



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 *	2017-11-13
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 *	Patrick Crudo	Representative Title	MMS MD CHAMPION
Representative Phone *	(+33) 442 688 339	Representative Email *	patrick.crudo@st.com
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/online_tech_support.html		

Uncertainty Statement


While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

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
STM32L083RBH6	U5R8*447XXXZ	A	959	2017-11-13
Amount		UoM	Unit type	ST ECOPACK Grade
64.00		mg	Each	ECOPACK® 2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin/Silver/Copper (Sn/Ag/Cu)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
BGA	5x5x1.2	64	No lead	
Comment	TFBGA 5x5x1.2 64L			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
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
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-12th January 2017				
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	USR8*447XXXZ					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
die (s)	Other inorganic materials	6.708	mg	supplier	die	Silicon (Si)	7440-21-3		6.386	mg	951998	99781
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.027	mg	4025	422
die (s)				supplier	metallization	Copper (Cu)	7440-50-8		0.115	mg	17144	1797
die (s)				supplier	metallization	Tantalum (Ta)	7440-25-7		0.003	mg	447	47
die (s)				supplier	metallization	Titanium (Ti)	7440-32-6		0.012	mg	1789	188
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.023	mg	3429	359
die (s)				supplier	passivation	Indium Tin oxide (In2O3.SnO2)	50926-11-9		0.142	mg	21169	2219
Substrate	Other inorganic materials	17.112	mg	supplier	core+ fiber glass	Bismaleimide (B)	13676-54-5		0.774	mg	45252	12100
Substrate				supplier	core+ fiber glass	Triazine (T)	25722-66-1		0.774	mg	45252	12100
Substrate				supplier	core+ fiber glass	Fiber glass	65997-17-3		2.310	mg	134990	36094
Substrate				supplier	core+ fiber glass	metal hydroxide	21645-51-2		0.053	mg	3068	820
Substrate				supplier	core+ fiber glass	Zinc hydroxide	20427-58-1		0.016	mg	920	246
Substrate				supplier	core+ fiber glass	Thermosetting resin	na		1.297	mg	75778	20262
Substrate				supplier	core+ fiber glass	Calcium sulfate	7778-18-9		0.026	mg	1534	410
Substrate				supplier	solder mask	Baryum sulfate	7727-43-7		0.243	mg	14199	3796
Substrate				supplier	solder mask	(2-methoxymethylethoxy)propanol	34590-94-8		0.040	mg	2366	633
Substrate				supplier	solder mask	Talc containing no asbestiform fibers	14807-96-6		0.135	mg	7888	2109
Substrate				supplier	solder mask	Quartz	14808-60-7		0.135	mg	7888	2109
Substrate				supplier	solder mask	Acrylates derivative	407-47-6		0.559	mg	32657	8732
Substrate				supplier	solder mask	aromatic hydrocarbon	na		0.054	mg	3155	844
Substrate				supplier	solder mask	amine compound	na		0.008	mg	473	127
Substrate				supplier	coating	Copper (Cu)	7440-50-8		10.586	mg	618639	165413
Substrate				supplier	coating	Nickel (Ni)	7440-02-0		0.080	mg	4696	1256
Substrate				supplier	coating	Gold (Au)	7440-57-5		0.021	mg	1244	333
Die Attach	Other inorganic materials	2.344	mg	supplier	glue or tape	Silver (Ag)	7440-22-4		2.085	mg	889400	32571
Die Attach				supplier	glue or tape	Neopentyl glycol dimethacrylate	1985-51-9		0.117	mg	50000	1831
Die Attach				supplier	glue or tape	2,6-Diglycidyl phenyl allyl ether	EC 417-470-1		0.129	mg	35000	2014
Die Attach				supplier	glue or tape	palmitic acid	57-10-3		0.002	mg	1000	37
Die Attach				supplier	glue or tape	4-tert-butylcyclohexanol	98-52-2		0.007	mg	3000	110
Die Attach				supplier	glue or tape	Hexamethyltetracosane-hexaene	111-02-4		0.002	mg	1000	37
Die Attach				supplier	glue or tape	Fluorine trace	14762-94-8		0.001	mg	600	22
Wires	Other inorganic materials	0.351	mg	supplier	Bonding wire	Gold (Au)	7440-57-5		0.351	mg	1000000	5483
Encapsulation	Other inorganic materials	30.857	mg	supplier	Moulding Compound	Biphenyl epoxy resin	85954-11-6		2.742	mg	88871	42849
Encapsulation				supplier	Moulding Compound	Phenol resin	205830-20-2		1.371	mg	44435	21424
Encapsulation				supplier	Moulding Compound	Quartz	14808-60-7		0.686	mg	22218	10712
Encapsulation				supplier	Moulding Compound	Silica, vitreous	1333-86-4		25.784	mg	835589	402877
Encapsulation				supplier	Moulding Compound	Carbon Black	1309-42-8		0.247	mg	7998	3856
Encapsulation				supplier	Moulding Compound	Magnesium dihydroxide	na		0.027	mg	889	428
Solder Balls	Other inorganic materials	6.627	mg	supplier	solder	Tin (Sn)	7440-31-5		6.513	mg	982700	101763
Solder Balls				supplier	solder	Silver (Ag)	7440-22-4		0.080	mg	12000	1243
Solder Balls				supplier	solder	Copper (Cu)	7440-50-8		0.033	mg	5000	518
Solder Balls				supplier	solder	Nickel (Ni)	7440-02-0		0.001	mg	200	21
Solder Balls				supplier	solder	Lead (Pb)	7439-92-1		0.001	mg	100	10