# Materials Declaration Form

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

| **Supplier Information** | | | |
|---|---|---|---|
| **Company Name *** | STMicroelectronics | **Response Date *** | 2014-05-28 |
| **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**

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.

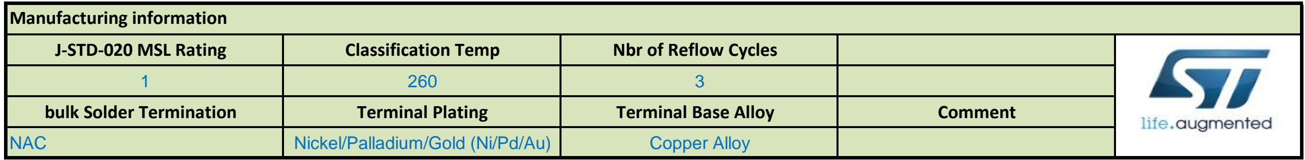
**Legal Statement**

| **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 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 |
| | RVWV*KN15FC1 | A | ZS1A | 2014-05-28 |
| | Amount | UoM | Unit type | ST ECOPACK Grade |
| | 15.933 | mg | Each | ECOPACK® 2 |



| Manufacturing information | | | | |
|---|---|---|---|---|
| J-STD-020 MSL Rating | Classification Temp | Nbr of Reflow Cycles | | |
| 1 | 260 | 3 | | |
| bulk Solder Termination | Terminal Plating | Terminal Base Alloy | Comment | |
| NAC | Nickel/Palladium/Gold (Ni/Pd/Au) | Copper Alloy | | |



| Package Designator | Size | Nbr of instances | Shape | |
|---|---|---|---|---|
| DSO | 2.8X1.5X0.9 | 5 | gull wing | |
| Comment | Package: SOT 23 5L | | | |

| 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-16th December 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 | RVWV*KN15FC1 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **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 Material | 0.772 | mg | Supplier | Silicon Die | Silicone (Si) | 7440-21-3 | | 0.737 | mg | 954663 | 46256 |
| Silicon Die | | | mg | Supplier | metallization | Aluminium (Al) | 7429-90-5 | | 0.008 | mg | 10363 | 502 |
| Silicon Die | | | mg | Supplier | metallization | Tungsten (W) | 7440-33-7 | | 0.006 | mg | 7772 | 377 |
| Silicon Die | | | mg | Supplier | passivation | Silicon Nitride (SiN) | 68034-42-4 | | 0.002 | mg | 2591 | 126 |
| Silicon Die | | | mg | Supplier | passivation | Silicon Oxide(SiO2) | 7631-86-9 | | 0.013 | mg | 16839 | 816 |
| Silicon Die | | | mg | Supplier | passivation | Gamma-butyrolactone | 96-48-0 | | 0.004 | mg | 5181 | 251 |
| Silicon Die | | | mg | Supplier | passivation | Polyhydroxyamide | 55295-98-2 | | 0.002 | mg | 2591 | 126 |
| Leadframe | Copper and its alloy | 7.2 | mg | Supplier | Alloy | Copper | 7440-50-8 | | 6.936 | mg | 963333 | 435323 |
| Leadframe | | | mg | Supplier | Alloy | Iron | 7439-89-6 | | 0.162 | mg | 22500 | 10168 |
| Leadframe | | | mg | Supplier | Alloy | Phosphorus | 7723-14-0 | | 0.002 | mg | 278 | 126 |
| Leadframe | | | mg | Supplier | Alloy | Zinc | 7440-66-6 | | 0.009 | mg | 1250 | 565 |
| Leadframe | | | mg | Supplier | Alloy | Nickel | 7440-02-0 | | 0.083 | mg | 11528 | 5209 |
| Leadframe | | | mg | Supplier | Alloy | Palladium | 7440-05-3 | | 0.007 | mg | 972 | 439 |
| Leadframe | | | mg | Supplier | Alloy | Gold | 7440-57-5 | | 0.001 | mg | 139 | 63 |
| Die Attach | Other Organic Material | 0.084 | mg | Supplier | Glue | Silver (Ag) | 7440-22-4 | | 0.056 | mg | 666667 | 3515 |
| Die Attach | | | mg | Supplier | Glue | methylene diacrylate | 42594-17-2 | | 0.021 | mg | 250000 | 1318 |
| Die Attach | | | mg | Supplier | Glue | Dicyclopentenyloxyethyl methacrylate | 68586-19-6 | | 0.002 | mg | 23810 | 126 |
| Die Attach | | | mg | Supplier | Glue | Polymer of Polybutadiene + Anhydride | Proprietary | | 0.002 | mg | 23810 | 126 |
| Die Attach | | | mg | Supplier | Glue | Palladium (Pd) | 7440-05-3 | | 0.002 | mg | 23810 | 126 |
| Bonding Wire | Other Inorganic Material | 0.079 | mg | Supplier | Glue | Bis(α,α-dimethylbenzyl) peroxide | 80-43-3 | | 0.001 | mg | 11905 | 63 |
| Encapsulation | Other Organic Material | 7.798 | mg | Supplier | Bonding Wire | Copper (Cu) | 7440-50-8 | | 0.079 | mg | 1000000 | 4958 |
| Encapsulation | | | mg | Supplier | Molding Compound | Epoxy Resin | Proprietary | | 0.157 | mg | 20133 | 9854 |
| Encapsulation | | | mg | Supplier | Molding Compound | Biphenyl epoxy resin | 85954-11-6 | | 0.157 | mg | 20133 | 9854 |
| Encapsulation | | | mg | Supplier | Molding Compound | Phenol resin | Proprietary | | 0.314 | mg | 40267 | 19708 |
| Encapsulation | | | mg | Supplier | Molding Compound | Silica | 60676-86-0 | | 6.808 | mg | 873044 | 427289 |
| Encapsulation | | | mg | Supplier | Molding Compound | Carbon Black | 1333-86-4 | | 0.016 | mg | 2052 | 1004 |
| Encapsulation | | | mg | Supplier | Molding Compound | Zinc hydroxide | 20427-58-1 | | 0.111 | mg | 14234 | 6967 |
| Encapsulation | | | mg | Supplier | Molding Compound | Magnesium hydroxide | 1309-42-8 | | 0.235 | mg | 30136 | 14749 |
| | | | | | | | | | | | | |