



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 *	2018-11-28
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Authorized Representative *	Giovanni Giacopello	Representative Title	ADG MD CHAMPION
Representative Phone *	Refer to Supplier Comment section	Representative Email *	Refer to Supplier Comment section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/support.html		

Uncertainty Statement


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Legal Statement		
Supplier Acceptance *	true	Legal Declaration *
		Standard

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
STTH4R06DEE-TR	786M*Q94B21M	A	Z45A	2018-11-28
	Amount	UoM	Unit type	ST ECOPACK Grade
	34	mg	Each	ECOPACK® 2
Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant (in each organic material)			

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
3	250	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	3.3 - 3.3 - 1	8	flat	
Comment	VFDFPN 8L 3.3x3.3x1 PITCH0.65			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	FALSE
2 - 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
3 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	TRUE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)

QueryList : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	FALSE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	TRUE
Exemption Id.	Description
8e	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)

QueryList : California Prop65 list, dated 25th May 2018			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			FALSE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			TRUE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.17	Die - Leadframe	5118
Lead	0.74	Soft solder	21824

QueryList : REACH-27th June 2018				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	0.74	Soft solder	21824
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
Lead	1000 ppm	0.74	Soft solder	925187

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	786M*Q94821M					
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	M-011 Other inorganic materials	1.523	mg	supplier	die	Silicon (Si)	7440-21-3		1.427	mg	936967	41971
				supplier	metallization	Aluminium (Al)	7429-90-5		0.050	mg	32830	1471
				supplier	Passivation	Silicon Oxide	7631-86-9		0.028	mg	18385	824
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	656	29
				supplier	back side metallization	Gold (Au)	7440-57-5		0.003	mg	1970	88
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.014	mg	9192	412
Leadframe	M-004 Copper and its alloys	14.856	mg	supplier	alloy	Copper (Cu)	7440-50-8		14.313	mg	963449	420971
				supplier	alloy	Iron (Fe)	7439-89-6		0.336	mg	22617	9882
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.020	mg	1346	588
				supplier	alloy	Zinc (Zn)	7440-66-6		0.018	mg	1212	529
				supplier	metallization	Nickel (Ni)	7440-02-0		0.160	mg	10770	4706
				supplier	metallization	Phosphorus (P)	7723-14-0		0.009	mg	606	265
Soft solder	Solder	0.802	mg	SVHC	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	0.742	mg	925187	21824
				supplier	solder	Silver (Ag)	7440-22-4		0.020	mg	24938	588
				supplier	solder	Tin (Sn)	7440-31-5		0.040	mg	49875	1176
Bonding Ribbons	M-003 Aluminum and its alloys	6.950	mg	supplier	ribbon	Aluminium (Al)	7429-90-5		6.950	mg	1000000	204412
Encapsulation	M-011 Other inorganic materials	9.409	mg	supplier	mold compound	Epoxy Resin - 1	Proprietary		0.282	mg	29971	8294
				supplier	mold compound	Epoxy Resin - 2	Proprietary		0.282	mg	29971	8294
				supplier	mold compound	Epoxy Resin - 3	Proprietary		0.282	mg	29971	8294
				supplier	mold compound	Phenol Resin	29690-82-2		0.470	mg	49952	13824
				supplier	mold compound	Carbon Black	1333-86-4		0.189	mg	20088	5558
				supplier	mold compound	Silica, vitreous	60676-86-0		7.904	mg	840047	232471
connections coating	Solder	0.460	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.460	mg	1000000	13529