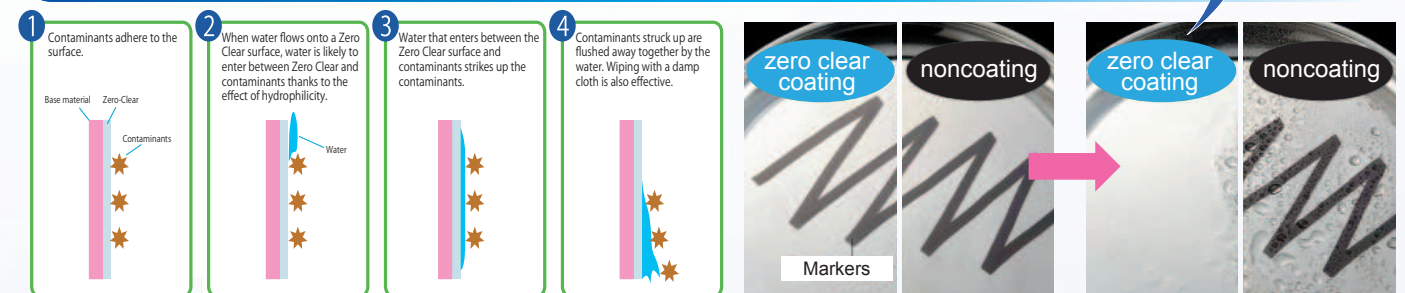
We created environmentally friendly technology



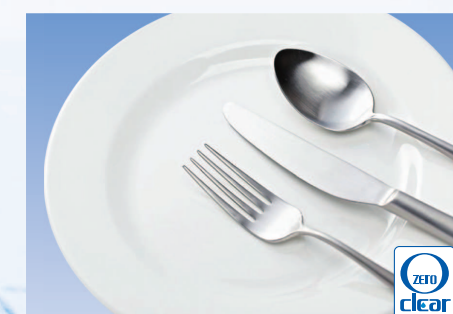
This coating has

- hydrophilicity
- high hardness,
- antifouling effect
- anti-microbial effect.

Effects of dust proof



Ashtray



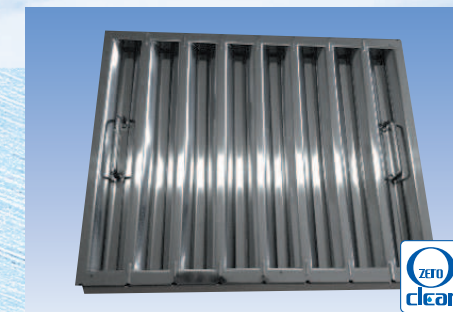
Western Tableware



automotive parts



Sink



Filter



Exterior wall glass of building