



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 *	2015-05-18
Contact Name *	Refer to "Supplier Comment" section	Contact Title	Refer to "Supplier Comment" section
Contact Phone *	Refer to "Supplier Comment" section	Contact Email *	Refer to "Supplier Comment" section
Authorized Representative *	Emilio Castelli	Representative Title	APG 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/online_tech_support.html		

Uncertainty Statement

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Legal Statement

Supplier Acceptance *	true	Legal Declaration *	Standard
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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
VN820B5TR-E	ATAT*VN82BF3	A	SH1A	2015-05-18
Amount		UoM	Unit type	ST ECOPACK Grade
1350.00		mg	Each	ECOPACK® 1

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
3	245	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used o	Tin (Sn), matte, annealed	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
CHP	10.2x9.15x4.5	4	flat	
Comment				

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	false
Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7a' exemption (other selected exemptions may apply)	true
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description

QueryList : REACH-16th June 2014				
Query				Response
The product 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

Material Composition Declaration						Mfr Item Name	ATAT*VN82BF3					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	5.305	mg	supplier	die	Silicon (Si)	7440-21-3		5.152	mg	971159	3816
Die				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.036	mg	6786	27
Die				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.036	mg	6786	27
Die				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.002	mg	377	1
Die				supplier	back side metallization	Gold (Au)	7440-57-5		0.008	mg	1508	6
Die				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.035	mg	6598	26
Die				supplier	glass coating	Glass: Silicon Dioxide (SiO2)	7631-86-9		0.036	mg	6786	27
Leadframe	Copper & its alloys	102.078	mg	supplier	alloy	Copper (Cu)	7440-50-8		101.588	mg	995200	75250
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.047	mg	460	35
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.085	mg	833	63
Leadframe				supplier	metallization	Nickel (Ni)	7440-02-0		0.358	mg	3507	265
Die attach		4.164	mg	JIG - R	Soft solder	Lead (Pb)	7439-92-1	7a-Lead in high me	3.977	mg	955091	2946
Die attach				supplier	Soft solder	Silver (Ag)	7440-22-4		0.104	mg	24976	77
Die attach				supplier	Soft solder	Tin (Sn)	7440-31-5		0.083	mg	19933	61
Bonding wire		0.222		supplier	wire	Gold (Au)	7440-57-5		0.081	mg	364865	60
Bonding wire				supplier	wire	Aluminium (Al)	7429-90-5		0.141	mg	635135	104
encapsulation		1230.815	mg	supplier	mold compound	Silica, vitreous	60676-86-0		984.650	mg	799998	729370
encapsulation				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		86.157	mg	70000	63820
encapsulation				supplier	mold compound	Phenol resin	9003-35-4		49.233	mg	40000	36469
encapsulation				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		73.849	mg	60000	54703
encapsulation				supplier	mold compound	Antimony Trioxide	1309-64-4		14.770	mg	12000	10941
encapsulation				supplier	mold compound	Brominated Epoxy Resin	40039-93-8		18.463	mg	15001	13676
encapsulation				supplier	mold compound	Carbon black	1333-86-4		3.693	mg	3000	2736
connections coating	Solder	7.417	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		7.417	mg	1000000	5494