

# Supplier Quality Requirements

## Q4000

### ▣ Scope

▷ Standard Hardware Supplier

 Hanwha	<b>SUPPLIER QUALITY ASSURANCE  REQUIREMENTS</b>	Doc. Group	<b>SQAR</b>
		Doc. No.	<b>Q4000</b>

Rev. No.	Date	Description	Prepare	Review	Approval
0	2014.10.27	Initial Issue	NI Kim	SW Kim	YH Cho
1	2015.07.17.	<b>Add Para 4.7</b> - Additional Quality Assurance Requirements <b>Add Para 4.8</b> - Corrective and Preventive Action	KH Jung	SW Kim	YH Cho

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## 1. Purpose

This requirements specifies quality assurance requirements for standard hardwares supplied by the suppliers of Hanwha Corporation Aerospace Division(hereafter "Hanwha").

## 2. Scope

2.1 Outsourced processes are classified into the following 3 categories.

Classification	Type	Remark
<b>Group 4A</b>	MILL/Manufacturer	Standard Hardware Manufacturers (QPL registered suppliers)
<b>Group 4B</b>	Distributor	Distributors which store, maintain and sell Standard Hardwares
<b>Group 4C</b>	Trading Agent	companies which receive purchase orders directly from Hanwha and purchase the items and supply ordered components to Hanwha

2.2 This requirements applies to the suppliers and the subtiers of the suppliers when stated on the contracts or purchase orders.

### 2.3 Relations to other requirements

Suppliers shall meet all the requirements on the contract and are responsible for providing the relevant products and services to Hanwha Corporation. If the requirements on the contract do not conform to the this SQAR the priority shall be given to the requirements of the contract.

2.4 If the requirements on this SQAR cannot be met, the suppliers must notify Hanwha Corporation and discuss prior to signing the contracts and receiving the purchase orders.

2.5 Suppliers shall refer to the latest revision of this requirements. When the manufacturing cost increases as a result of revision of the requirements, the suppliers must notify Hanwha's purchasing department for discussion.

## 3. Applicable Documentations

3.1 AS9100 "Quality Management Systems - Requirements for Aviation, Space and Defence Organizations"

☞ Web site address: <http://www.sae.org/standardsdev/aerospace/hotaero.htm>

3.2 AS9120 "Quality Management Systems - Aerospace Requirements for Stockist Distributors"

☞ Web site address: <http://www.sae.org/standardsdev/aerospace/hotaero.htm>

3.3 ISO9001 "Quality Management Systems - Requirements"

☞ Web site address: <http://www.iso.org>

3.4 Material Standards (e.g. AMS, ASTM, MIL Spec. etc)

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#### 4. General Requirements

4.1 Suppliers shall establish and maintain a quality system which meets the requirements stated on this SQAR and acquire proper certifications as below from Certification Body(CB).

Classification	Type	Quality System Specifications
<b>Group 4A</b>	MILL/Manufacturer	AS9100 or ISO9001
<b>Group 4B</b>	Distributor	AS9100 or AS9120
<b>Group 4C</b>	Trading Agent	AS9100 or AS9120 (Refer to 4.2 clause)

4.2 Group 4C suppliers that don't have AS9100 or AS9120 QMS certification shall establish a quality system which meets the following requirements and shall be approved by Hanwha through the quality audit prior to officially managing the system.

4.2.1 When a trading agent receives purchase items that are ordered by Hanwha from a manufacturer or distributor and supply them to Hanwha, the purchase order must stipulate contract requirements of Hanwha including following clauses.

- a Clear means of identification including type, class, grade, part No. of the purchased products
- b. Applied drawings, specifications, manufacturing requirements, and other engineering requirements

4.2.2 Purchase orders shall be reviewed and approved properly before they are submitted to manufacturers or distributors.

4.2.3 Trading agents shall not modify or repair items without an approval from Hanwha.

4.2.4 All Products shall be identified with part description, part number, Lot/Batch number and its manufacturer.

4.2.5 Trading agents shall provide customer service which allows Hanwha to contact the manufacturers and distributors to solve issues related to the products.

4.2.6 Trading agents shall maintain and manage a list of approved manufacturers and distributors and evaluate the validity of their accreditation through periodic audits.

4.2.7 Trading agents shall manage to prevent any damage or loss of all products and forward manufactures and distributors the requirements clearly and check their compliance periodically.

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4.2.8 Trading agents shall establish proper procedures to verify that the products and the delivery documents meet the requirements of Hanwha.

