

SAFETY DATA SHEET

No.R-110525-001 Date: Jan 08, 2013

SECTION 1. ------CHEMICAL IDENTIFICATION-----

Product name: MLCC (Multi-Layer Ceramic Capacitor)

Product code: NPO, X7R, X5R, Y5V SERIES

Manufacturer's name: Yageo Corporation Nantze Branch

Address: No.16, West 3rd St, N.E.P.Z., Kaohsiung 81170, Taiwan, R.O.C.

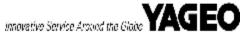
TEL: 886-7-3614101 FAX:886-7-9616898

SECTION 2. ---- COMPOSITION/INFORMATION ON INGREDIENTS -----

NPO(NME) SERIES

TH G(TIME) GERIEG			
	Material	wt%	CAS No
Ceramic substrate	TiO ₂	88-93	13463-67-7
	Others	0.8-1.0	-
Inner electrode	Silver	2.0-7.5	7440-22-4
	Palladium	0.25-2.8	7440-05-3
Termination electrode	Silver	2.2-21	7440-22-4
Under plating	Nickel	0.2-3	7440-02-0
Surface plating	Tin	0.65-6	7440-31-5
NPO SERIES			
	Material	wt%	CAS No
Ceramic substrate	CaZrO₃	64-90	12013-47-7
Inner electrode	Nickel	3.2-8.4	7440-02-0
Termination electrode	Copper	4.3-19.8	7440-50-8
Under plating	Nickel	0.4-2	7440-02-0
Surface plating	Tin	1.2-6.5	7440-31-5
X7R / X5R SERIES			
	Material	wt%	CAS No
Ceramic substrate	BaTiO ₃	45-94	12047-27-7
Inner electrode	Nickel	1.6-13.8	7440-02-0
Termination electrode	Copper	2.95-25.5	7440-50-8
Under plating	Nickel	0.075-5.5	7440-02-0
Surface plating	Tin	0.26-19	7440-31-5

Yageo Corporation Nantze Branch No.16, West 3rd St, N.E.P.Z., Kaohsiung 81170, Taiwan www.yageo.com





			A VAGEO CO
Y5V SERIES			
	Material	wt%	CAS No
Ceramic substrate	BaTiO₃	45-85	12047-27-7
Inner electrode	Nickel	7.3-13.8	7440-02-0
Under plating	Copper	4.1-18.5	7440-50-8
Termination plating	Nickel	0.11-7.5	7440-02-0
Surface plating	Tin	0.4-18.5	7440-31-5
ECTION 3 H Hazardous product for hun			
CTION 4 FI		RES	
Main effect : Risk of stoma			
Eye contact : No irritation i			
Skin contact : No irritation			
Ingestion: If swallowed, wa	ash out mouth with	n water provided _l	person is conso

First aid: Consult with a physician in all cases.and take to hospital.

SECTION 5. ----- FIRE FIGHTING MEASURES -----

Common extinguishing means: In case of fire in close proximity, all means of extinguishing are acceptable, e.g. foam, dry chemical, carbon dioxide, water.

Inappropriate extinguishing means: No restriction

Specific hazards: Non-combustible if temperature is lower than 1200 degree C.

Protective measure in case of intervention: The product does not require any apecial precaution

Extinguishing instruction: Keep person removing from an upwind of fire.

SECTION 6. - - - - - - ACCIDENTAL RELEASE MEASURES - - - - - -

Sweep up, place in a bag and collect for waste disposal.

Prevent discharge into the environment(sewers,river,soil,---)

SECTION 7. ------ HANDLING AND STORAGE-----

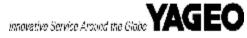
Handling: Keep in a above environment, and original packing, closed to be free of chlorine and bromide material contaminant.

Storage: Keep storage place temperature from 20 to 40 degree C,humidity from 45 to 75% RH.

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION----

Engineering control: Premises ventilation Authorized limit values: Not applicable Respiratory protection: Not applicable Hand protection: Not applicable Eye protection: Not applicable

Yageo Corporation Nantze Branch No.16, West 3rd St, N.E.P.Z., Kaohsiung 81170, Taiwan www.yageo.com





Skin protection: Not applicable Other precaution: Not applicable

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

Physical state: Solid

Appearance: Gray brown / Silver metal

Order: None

PH value: Not applicable

Decomposition temperature: Not applicable

Flash point : Not applicable Boiling point : Not applicable

Melting point: About 1200 degree C Flammable limits(LEL): Not applicable Flammable limits(UEL): Not applicable

The energy storage capacity of watt-hours equal or less than 0.3Wh

SECTION 10. ------STABILITY AND REACTIVITY -----

Stability: Stable on normal temperature and pressure Condition to avoid: High temperature and humidity

Hazardous reaction with: Not applicable

Hazardous decomposition Products : Not applicable

SECTION 11. - - - - TOXICOLOGICAL INFORMATION - - - - - -

Acute effects : Not applicable Toxicity : Not traceable

SECTION 12. - - - - - ECOLOGICAL INFORMATION - - - - -

Biological oxygen demand : Not applicable Chemical oxygen demand : Not applicable

Biological /Chemical oxygen demand ratio: Not applicable

Biochemical factor: Not applicable

Ecotoxicity: Not applicable

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

Installated or dump in a incinerator equipped in accordance with all federal, state, local and national environmental regulations.

SECTION 14. - - - - - TRANSPORT INFORMATION - - - - - -

No classification assigned.

Not subject to Transport-regulation Dangerous Substances under IATA Dangerous Goods Regulations.

SECTION 15. - - - - - REGULATORY INFORMATION - - - - - -

Designation according to Sony SS-00259 ,EU WEEE/ROHS and customer 's related standard.

No classification assigned.

SECTION 16. ----- OTHER INFORMATION------

Yageo Corporation Nantze Branch No.16, West 3rd St, N.E.P.Z., Kaohsiung 81170, Taiwan www.yageo.com





These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product feature and shall not establish a legally valid contractual relationship.

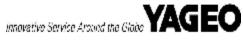
Person responsible for MSDS:

E-mail address: <u>GP_service@yageo.com</u>
Yageo Corporation Nantze Branch

No.16, West 3rd St, N.E.P.Z., Kaohsiung 81170,

Taiwan, R.O.C

TEL:886-7-3614101 FAX:886-7-9616898





Yageo Corporation Nantze Branch No.16, West 3rd St, N.E.P.Z., Kaohsiung 81170, Taiwan www.yageo.com

