



Form no.	<b>F104-1 En</b>	Quality Procedures	 <p>Lightweight Solutions for Aeronautics &amp; Defense</p> <p>En Harod Ihud 1896000, Israel Phone: +972-4-6530700 Fax: +972-4-6531904 www.aero-magnesium.com</p>
Rev.	<b>01</b>	<b>Suppliers Quality Requirements</b>	
Last Update	<b>18.7.2021</b>		
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### Approvals and changes

Revision	Description of change	date	Approved by	Signature
01	New table in article 5.13, new article 6.1.1.7	18 July 2021	Amir Fein	

#### **1. Introduction**

- 1.1 A strong and stable relationship with Aero-Magnesium suppliers is essential to our success. We expect our suppliers to support and commit to quality by maintaining an effective quality management system that serves as the basis for improving products, services and processes.
- 1.2 Aero-Magnesium is an AS9100 certified quality management system for the aviation and defense industries and requires its suppliers to implement the applicable requirements of the standard.

#### **2. Definitions**

- 2.1 The Customer – Aero-Magnesium Limited (A.C.S)
- 2.2 Supplier - a supplier or subcontractor of products or services ordered by the customer.

#### **3. Applicable documents**

- 3.1 EN/AS 9100 (**Latest Revision**)
- 3.2 AS9102 First Article Inspection (Latest Revision)
- 3.3 AS9103 Variation Management (Latest Revision)


#### **4. Supplier Classification**

Group	Scope of activity
1	Sub-contractors that produce mechanical items and mechanical assemblies according to drawings or specifications of the customer.
2	Special process suppliers (coatings, paint, special adhesives, etc.)
3	Manufacturers of raw materials, hardeners and components (catalogs)
4	Distributors of components or fasteners
5	Testing services and laboratories

#### **5. General requirements**

##### **5.1 Quality Management System:**

- 5.1.1 The supplier must maintain a quality management system in accordance with the requirements of ISO9001 / AS9100 or AS9120 (Group 5)
- 5.1.2 Special process vendors (Group 3) will also be accredited by the final customer or reviewed by the customer's representatives against the applicable requirements of AS9100.

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5.1.3 Calibration Services and Laboratories (Group 6) shall be accredited as an approved laboratory in accordance with ISO17025 (last revision).

**5.2 Awareness:**

5.2.1 The Supplier shall ensure that the employees engaged in activities related to the customer are aware of their contribution to adapting the product to the requirements, their contribution to the safety of the product and the importance of ethical conduct.

**5.3 Performance Monitoring:**

5.3.1 The organization conducts annual follow-up on the quality performance and OTD of the Supplier.

5.3.2 Suppliers with a quality performance below **85%** and delivery performance below **75%** will be placed as "at risk" status and will be required to provide a performance improvement plan.

**5.4 Deviation approvals and nonconformances:**

5.4.1 The supplier is not authorized to determine the product disposition as use as he is or to repair a nonconforming product.

5.4.2 A supplier wishing to obtain a deviation approval will submit a written request. The request will be considered by the customer and will be approved as possible, deviations will not be approved without a written approval from the customer.

5.4.3 The supplier shall notify the customer within 24 hours of any non-conformance found by the supplier which may cause the supply of nonconforming products.

**5.5 Corrective action:**

5.5.1 The supplier shall initiate the investigation of the nonconformance and shall take effective remedial action in any case of any nonconformance relating to the supplier's activity.

5.5.2 The study of the nonconformance will include analysis of the root causes of nonconformances related to the human factor.

5.5.3 The Supplier shall take the immediate actions necessary to prevent the adverse effect of the nonconformance, including reporting to the customer or other interested parties.

5.5.4 The plan for corrective action will be submitted to the customer for approval within 14 working days.

**5.6 Right of entry to the supplier site:**


5.6.1 The Supplier is required to allow the authorized representatives of the direct and/or final customer and / or the representative of the Regulatory bodies to enter the supplier site and to provide information related to the customer order. The customer shall coordinate visits in advance with the supplier.

**5.7 Verification of the production process (FAI) for groups 1,2 only:**

5.7.1 Verification of the manufacturing process shall be carried out by FAI in accordance with the requirements of the AS9102 standard.

