

Safety Data Sheet



Chemical Product and Company Identification

Product Name : Chip-Resistor

Details of the supplier of the safety data sheet

Premier Farnell
150 Armley Road
Leeds LS12 2QQ
Tel. : +44 (0) 870 129 8608

Emergency telephone number : +44 (0) 870 202530

Hazards Identification

Product Hazard Class : Not Available.

Label content : Not Available.

Other hazards : Not Available.

Composition/information on ingredients Pure material/Mixtures

MCWR04xxxxxxxL		Weight (mg)	0.58	
Substance	CAS No.	Formula	Main purpose	Typical %
Aluminium oxide	1344-28-1	Al ₂ O ₃	Substrate	83.9144
Silicon dioxide	14808-60-7	SiO ₂	Substrate	1.6127
Calcium Peroxide	1305-79-9	CaO	Substrate	0.1984
Magnesium oxide	1309-48-4	MgO	Substrate	0.5175
Silver	7440-22-4	Ag	Backside layer	2.5759
Palladium	7440-05-3	Pd	Backside layer	0.0370
Lead Free Glass	65997-18-4	Lead Free Glass Frit	Backside layer	0.14710
Silver	7440-22-4	Ag	Topside layer	3.0612
Palladium	7440-05-3	Pd	Topside layer	0.0440
Lead Free Glass	65997-18-4	Lead Free Glass Frit	Topside layer	0.17480
Silver	7440-22-4	Ag	Resistive layer	0.3433
Palladium	7440-05-3	Pd	Resistive layer	0.1373
Ruthenium Dioxide	12036-10-1	RuO ₂	Resistive layer	0.0515
Lead oxide	1317-36-8	PbO	Resistive layer	0.1717
Silicon oxide	7631-86-9	SiO ₂	Resistive layer	0.2575
Lead Free Glass	65997-18-4	Lead Free Glass Frit	Resistive layer	0.0687
Lead Free Glass	65997-18-4	Lead Free Glass Frit	Primary coating	0.9880
Pigment (Chromium(III) Oxide)	1308-38-9	CR ₂ O ₃	Primary coating	0.0073
Resin	9004-57-3	[C ₆ H ₇ O ₂ (OH) _{3-n} (OC ₂ H ₅) _n] _x	Primary coating	0.0447
Epoxy Resin	25068-38-6	(C ₁₅ -H ₁₆ -O ₂ C ₃ -H ₅ -Cl-O) _x	Protective coating	0.7600
Polymer	29661-89-0	(C ₈ H ₁₀ C ₆ H ₆ O CH ₂ O) _x	Protective coating	0.8360
Colour pigments	68186-91-4	Colour pigments	Protective coating	0.4560

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Substance	CAS No.	Formula	Main purpose	Typical %
Silicon dioxide	60676-86-0	SiO ₂	Protective coating	1.1020
Talc	14807-96-6	3MgO-4SiO ₂ -H ₂ O	Protective coating	0.1900
Additives	2530-83-8	C ₉ H ₂₀ O ₅ Si	Protective coating	0.4560
Nickel	7440-02-0	Ni	Sputtering End	0.0935
Chromium	7440-47-3	Cr	Sputtering End	0.0735
Nickel	7440-02-0	Ni	Plating	0.9200
Tin	7440-31-5	Sn	Plating	0.7600

First Aid Measures

The first aid measures for different exposure routes

Inhalation : Not Available
Skin contact : Not Available.
Eye contact : Not Available.
Ingestion : Not Available.

The most important symptoms and hazardous effects : none.

The protection of first-aiders : none.

Notes to Physician : None

Fire-fighting measures

Suitable fire extinguishing media : This product is incombustible.

Specific hazards may be encountered during fire-fighting : None.

Specific fire-fighting methods : No.

Special equipment for the protection of firefighters : No.

Accidental release measures

Personal precautions : No.

Environmental precautions : No.

Methods for cleaning up : No.

Handling and storage

Handling : No special advice

Storage : Following the method defined in MSL level 1.

Exposure controls/personal protection

Engineering control : No

Control parameters : -

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8 hours time weighted average exposure limits/Short-term exposure limits/maximum exposure limits : No.
Biological Standards : No.
Personal protective equipment : -
Respiratory protection : No.
Hand protection : No.
Eye protection : No.
Skin and body protection : No.
Hygiene measures : No special requirement.

Physical and chemical properties

Appearance (physical state, colour, etc.) : Cuboid ceramic.
Odor threshold : No defined.
pH value : Not available.
Flammability (solid, gas) : Incombustible.
Decomposition temperature : Not be tested
Auto-ignition temperature : Incombustible.
Vapor pressure : Not Available.
Density : ≈ 4
Partition coefficient (n-octanol/water,log Kow) : -
Odor: : No.
Melting point : 1500°C
Boiling point/boiling point range : Not be tested
Flash point: °F °C : Not be tested
Test method : Open cup Closed cup
Explosion limits : Not Available.
Vapor density : Not Available.
Solubility : Not Available.
Evaporation rate : Not Available.

Stability and reactivity

Stability : Stable.
Possible hazardous reactions under specific conditions : No.
Conditions to avoid : No.
Materials to avoid : No.
Hazardous decomposition products : No.

Toxicological information

Routes of exposure : Not available.
Symptoms : No.

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Acute toxicity : No.
Chronic toxicity or long term toxicity : No.

Ecological information:

Ecotoxicity : No.
Persistence and degradability :-
Bioaccumulative potential :-
Mobility in soil :-
Other adverse effects : No.

Disposal considerations

Methods of waste disposal : Follow the local regulation.

Transport information

United Nations number(UN No) : Not available.
UN Proper shipping name : Not applicable
Transport hazard class (es) : Not available.
Packing group : Not available.
Marine pollutant (Yes/No) : No.
Specific transport measures and precautionary conditions : No.

Regulatory information

Applicable regulations : 2011/65/EU, EC-1907-2006

Other information

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Part Number
MCWR04X4701FTL

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