

| Product | | | | |
|-----------------|---------------|---|-----------|------------------|
| Mfr Item Number | Mfr Item Name | Version | Mfr Site | Date |
| STM32F378VCT6 | P81L*432XXX1 | A | 9998 | 2017-07-11 |
| | Amount | UoM | Unit type | ST ECOPACK Grade |
| | 681.44 | 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 Temp | Nbr of Reflow Cycles | |  life.augmented |
| 3 | 260 | 3 | | |
| bulk Solder Termination | Terminal Plating | Terminal Base Alloy | Comment | |
| Not Applicable; if coating is used or other bulk termination | Nickel/Palladium/Gold (Ni/Pd/Au) | Copper Alloy | | |

| Package Designator | Size | Nbr of instances | Shape | |
|--------------------|---|------------------|--------|--|
| QFP | 14x14x1.4 | 100 | L Bend | |
| Comment | Package : 1L LQFP 100 14x14x1.4 1 0086901 | | | |

| QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015 | |
|--|-------------|
| Query | Response |
| 1 - Product(s) meets EU RoHS requirement without any exemptions | TRUE |
| 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) | FALSE |
| 4 - Product(s) does not meet EU RoHS requirements and is not under exemptions | FALSE |
| Exemption Id. | Description |
| | |

| QueryList : REACH-12th January 2017 | | | | |
|--|-------------------------|------------------------|-------------|----------------|
| Query | | | | Response |
| 1 - Product(s) 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 : note : Substance present with less 0.001mg will not be declared in this document | | | | | | Mfr Item Name | P81L*432XXX1 | | | | 6000002.0 | 0.0 | | | | |
|--|---------------------------------|-----------------|-----------|-----------|---------------------------------|---------------------|--------------|----------|---------|-------------|---|--------------------------------|---------|----|--------|--------|
| Homogeneous Material | Material Group | Mass | UoM | Level | Substance Category | Substance | CAS | Exempt | Mass | UoM | Concentration in homogeneous material (ppm) | Concentration in product (ppm) | | | | |
| Die or dies | M-011 Other inorganic materials | 14.779 | mg | supplier | die | Silicon (Si) | 7440-21-3 | | 14.165 | mg | 958455 | 20787 | | | | |
| | | | | supplier | metallization | Aluminium (Al) | 7429-90-5 | | 0.042 | mg | 2842 | 62 | | | | |
| | | | | supplier | metallization | Copper (Cu) | 7440-50-8 | | 0.208 | mg | 14074 | 305 | | | | |
| | | | | supplier | metallization | Cobalt (Co) | 7440-48-4 | | 0.039 | mg | 2639 | 57 | | | | |
| | | | | supplier | metallization | Titanium (Ti) | 7440-32-6 | | 0.012 | mg | 812 | 18 | | | | |
| | | | | supplier | metallization | Tungsten (W) | 7440-33-7 | | 0.023 | mg | 1556 | 34 | | | | |
| | | | | supplier | Passivation | Silicon Nitride | 12033-89-5 | | 0.027 | mg | 1827 | 40 | | | | |
| | | | | supplier | Passivation | Silicon Oxide | 7631-86-9 | | 0.263 | mg | 17796 | 386 | | | | |
| | | | | LEADFRAME | M-011 Other inorganic materials | 155.426 | mg | supplier | ALLOY | Copper (Cu) | 7440-50-8 | | 147.008 | mg | 945839 | 215731 |
| | | | | | | | | supplier | ALLOY | Iron (Fe) | 7439-89-6 | | 3.621 | mg | 23297 | 5314 |
| supplier | ALLOY | Phosphorous (P) | 7723-14-0 | | | | | | 0.045 | mg | 290 | 66 | | | | |
| supplier | ALLOY | Zinc (Zn) | 7440-66-6 | | | | | | 0.181 | mg | 1165 | 266 | | | | |
| supplier | COATING | Nickel (Ni) | 7440-02-0 | | | | | | 4.431 | mg | 28509 | 6502 | | | | |
| supplier | COATING | Palladium (Pd) | 7440-05-3 | | | | | | 0.094 | mg | 605 | 138 | | | | |
| supplier | COATING | Gold (Au) | 7440-57-5 | | | | | | 0.046 | mg | 296 | 68 | | | | |
| DIE ATTACH | M-011 Other inorganic materials | 2.904 | mg | supplier | GLUE | Silver (Ag) | 7440-22-4 | | 2.033 | mg | 700069 | 2983 | | | | |
| | | | | supplier | GLUE | Silica | Proprietary | | 0.436 | mg | 150138 | 640 | | | | |
| | | | | supplier | GLUE | Epoxy resin A | 9003-36-5 | | 0.087 | mg | 29959 | 128 | | | | |
| | | | | supplier | GLUE | Epoxy resin B | Proprietary | | 0.145 | mg | 49931 | 213 | | | | |
| | | | | supplier | GLUE | Diluent | Proprietary | | 0.145 | mg | 49931 | 213 | | | | |
| | | | | supplier | GLUE | Hardener | Proprietary | | 0.058 | mg | 19972 | 85 | | | | |
| BONDING WIRE | M-011 Other inorganic materials | 1.534 | mg | supplier | BONDING WIRE | Gold (Au) | 7440-57-5 | | 1.533 | mg | 999348 | 2250 | | | | |
| | | | | supplier | BONDING WIRE | Palladium (Pd) | 7440-05-3 | | 0.001 | mg | 652 | 1 | | | | |
| ENCAPSULATION | M-011 Other inorganic materials | 506.038 | mg | supplier | MOLDING COMPOUND | Epoxy resin | Proprietary | | 49.860 | mg | 100637 | 73169 | | | | |
| | | | | supplier | MOLDING COMPOUND | Silica fused (SiO2) | 60676-86-0 | | 426.262 | mg | 838981 | -374470 | | | | |
| | | | | supplier | MOLDING COMPOUND | Phenol Resin | Proprietary | | 27.423 | mg | 55350 | 40243 | | | | |
| FINISHING | M-011 Other inorganic materials | 0.759 | mg | supplier | MOLDING COMPOUND | Carbon Black | 1333-86-4 | | 2.493 | mg | 5032 | 3658 | | | | |
| | | | | supplier | COATING | Nickel (Ni) | 7440-02-0 | | 0.739 | mg | 973650 | 1084 | | | | |
| | | | | supplier | COATING | Palladium (Pd) | 7440-05-3 | | 0.016 | mg | 21080 | 23 | | | | |
| | | | | supplier | COATING | Gold (Au) | 7440-57-5 | | 0.004 | mg | 5270 | 6 | | | | |