# Materials Declaration Form

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

| Supplier Information | | | |
|---|---|---|---|
| Company Name * | STMicroelectronics | Response Date * | 2013-10-11 |
| 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 * | Giuseppe Vitali Palma | Representative Title | AMS & IPD Materials 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/internet/com/support/online_tech_support.jsp | | |

**Uncertainty Statement**

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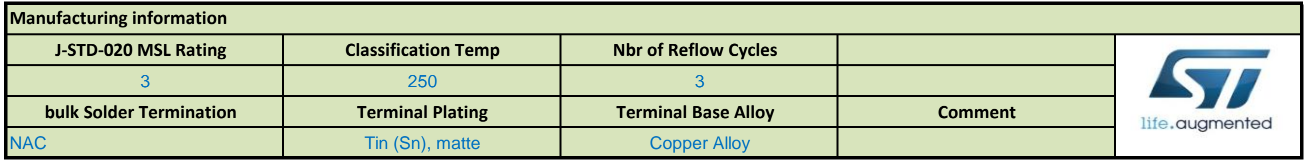
**Legal Statement**

| 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 omprehensive 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 |
| | B5Z7*U527CBZ | A | ZY1A | 2013-10-11 |
| | Amount | UoM | Unit type | ST ECOPACK Grade |
| | 534.518 | mg | Each | ECOPACK® 2 |



| Manufacturing information | | | | |
|---|---|---|---|---|
| J-STD-020 MSL Rating | Classification Temp | Nbr of Reflow Cycles | | life.augmented |
| 3 | 250 | 3 | | |
| bulk Solder Termination | Terminal Plating | Terminal Base Alloy | Comment | |
| NAC | Tin (Sn), matte | Copper Alloy | | |

| Package Designator | Size | Nbr of instances | Shape | |
|---|---|---|---|---|
| DSO | 12.8X7.5X2.5 | 19 | gull wing | |
| Comment | Package: SO 20 .30 TO JEDEC MS-013 | | | |

| QueryList : ROHS directive 2011/65/EU _ July 2011 | |
|---|---|
| **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-20th June 2013 | | | | |
|---|---|---|---|---|
| **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 | B5Z7*U527CBZ | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Homogeneous Material** | **Material Group** | **Mass** | **UoM** | **Level** | **Substance Category** | **Substance** | **CAS** | **Exempt** | **Mass** | **UoM** | **Concentration in homogeneous material (ppm)** | **Concentration in product (ppm)** |
| SILICON DIE | Other inorganic materials | 8.274 | mg | supplier | SILICON DIE | Silicon (Si) | 7440-21-3 | | 8.092 | mg | 978003 | 15139 |
| SILICON DIE | | | | supplier | METALLIZATION | Aluminium (Al) | 7429-90-5 | | 0.046 | mg | 5560 | 86 |
| SILICON DIE | | | | supplier | METALLIZATION | Titanium (Ti) | 7440-32-6 | | 0.001 | mg | 121 | 2 |
| SILICON DIE | | | | supplier | PASSIVATION | Silicon Nitride (SiN) | 68034-42-4 | | 0.026 | mg | 3142 | 49 |
| SILICON DIE | | | | supplier | PASSIVATION | Silicon Oxide(SiO2) | 7631-86-9 | | 0.109 | mg | 13174 | 204 |
| LEADFRAME | Copper and its alloy | 145.218 | mg | supplier | ALLOY | Copper (Cu) | 7440-50-8 | | 140.298 | mg | 974258 | 262476 |
| LEADFRAME | | | | supplier | ALLOY | Iron (Fe) | 7439-89-6 | | 3.456 | mg | 23999 | 6466 |
| LEADFRAME | | | | supplier | ALLOY | Zinc (Zn) | 7440-66-6 | | 0.193 | mg | 1340 | 361 |
| LEADFRAME | | | | supplier | ALLOY | Phosphorus (P) | 7723-14-0 | | 0.058 | mg | 403 | 109 |
| LEADFRAME | | | | supplier | COATING | Silver (Ag) | 7440-22-4 | | 1.213 | mg | 1000000 | 2269 |
| DIE ATTACH | Other organic materials | 1.833 | mg | supplier | GLUE | Resin A | 9003-36-5 | | 0.128 | mg | 69831 | 239 |
| DIE ATTACH | | | | supplier | GLUE | Resin B | 68475-94-5 | | 0.073 | mg | 39825 | 137 |
| DIE ATTACH | | | | supplier | GLUE | Silver (Ag) | 7440-22-4 | | 1.413 | mg | 770867 | 2644 |
| DIE ATTACH | | | | supplier | GLUE | Gamma Butyrolactone | 96-48-0 | | 0.073 | mg | 39825 | 137 |
| DIE ATTACH | | | | supplier | GLUE | Polyoxypropylenediamine | 9046-10-0 | | 0.073 | mg | 39825 | 137 |
| DIE ATTACH | | | | supplier | GLUE | 2,6-Diglycidyl phenyl allyl ether oligomer | Proprietary | | 0.073 | mg | 39825 | 137 |
| BONDING WIRE | Other inorganic materials | 0.676 | mg | supplier | BONDING WIRE | Gold (Au) | 7440-57-5 | | 0.676 | mg | 1000000 | 1265 |
| ENCAPSULATION | Other organic materials | 374.915 | mg | supplier | MOLDING COMPOUND | Multi-aromatic resin | Trade Secret | | 28.127 | mg | 75022 | 52621 |
| ENCAPSULATION | | | | supplier | MOLDING COMPOUND | Silica Fused | 60676-86-0 | | 320.527 | mg | 854932 | 599656 |
| ENCAPSULATION | | | | supplier | MOLDING COMPOUND | Phenol Resin | Proprietary | | 15.001 | mg | 40012 | 28065 |
| ENCAPSULATION | | | | supplier | MOLDING COMPOUND | Carbon Black | 1333-86-4 | | 1.875 | mg | 5001 | 3508 |
| ENCAPSULATION | | | | supplier | MOLDING COMPOUND | Epoxy Cresol Novolac | 29690-82-2 | | 7.501 | mg | 20007 | 14033 |
| ENCAPSULATION | | | | supplier | MOLDING COMPOUND | Bismuth (Bi) | 7440-69-9 | | 1.884 | mg | 5025 | 3525 |
| FINISHING | Other inorganic materials | 3.602 | mg | supplier | CONNECTION COATING | Tin (Sn) | 7440-31-5 | | 3.602 | mg | 916539 | 6739 |
| | | | | | | | | | | | | |