



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 *	2018-10-08
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 Giapello	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
SMAJ43CA-TR	8HSR*TWB051C	A	9941	2018-10-08
	Amount	UoM	Unit type	ST ECOPACK Grade
	70	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
1	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOJ	4.3 x 2.77 x 2	2	J bend	
Comment	SMA			

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	0.01	Die	171
Lead	2.62	Soft solder	37429

QueryList : REACH-15th January 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	2.62	Soft solder	37429
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	2.62	Soft solder	924488

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	BHSR**TW8051C					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	M-011 Other inorganic materials	1.125	mg	supplier	die	Silicon (Si)	7440-21-3		1.092	mg	970667	15600
				supplier	metallization	Aluminium (Al)	7429-90-5		0.006	mg	5333	86
				supplier	passivation	Nickel (Ni)	7440-02-0		0.005	mg	4444	71
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	889	14
				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	1778	29
				supplier	Passivation	Silicon Oxide	7631-86-9		0.006	mg	5333	86
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.004	mg	3556	57
				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	1778	29
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.007	mg	6222	100
				Leadframe & Clip	M-004 Copper and its alloys	26.749	mg	supplier	alloy	Copper (Cu)	7440-50-8	
supplier	alloy	Zinc (Zn)	7440-66-6						0.001	mg	38	14
supplier	alloy	Iron (Fe)	7439-89-6						0.003	mg	112	43
supplier	alloy	Iron Phosphide (FeP)	26508-33-8						0.009	mg	336	129
supplier	solder	Silver (Ag)	7440-22-4						0.072	mg	25406	1029
Soft solder	Solder	2.834	mg	supplier	solder	Tin (Sn)	7440-31-5		0.142	mg	50106	2029
				JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.620	mg	924488	37429
				supplier	alloy	Amorphous Silica	7631-86-9		23.820	mg	616220	340286
Encapsulation	M-011 Other inorganic materials	38.655	mg	supplier	alloy	Quartz	14808-60-7		7.730	mg	199974	110429
				supplier	metallization	epoxy resin	Proprietary		4.639	mg	120010	66271
				supplier	metallization	phenolic resin	9003-35-4		2.319	mg	59994	33126
				supplier	metallization	Bismuth trioxide	1304-76-3		0.027	mg	698	386
				supplier	metallization	chlorine residue	7782-50-5		0.004	mg	103	57
				supplier	metallization	Carbon black	1333-86-4		0.116	mg	3001	1657
				connections coating	Solder	0.637	mg	supplier	solder alloy	Tin (Sn)	7440-31-5	