

Cypress Semiconductor Indirect Material Qualification Report

**QTP# 164405 VERSION **
March 2017**

**Qualification of PEAK Tray for
48L TSOP I Package (18.4x12.0x1.2mm)
Telford-Phils. (TL), CML-R
Chipmos-Taiwan (GO), OSE-Taiwan (T)**

**FOR ANY QUESTIONS ON THIS REPORT, PLEASE CONTACT
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FINISH QUALIFICATION HISTORY

QTP Number	Description of Qualification Purpose	Date
164405	Qualification of Peak Tray for Cypress 48L TSOP I (18.4x12.0x1.2mm) Package	January 2017

MAJOR MATERIAL INFORMATION USED IN THIS QUALIFICATION	
MATERIAL IDENTIFICATION	
Material Designation:	31011736
Carrier Tape Part No:	Not Applicable
Surface Resistivity:	10 ⁵ – 10 ¹¹ ohm/sq.
Material Name:	48-Lead TSOP I Tray (12 x 20mm)
Chemical Name:	Modified Polyphenylene Oxide
Content:	Polyphenylene Oxide: 45~65%, Polystyrene: 5~15%, Glass Fiber: 5~15%, Carbon Black: 5~15% Talc: 10~20%, Additive: 0.1~1.5%
CAS no.:	Polyphenylene Oxide: 25134-01-4 Polystyrene: 9003-53-6, Glass Fiber : 65997-17-3 Carbon Black : 1333-86-4 Talc : 14807-96-6 Additive : 6683-19-8
Impurities contributing to Hazards:	None
PHYSICAL DATA	
Appearance:	Black in color
Melting point	250 °C
Solubility in water	Not soluble in water
Specific Gravity:	1.36
STABILITY AND REACTIVITY	
Stability: Stable	Yes
Incompatible Material to avoid	Mineral Oil, ketone, esters, halo hydrocarbon
Hazardous Decomposition	None
Hazardous Polymerization	Does not occur
Hazardous decomposition	Carbon monoxide, carbon dioxide, sulfur oxide
TOXICOLOGICAL INFORMATION	
Acute toxicity	N/A
Eye damage/irritation	Low hazard for usual industrial handling
Skin corrosion/irritation	Molten material will cause thermal burns
ECOLOGICAL INFORMATION	
General	This material is not expected to be harmful to the ecology

MAJOR MATERIAL INFORMATION USED IN THIS QUALIFICATION	
HAZARD IDENTIFICATION	
Most Important Hazards:	None
Adverse Human Health Effects	If fumes or smoke are inhaled, remove personnel for fresh air. If breathing would be difficult.
Environmental Effects	None
Physical and Chemical Hazards	Combustion
FIRST AID MEASURES	
Inhalation	Move to well-ventilated area. Just in case the patient is not able to inhale, do CPR. Just in case the patient is hard to inhale, provide Oxygen.
Skin Contact	Seek a medical advice when you get dermal irritaion.
Eye Contact	Just in case of getting into eyes, wash your eyes several times (get rid of your contact lens of your eyes) and keep washing. Just in case your eyes get irritate constantly, seek a medical advice.
Ingestion	Rinse mouth with water and consult with physician. Just in case of eating, do not CPR as mouth-to-mouth but use appropriate respiratory medical device.
FIRE-FIGHTING MEASURES	
Extinguishing Media	Use water spray, dry chemical or carbon dioxide
Special Fire-Fighting Procedure	Wear self-contained breathing apparatus. Avoid inhalation of smoke or gas when firefighting. Stay upwind and avoid inhalation of hazard dust.
Fire and Explosion Hazards	Non-explosive, burning tendency follow UL rating
ACCIDENTAL RELEASE MEASURES	
Methods for cleaning UPS	Collect the spilled material in appropriate containers and clear surface.
Waste disposal Method	Can be recycled and reused.
HANDLING AND STORAGE	
Safe Handling advice	Safe Handling advice. No Smoking. Keep away from heat and sources of ignition. Normal measures for preventive fire protection.



MAJOR MATERIAL INFORMATION USED IN THIS QUALIFICATION	
EXPOSURE CONTROLS / PERSONAL PROTECTION	
Threshold limit value	None
Most important Hazard	None
Health Hazard	None
Effect of overexposure	Safe for contact with skin, no danger to overexposure
DISPOSAL CONSIDERATIONS	
Discard the treatment method	Completely incinerate in incineration plant when it need to be according to the local laws. Classify designated and general wastes and hire disposal specialized company.

PROCESS ENGINEERING QUALIFICATION PERFORMED PER SPECIFICATION REQUIREMENTS

Test	Test Condition (Reference Specifications)	Result P/F
CADFIT Analysis	Pass POD & End flash Criteria	P
Dimensional Measurement	POD Drawing-JESD22-B100	P
Drop Test	Non-Dry Packed Material: No tears & punctures Boxes: No Complete structural damage, No progressive crumpling/deformed, no tears & punctures.	P
Functionality Test	Pass Manufacturability	P
Substance Check	European Union RoHS 2002/95/E REACH XVII	P
Surface Resistivity Measurement	Conductive Packing/shipping material: $10^5 \Omega/\text{sq}$ Static dissipative Packing/shipping material: $10^5\text{-}10^{12} \Omega/\text{sq}$	P



Reliability Test Data QTP #:164405

<i>Device</i>	<i>Material Part #</i>	<i>Package</i>	<i>Finish Site</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
STRESS: CADFIT ANALYSIS							
N/A	PEAK Tray	48L TSOP I	GO-Taiwan	COMP	1	0	
STRESS: DIMENSIONAL MESAUREMENT							
N/A	PEAK Tray	48L TSOP I	GO-Taiwan	COMP	10	0	
STRESS: DROP TEST							
N/A	PEAK Tray	48L TSOP I	GO-Taiwan	COMP	480	0	
STRESS: FUNCTIONALITY TEST							
N/A	PEAK Tray	48L TSOP I	GO-Taiwan	COMP	90	0	
STRESS: SUBSTANCE CHECK							
N/A	PEAK Tray	48L TSOP I	GO-Taiwan	COMP	1	0	
STRESS: SURFACE RESISTIVITY MEASUREMENT							
N/A	PEAK Tray	48L TSOP I	GO-Taiwan	COMP	10	0	
STRESS: WARP TEST							
N/A	PEAK Tray	48L TSOP I	GO-Taiwan	COMP	10	0	



Document History Page

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Rev.	ECN No.	Orig. of Change	Description of Change
**	5654961	JYF	Initial spec release.