5.7.2 The process will be performed for each new product, change of product edition or after a 24-month break in item production.

5.7.3 Substantial changes in the production processes after approval of the FAI will be carried out with the prior notice and approval of the customer.

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### 5.8 Identification:

5.8.1 The parts shall be marked as required by the drawing or the detailed specifications and according to the applicable standard.

5.8.2 For mechanical parts – specify DATE CODE, manufacturer ID, drawing number and revision or other identification method – specify week and year of production.

### 5.9 Packaging, Handling and prevention of foreign objects FOD:

5.9.1 The Supplier shall plan and implement the necessary measures to prevent damage to the Product during the stages of transportation, production and storage.

5.9.2 The parts will be packaged in such a way that it will be possible to rapidly verify and count the exact quantity of parts in the package.

5.9.3 Each shipment will be accompanied by, at minimum, inspection reports, and an invoice that includes the PO number, part number and revision.

5.9.4 Prior to packing the products or performing a special process, the products will be inspected for detection and prevention of foreign objects.

5.9.5 If the packaging specification is defined by the final customer, the parts will be packaged according to the customer specification.

### 5.10 Traceability:

5.10.1 Unless otherwise specified, the parts / materials shall be marked with the lot number and shall include traceability to the lot number of raw materials.

5.10.2 The products or materials will be supplied from one raw material lot - if the materials / products are supplied from different lots – the supplier will separate the packaging and the accompanying documentation.

### 5.11 Records Retention:

5.11.1 The period of records retention is 10 years, unless otherwise required the order or the final customer.

5.11.2 After the record retention period, the customer's approval must be requested prior to their deletion.


### 5.12 Employee Certification:

5.12.1 The production and inspection activities performed by the supplier shall be performed by employees who have been certified in accordance with the requirements of the applicable standards.

5.12.2 Quality inspectors and production workers for whom quality of vision is crucial to the quality of the product, (such as painting and coating employees, etc.), shall have appropriate vision that includes visual acuity, depth of vision and proper color diagnosis. A compliance test shall be performed by a qualified person (optometrist / ophthalmologist) at least once every two years (unless otherwise required by the applicable standard).

### 5.13 Flow-down of Requirements

5.13.1 The work ordered by the supplier will not be transferred to a sub-contractor without the prior **written** approval from the customer's Quality Manager.

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5.13.2 It is the responsibility of the supplier to implement and flow-down to sub-contractors the applicable quality requirements of the final customers.

End User	Applicable requirements
Rafael	<b>Procurement Special QA Provisions (SQAP) From procedure 93.00.63 (latest Edition)</b>
IAI	<b>Quality requirements by divisions can be found on the IAI website at the link below (see requirements documents on the right or left side):</b> <a href="http://www.iai.co.il/2013/10143-en/Suppliers_Net.aspx">http://www.iai.co.il/2013/10143-en/Suppliers_Net.aspx</a>
Elbit	<b>The following specifications (ask Aero-Magnesium if not at your hand):</b> <ul style="list-style-type: none"> <li>• <b>Quality Codes</b></li> <li>• <b>Accompanying conditions for a purchase order</b></li> <li>• <b>Quality requirements for BTS / BTP</b></li> <li>• <b>Quality requirements for BTP for mechanical production</b></li> </ul>

## 6. Special quality requirements according to item / technology

### 6.1 **Group 1 – Subcontractors (Machining & Assembly):**

#### 6.1.1 **CNC Machining**

6.1.1.1 Materials intended for RAFAEL, IAI or Elbit shall be supplied with a certificate of validation (STS / COC SHIPPER). Unless otherwise specified, only Western materials (USA, Western Europe) will be supplied.

6.1.1.2 Materials for aerospace-**defense** customers without validation certificates will be approved by the customer prior to their delivery.

6.1.1.3 For materials defined as "critical" by the customer, the raw material will be validated in an approved laboratory under the responsibility of the supplier.

6.1.1.4 Special Processes should only be performed by subcontractors approved by the customer and by the final customer against a list of approved special process suppliers.

