



Materials Declaration Form

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

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2019-11-18
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 *	Floriana SAN BIAGIO	Representative Title	AMS 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
	HYQ(*UQ60AA5	A	9957-SA1A	2019-11-18
	Amount	UoM	Unit type	ST ECOPACK Grade
	6.85	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		
1	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	0	



Package Designator	Size	Nbr of instances	Shape	
QFN	2 x 2	6	flat	
Comment	Q(VFDFPN 6L 4F EP 2x2x0.55 PTH 0.5; MDF is valid for LDLN015PU28R			

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	TRUE
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)	FALSE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description

QueryList : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	TRUE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	FALSE
Exemption Id.	Description

QueryList : California Prop65 list, dated 13th September 2019			
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	0.10	Leadframe	14051

QueryList : REACH-16th July 2019				
Query				Response
1 - Product(s) 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
,	0			
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				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
,	0		,	

QueryList : Korea Chemical Control Act_ 27 Dec 2017 update				
Query				Response
The Product does contain at least one of the substances listed in Chemical Control Act				NO
Substance	Homogeneous Material impacted	Content in Homogeneous Material (mg)	Concentration in the material(%)	Application Purpose

Material Composition Declaration :						Mfr Item Name	HYQ(*UQ60AA5				6000001.0	999268.0
note : Substance present with less 0.001mg will not be declared in this document												
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	0.379	mg	supplier	die	Silicon(Si)	7440-21-3		0.342	mg	902375	49927
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.008	mg	21108	1168
				supplier	metallisation	Tungsten(W)	7440-33-7		0.006	mg	15831	876
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.002	mg	5277	292
				supplier	passivation	Silicon oxide	7631-86-9		0.013	mg	34301	1898
				supplier	polymer coating	PIX1 Gamma-butyrolactone	96-48-0		0.008	mg	21108	1168
Leadframe	M-002 Other ferrous alloys, non-stainless steels	2.750	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		2.590	mg	941818	378102
				supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.096	mg	34909	14015
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.003	mg	1091	438
				supplier	alloy & coating	Zinc(Zn)	7440-66-6		0.014	mg	5091	2044
				supplier	alloy & coating	Magnesium(Mg)	7439-95-4		0.004	mg	1455	584
				supplier	alloy & coating	Silicon(Si)	7440-21-3		0.014	mg	5091	2044
				supplier	alloy & coating	Silver (Ag)	7440-22-4		0.028	mg	10182	4088
				supplier	alloy & coating	Manganese (Mn)	7439-96-5		0.001	mg	364	146
Die attach	M-015 Other organic materials	0.180	mg	supplier	glue	Silver (Ag)	7440-22-4		0.153	mg	850000	22336
				supplier	glue	Carbocyclic acrylate	Proprietary		0.018	mg	100000	2628
				supplier	glue	2-Propenoic acid, 2-methyl-, 2-[(2,3,3a,4,7,7a)	68586-19-6		0.008	mg	45000	1182
				supplier	glue	2-(3,4-Epoxy cyclohexyl)ethyltrimethoxysilane	3388-04-3		0.001	mg	5000	131
Bonding wires	M-008 Precious metals	0.030	mg	supplier	wire	Gold (Au)	7440-57-5		0.030	mg	1000000	4379
Encapsulation	M-015 Other organic materials	3.266	mg	supplier	mold compound	Silica Fused	60676-86-0		3.060	mg	937000	446751
				supplier	mold compound	Epoxy Resin	Proprietary		0.098	mg	30000	14304
				supplier	mold compound	Phenol Resin	Proprietary		0.098	mg	30000	14304
				supplier	mold compound	Carbon Black	1333-86-4		0.010	mg	3000	1430
connections coating	Solder	0.240	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.240	mg	1000000	35033