



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D
<i>* : Required Field</i>			

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-09-13
Contact Name *	Refer to "Supplier Comment" section	Contact Title	Refer to "Supplier Comment" section
Contact Phone *	Refer to "Supplier Comment" section	Contact Email *	Refer to "Supplier Comment" section
Authorized Representative *	LAURENT TOSI	Representative Title	MMS MD CHAMPION
Representative Phone *	33 442 685 795	Representative Email *	laurent.tosi@st.com
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/online_tech_support.html		

Uncertainty Statement

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Legal Statement

Supplier Acceptance *	true	Legal Declaration *	Standard
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Legal Statement

Supplier certifies that it gathered the provided information and such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part(s), and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part(s), the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Supplier's liability and the Company's remedies for issues that arise regarding information the Supplier provides in this form.

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
ST33HTPH2E28AHC2	38YM*A8KCHC2	A	9998	2018-09-13
	Amount	UoM	Unit type	ST ECOPACK Grade
	84.00	mg	Each	ECOPACK® 2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
TSSOP	NAC	28	L bend	
Comment	TSSOP 28 BODY 4.4 PITCH 0.65			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7b' exemption (other selected exemptions may apply)	false
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description

QueryList : REACH-12th January 2017				
Query				Response
The product does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration						Mfr Item Name	38YM* A8KHC2					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or Dies	Other inorganic materials	4.172	mg	supplier	die	Silicon (Si)	7440-21-3		3.914	mg	938159	46595
Die or Dies					metallization	Aluminium (Al)	7429-90-5		0.019	mg	4554	226
Die or Dies					metallization	Copper (Cu)	7440-50-8		0.066	mg	15820	786
Die or Dies					metallization	Tantalum (Ta)	7440-25-7		0.116	mg	27804	1381
Die or Dies					metallization	Tungsten (W)	7440-33-7		0.001	mg	240	12
Die or Dies					passivation	Silicon Nitride (SiN)	68034-42-4		0.013	mg	3116	155
Die or Dies					passivation	Silicon Oxide(SiO2)	7631-86-9		0.043	mg	10307	512
Lead-frame	Other inorganic materials	39.396	mg	supplier	alloy	Copper (Cu)	7440-50-8		38.392	mg	974500	457046
Lead-frame					alloy	Iron (Fe)	7439-89-6		0.924	mg	23460	11003
Lead-frame					alloy	Zinc (Zn)	7440-66-6		0.047	mg	1200	563
Lead-frame					alloy	Iron Phosphide (FeP)	26508-33-8		0.033	mg	840	394
Die Attach	Other inorganic materials	1.599	mg	supplier	glue or soft solder	Silver (Ag)	7440-22-4		1.279	mg	800000	15227
Die Attach					glue or soft solder	Epoxy resin (molecular weight <= 700g)	9003-36-5		0.128	mg	80000	1523
Die Attach					glue or soft solder	Epoxy resin	68475-94-5		0.048	mg	30000	571
Die Attach					glue or soft solder	2,6-Diglycidyl phenyl allyl ether oligomer	CE 417-470-1		0.048	mg	30000	571
Die Attach					glue or soft solder	Lactone	na		0.048	mg	30000	571
Die Attach					glue or soft solder	Polyoxypropylenediamine	9046-10-0		0.048	mg	30000	571
Wires	Other inorganic materials	0.202	mg	supplier	Bonding wire	Gold (Au)	7440-57-5		0.202	mg	1000000	2400
Encapsulation	Other inorganic materials	36.084	mg	supplier	Moulding Compound	Epoxy Resin	na		2.781	mg	77065	33105
Encapsulation					Moulding Compound	Phenol Resin	na		1.854	mg	51377	22070
Encapsulation					Moulding Compound	Silica, vitreous	60676-86-0		31.115	mg	862311	370420
Encapsulation					Moulding Compound	Carbon-black	1333-86-4		0.185	mg	5138	2207
Encapsulation					Moulding Compound	Bismuth (Bi)	7440-69-9		0.148	mg	4110	1766
Finishing	Other inorganic materials	2.547	mg	supplier	connections coating	Tin (Sn)	7440-31-5		2.547	mg	1000000	30326