



Material declaration form

General Information			
IPC	1752	Version	2
Form type*	Distribute		
Sectionals*	Material information	Subsectionals*	A-D
	Manufacturing information		

Supplier Information			
Company name*	STMicroelectronics	Response Date*	2024-05-20
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*	gregorio duro	Representative title	ADGMaterial Declaration 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
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	Manufacturing site	date
TN4015H-8I	7AVT*PNN4015	A	3068	2024-05-20
	Amount	Unit of measure	Unit type	ST ECOPACK grade
	1900.00	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 temperature	Number of reflow cycles		
Not Applicable	Not Applicable	,		
Bulk solder termination	Terminal plating	Terminal base alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM01035228	
Package designator	Package size	Number of instances	Shape	
SIP	10.00x9.10x4.50	3	Through-hole	
Comment	TO 220 I CLIP			

QueryList : RoHS Directive 2011/65/EU - 8 June 2011 – Annex II amended by Delegated Directive 2015/863 - 31 March 2015		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)	
7c-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices, or in a glass or ceramic matrix compound	

QueryList : ELV directive : 2000/53/EC amended 2020/363_March 2020		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	
8(e)	8(e) - Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)	
10(a)	10(a) - Electrical and electronic components which contain lead in a glass or ceramic, in a glass or ceramic matrix compound, in a glass-ceramic material, or in a glass-ceramic matrix compound. This exemption does not cover the use of lead in: — glass in bulbs and glaze of spark plugs, — dielectric ceramic materials of components listed under 10(b), 10(c) and 10(d)	

QueryList : California Prop65 list, dated 17th Nov 2023			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	1.561	die	822
Lead	16.248	soft solder	8552
Lead-Borate Glass	2.276	die	1198

QueryList : REACH-23rd January 2024				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	16.248	Soft solder, solder paste	8550
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	5.754	Soft solder	920345



QueryList : Responsible metals sourcing	Response
The component is containing at least one of the following metals : Cobalt , Gold , Tantalum , Tin , Tungsten.	true
The following metals are present is the component :	Gold, Tin,

QueryList : Korea Chemical Control Act_ 27 Dec 2017 update	Response
The Product does contain at least one of the substances listed in Chemical Control Act	False

QueryList : China GB 33372-2020 Limit standard for volatile organic compounds content in adhesives - 4 March 2020 application date 1st December 2020	Response
The product contains adhesives identified under GB 33372	False

Stockholm Convention Persistent Organic Pollutants	Response
Product is compliant with Stockholm Convention Persistent Organic Pollutants Annex I	True

QueryList : EUSRR Directive	Response
Product contains hazardous materials listed in EUSRR Annex II	True
The material present in the product is:	Lead

PFAS/PTFE Declaration	Response
The product is containing at least one of the following PFAS substance: Polytetrafluoroethylene,Thiophenium, Triphenylsulfonium nonaflate, Trifluoroacetic anhydride	False

BPA Declaration	Response
Product does not contain Bisphenol A (Isopropylidenediphenol)	True

Montreal Protocol	Response
Product does not contain Ozone Depleting Substances based on Annex I to Annex VII of EU REGULATION (EC) No 1005/2009	True

Environmental Protection Agency:Toxic Substances Control Act (TSCA). Section 6(h)	Response
Product does not contain Phenol, isopropylated, phosphate (3:1)	True



Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	7AVT*PNN4015					
Homogeneous material	Material group	Mass	Unit of measure	Level	Substance category	Substance	CAS	Exempt	Mass	Unit of measure	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	M-011 Other inorganic materials	13.289	mg	supplier	die	Silicon(Si)	7440-21-3		10.387	mg	781624	5468
				supplier	metallisation	Gold(Au)	7440-57-5		0.052	mg	3913	27
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.490	mg	36873	258
				supplier	passivation	Silicon oxide	7631-86-9		0.084	mg	6321	44
					JIG-R & California 65	glass	Lead-BorateGlass	65997-18-4	7c-I-Electrical and electronic com	2.276	mg	171269
Leadframe	M-004 Copper and its alloys	1538.070	mg	supplier	alloy	Copper(Cu)	7440-50-8		1536.070	mg	998700	808458
				supplier	alloy	Iron phosphide	26508-33-8		1.292	mg	840	680
				supplier	alloy	Iron(Fe)	7439-89-6		0.708	mg	460	373
				supplier	alloy	Lead(Pb)	7439-92-1	7a-Lead in high melting temperat	5.754	mg	920346	3028
Soft solder	Solder	6.252	mg	supplier	solder	Silver(Ag)	7440-22-4		0.156	mg	24952	82
				supplier	solder	Tin(Sn)	7440-31-5		0.311	mg	49744	164
				supplier	solder	Flux residue	proprietary		0.031	mg	4958	16
				supplier	solder	Silica vitreous	60676-86-0		29.596	mg	741996	15577
Encapsulation	M-011 Other inorganic materials	39.887	mg	supplier	mold compound	Phenol resin	9003-35-4		1.994	mg	49991	1049
				supplier	mold compound	Epoxy Cresol Novolac	29690-82-2		4.388	mg	110011	2309
				supplier	mold compound	other	proprietary		3.590	mg	90004	1889
				supplier	mold compound	Carbon black	1333-86-4		0.319	mg	7998	168
				supplier	solder	Lead(Pb)	7439-92-1		2.370	mg	850682	1247
solder paste	Solder	2.786	mg	supplier	solder	Tin(Sn)	7440-31-5		0.139	mg	49892	73
				supplier	solder	Antimony (Sb)	7440-36-0		0.264	mg	94760	139
				supplier	solder	dry flux residue	proprietary		0.013	mg	4666	7
				supplier	solder alloy	Tin (Sn)	7440-31-5		127.936	mg	1000000	67335
Connections coating	Solder	127.936	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		127.936	mg	1000000	67335
Ceramic base		140.155	mg	supplier	ceramic	Alumina	1344-28-1		89.897	mg	641411	47314
				supplier	ceramic	Nickel(Ni)	7440-02-0		1.071	mg	7642	564
				supplier	ceramic	Molybdenum(Mo)	7439-98-7		49.187	mg	350947	25888
Trigger		31.625	mg	supplier	alloy	Copper(Cu)	7440-50-8		31.625	mg	1000000	16645