



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 *	2020-02-12
Company Unique ID	NL 008751171B01	Contact Name *	Refer to Supplier Comment section
Contact Name *	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 *	Legal Declaration *
true	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
0	IYWY*0391ADY	B	ZS1A	2020-02-12
	Amount	UoM	Unit type	ST ECOPACK Grade
	16.38	mg	Each	ECOPACK® 3
Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony			

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	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy	0	

Package Designator	Size	Nbr of instances	Shape	
SOT	2.9 x 1.6	5	gull wing	
Comment	WY SOT 23-5; MDF is valid for TS391IYLT			

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 3rd January 2020			
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	0.07	Leadframe	4330

QueryList : REACH-16th January 2020				
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
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

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 : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	IYWY*0391ADY				5000010.0	1009554.0
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	0.393	mg	supplier	die	Silicon(Si)	7440-21-3		0.384	mg	977099	23450
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.004	mg	10178	244
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.002	mg	5089	122
				supplier	passivation	Silicon oxide	7631-86-9		0.003	mg	7634	183
				supplier	alloy & coating	Copper(Cu)	7440-50-8		6.858	mg	967151	418809
Leadframe	M-004 Copper and its alloys	7.091	mg	supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.071	mg	10013	4336
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.149	mg	21013	9099
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.001	mg	141	61
				supplier	alloy & coating	Zinc(Zn)	7440-66-6		0.004	mg	564	244
				supplier	alloy & coating	Palladium(Pd)	7440-05-3		0.007	mg	987	427
Die attach	M-015 Other organic materials	0.037	mg	supplier	alloy & coating	Gold(Au)	7440-57-5		0.001	mg	141	61
				supplier	glue	Silver (Ag)	7440-22-4		0.031	mg	850000	1921
				supplier	glue	Carbocyclic acrylate	Proprietary		0.004	mg	100000	226
				supplier	glue	2-Propenoic acid, 2-methyl-, 2-[[2,3,3a,4,7,7a]]	68586-19-6		0.002	mg	45000	102
				supplier	glue	2-(3,4-Epoxy)cyclohexyl)ethyltrimethoxysilane	3388-04-3		0.000	mg	5000	11
Bonding wires	M-004 Copper and its alloys	0.158	mg	supplier	wire	Gold (Au)	7440-50-8		0.158	mg	1000000	9655
Encapsulation	M-015 Other organic materials	8.705	mg	supplier	mold compound	Solid Epoxy Resin-1	Proprietary		0.174	mg	20000	10632
				supplier	mold compound	Solid Epoxy Resin-2	Proprietary		0.174	mg	20000	10632
				supplier	mold compound	Phenol resin	Proprietary		0.348	mg	40000	21264
				supplier	mold compound	Amorphous Silica	60676-86-0		7.747	mg	890000	473127
				supplier	mold compound	Carbon Black	1333-86-4		0.044	mg	5000	2658
				supplier	mold compound	Crystalline silica	14808-60-7		0.218	mg	25000	13290