6.1.1.5 The supplier shall ensure that during the manufacturing, testing and packaging processes appropriate conditions are allocated for the prevention of foreign objects (FOD).

6.1.1.6 Unless otherwise defined, the sampling method for final inspection shall be in accordance with Squeglia, AQL 2.5%.

**6.1.1.7 In any case the sampling method will be based on acceptance number 0 (C = 0).**

6.1.1.8 Key Characteristics (KC) will be managed in accordance with the requirements of the AS9103 standard.


#### 6.1.2 **Component Assembly**

6.1.2.1 The work will be carried out according to the requirements of CLASS 3 IPC-A-610 in the latest revision.

6.1.2.2 The supplier will not use LF production processes without the prior approval of the customer

6.1.2.3 Moisture sensitive components will be treated according to JSTD-033 and JSTD-020.

6.1.2.4 A 100% AOI test shall be performed for assembled circuit boards.

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6.1.2.5 In the event of a repeating nonconformance or a correction of more than 10% of the lot, a repeat AOI test shall be performed for 100% of the lot.

6.1.2.6 If AOI testing cannot verify the quality of the products, an X-ray test shall be performed.

6.1.2.7 The assembled boards will be identified by a label that includes s/n identification WWYYY MNF (manufacturer name, week of production, year of production and PCB s/n)

6.1.2.8 The status of the tests will be identified on the card (AOI, X-Ray)

## 6.2 Group 2 – Special processes:

6.2.1 If required by the final customer or the direct customer, the items will be supplied with additional test samples.

6.2.2 If necessary, and in accordance with the requirements of the customer, the drawing, the applicable specification or the final customer, a process shall be carried out for hydrogen embrittlement or a thermal treatment process. Report and a process chart will be provided with the parts.

6.2.3 The special process test reports shall include the applicable drawing requirements and specifications, their revision and the results of the tests and the type of measurement instrument used for the examination.

6.2.4 Special processes will be validated according to applicable standards. Evidence of the validation will be maintained by the supplier and will be presented to the customer in accordance with the demand.

## 6.3 Group 3,4 – Manufacturers / distributors of catalog materials and items:

### 6.3.1 Fasteners

6.3.1.1 Fasteners supplied with a certificate of conformity that meets the requirements of the order, the report will include the details of the manufacturer and the lot number of the parts.

6.3.1.2 The Fasteners will be supplied from one production lot and from one manufacturer, the supply of Fasteners from more than one lot will be with the approval of the customer only, each lot will be accompanied by the applicable quality documentation.

### 6.3.2 Adhesives / paints


6.3.2.1 On each individual packaging, the date of manufacture, recommended shelf life and the storage, temperature, humidity or other conditions of all items / materials with a limited life span provided under this order shall be stated. The remaining shelf life shall be at least 80% of the total shelf life of the item at the time of departure from the supplier's facility.

## 7. Prevention of purchase and supply of counterfeit components and items:

7.1 In order to reduce the risk of providing counterfeit electronic components, items or materials, the supplier must meet the following requirements:

7.1.1 The supplier must meet the applicable requirements of AS5553 (for electronic items) AS6174 (for parts and materials)

7.1.2 Items will be purchased from the original manufacturer or from an authorized distributor. If the items or materials cannot be purchased from an authorized distributor or manufacturer, please contact the customer for approval.

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- 7.1.3 The supplier must maintain a method that will ensure traceability in the supply chain of components and items supplied from the original manufacturer to the customer.
- 7.1.4 The supplier must attach to the order all documents proving the traceability of the purchase.
- 7.1.5 The traceability of the purchase shall include: details of those involved in the supply chain from the original manufacturer to the direct source from which the item was purchased by the supplier.
- 7.1.6 The supplier must attach to each shipment the Original COC issued by the authorized component manufacturer or distributor - including the DATE CODE and the vendor's Declaration of Conformity containing the details of the order.
- 7.1.7 The first products / packages will be identified by DATE CODE related to the COC.
- 7.1.8 The supplier must maintain records including DATE CODE, lot numbers, and any other documentation attached to the purchase order and invoice.
- 7.1.9 For MS / NAS items, the vendor must attach to each shipment an original COT certificate from the manufacturer.