4.2.9 Suppliers which are approved by Hanwha shall be audited periodically at least once every year. Intervals between each audit can be extended up to 3 years by evaluating the performance of the suppliers.

4.3 Standard hardware manufacturers shall be approved by each qualified institution. The qualification of these manufacturers shall be verified by checking the presence of the "Qualified Product Lists (QPL)".

4.4 Distributors shall supply the products along with documents which allow every single unit to be traceable based on the items' certificates of conformance issued by the manufacturers.

4.5 Suppliers shall package and deliver the products with identifications such as part number and batch number

4.6 Trading agents (Group 4C) shall confirm that manufactures (Group 4A) and distributors (Group 4B) comply with following requirements prior to its delivery.

4.6.1 A supplier which meets the quality system requirements of 4.1.1 clause

4.6.2 A supplier registered on "Qualified Product Lists"

4.6.3 A supplier designated by Hanwha or Hanwha's customer

4.6.4 A distributor designated by the manufacturer if applicable

#### 4.7 Additional Quality Assurance Requirements

Supplier shall meet the following quality requirements in addition to the quality assurance system specified in this document.

4.7.1 Quality assurance/inspection requirements specified on the drawing and specification of the product.

4.7.2 Quality assurance/inspection requirements stated on the relevant government policy and contract related documents.

4.7.3 Additional quality requirements(Q0000) stipulated in the purchase order with Q4000.

#### 4.8 Corrective and Preventive Action

4.8.1 Suppliers shall carry out corrective and preventive actions in order to preclude reoccurrence of the same nonconformance and present the proof when requested by Hanwha.

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4.8.2 Suppliers shall respond to the corrective action request issued by Hanwha in timely manner before the response due date and send result of the actions taken. If suppliers need more time to respond officially to Hanwha, suppliers shall submit a formal request in writing to extend the deadline in advance.

4.8.3 Hanwha can prohibit all deliveries of the supplier until the official response is received and its action is confirmed when the due date is expired over 15 business days without any notice or request.

## 5. Requirements for Shelf Life Control

5.1 The following requirements shall be provided when raw materials and subsidiary materials with limited shelf life are delivered.

5.1.1 Manufacture date and Cure date

5.1.2 Expiration date or Shelf life

5.1.3 Lot/Batch Number

5.1.4 Special requirements for Handling & Storage

5.2 All shelf life materials to be supplied to Hanwha shall have over 75% of their full shelf life unless otherwise specified on the contract or purchase order.

5.3 Suppliers shall establish and apply a proper procedure to manage shelf life materials which can be significantly affected by storing and preserving conditions and ensure that their quality and shelf life are not affected during its delivery from manufactures to Hanwha by providing adequate package and environment.

## 6. Delivery

6.1 Suppliers shall devise a means of preventing damage and corrosion of products during their delivery by predicting various circumstances that may affect the conditions of the products.

6.1.1 The shipping documents that need to be enclosed with the products are as follows.

6.1.1.1 Group 4A (MILL/Manufacturer) Supplier

a) CoC (Certificate of Conformance)

- Name of Manufacturer

- Part Name/Part No.

- Specification and Condition)

- Purchase Order No.

- Quantity

- Batch/Lot No.

- Shelf Life Information, if applicable : Refer to Para. 5

b) Material Test Report required by the applicable specification

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6.1.1.2 Group 4B (Distributor) Supplier

a) CoC (Certificate of Conformance from a supplier)

- Name of Distributor
- Name of Manufacturer or Attach the Manufacturer' CoC
- Part Name/Part No.
- Specification and Condition
- Purchase Order No.
- Quantity
- Batch/Lot No.
- Shelf Life Information, if applicable : Refer to Para. 5

b) Material Test Report required by the applicable specification

6.1.1.2 Group 4C (Trading Agent) Supplier

a) CoC (Certificate of Conformance from a supplier)

- Name of Trading Agent
- Name of Manufacturer and Sub-Distributor
- Part Name/Part No.
- Specification and Condition
- Purchase Order No.
- Quantity
- Batch/Lot No.
- Shelf Life Information, if applicable : Refer to Para. 5

b) CoC (Certificate of Conformance from a Sub-Distributor)

- Name of Distributor
- Name of Manufacturer or Attach the Manufacturer's CoC
- Part Name/Part No.
- Specification and Condition
- Purchase Order No.
- Quantity
- Batch/Lot No.
- Shelf Life Information, if applicable : Refer to Para. 5

c) Material Test Report required by the applicable specification

6.2 Suppliers shall not deliver any unauthorized copy, substitute and counterfeit products.