

 Hanwha	SUPPLIER QUALITY ASSURANCE REQUIREMENTS	Doc. Group	SQAR
		Doc. No.	Q3000

Rev. No.	Date	Description	Prepare	Review	Approval
0	2014.10.27	Initial Issue	NI Kim	SW Kim	YH Cho
1	2015.07.17.	Add Para 4.5 - Additional Quality Assurance Requirements Amend Para 5.2.1 - Test requirement for domestic raw material Amend Para 5.3.3 - Traceability for domestic raw material Add Para 5.6 - Corrective and Preventive Action	KH Jung	SW Kim	YH Cho
2	2017.09.01.	Amend Para 4.3 - Requirement of confirmation of ASL Amend Para 4.4 - Requirement of inspection reports - Link to Para 6 Delivery requirement Amend Para 5.1.1 - Requirement of QMS Requirement for Group 3B, 3C Amend Para 5.1.2 - Requirement of QMS certification Delete Para 5.1.3 - Annual QMS Audit requirements Amend Para 5.3.3 - Requirement of traceability for intermediaries Amend Para 5.4.2 - Shelf Life : more than "75%" ⇒ "2/3" Amend Para 5.5.2 - Requirement of record of inspection results Amend Para 6.1.1.2 and Para 6.1.1.3 - Requirement of delivery documentations change (for Group 3B and 3C)	KH Jung	HC Lee	SW Kim

 Hanwha	SUPPLIER QUALITY ASSURANCE REQUIREMENTS	Doc. No.	Q3000
		Pages	1 OF 7
		Rev. No.	2
		Rev. Date	2017. 09. 01

1. Purpose

This requirements specifies quality assurance requirements for the raw materials and subsidiary materials that are purchased order/contacted suppliers of Hanwha Corporation Aerospace Division(hereafter "Hanwha").

2. Scope

2.1 The outsourced items are classified according to the criteria below.

Types	Classifications	Remark
Group 3A	MILL/Manufacturer	Raw Materials/Subsidiary Materials Suppliers
Group 3B	Distributor	Distributors which receive, store, and maintain raw materials/subsidiary materials for sales
Group 3C	Trading Agent	A company which receives purchase orders for raw materials/subsidiary materials and transport them from distributors to customers

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. 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 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>

 Hanwha	SUPPLIER QUALITY ASSURANCE REQUIREMENTS	Doc. No.	Q3000
		Pages	2 OF 7
		Rev. No.	2
		Rev. Date	2017. 09. 01

3.3 ISO9001 "Quality Management Systems - Requirements"

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

3.4 Material Standards

Material specifications applied on the drawings and specifications of the items found on the contract or purchase order. ("ex" AMS, ASTM, MIL Spec. etc)

4. General Requirements

4.1 Suppliers shall establish a quality system which meets the requirements stated on this SQAR and get an approval from Hanwha prior to providing the relevant products and services.

4.2 If a trading agent which belongs Group 3C receives raw materials/subsidiary materials from a manufacturer or a distributor in Group 3A and Group 3B and supply them to Hanwha, the trading agent must have the following qualifications.

4.2.1 A supplier which meets the quality system requirements of Part 5.1.1

4.2.2 A supplier registered on Qualified Product Lists to process the pertinent goods

4.2.3 A supplier designated by Hanwha or Hanwha's customer

4.2.4 A distributor designated by the manufacturer if applicable

4.3 Group 3C suppliers shall confirm a list of approved manufacturers and distributors of Hanwha and Hanwha's customers prior to its delivery for each product classified by different types and specifications.

4.4 Suppliers shall perform inspection on all the products or secure all inspection reports prior to its delivery and submit the documents in accordance with Para 6 Delivery requirement.

4.5 Additional Quality Assurance Requirements

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

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

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

4.3.3 Additional quality requirements(Q0000) stipulated in the purchase order with Q3000.

 Hanwha	SUPPLIER QUALITY ASSURANCE REQUIREMENTS	Doc. No.	Q3000
		Pages	3 OF 7
		Rev. No.	2
		Rev. Date	2017. 09. 01

5. Quality Assurance Requirements

5.1 Quality System Assurance Requirement

5.1.1 The suppliers which are affected by this SQAR shall get an approval from a certification which is registered as a member of IAQG and maintain the certification status by establishing a quality system conforming to the specifications of AS9100 quality management system.

Types	Classifications	Quality System Requirements
Group 3A	MILL/Manufacturer	AS9100 or ISO9001
Group 3B	Distributor	AS9100 or AS9120 or ISO9001
Group 3C	Trading Agent	AS9100 or AS9120 or ISO9001 ☞ Refer to Part 5.1.2

[5.1.2 Group 3C Suppliers shall submit the plan in writing to get the AS9100, AS9120 or ISO9001 certification and obtain conditional approval from Hanwha based on following requirements. if supplier does not have any international quality management system certification or the certification is cancelled.](#)

5.1.2.1 When a trading agent receives purchase items that are ordered by Hanwha from a manufacturer or distributor and supply them to Hanwha, the purchase must include the following conditions.

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

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

5.1.2.3 Distributors shall not modify or repair items without approval from Hanwha.

5.1.2.4 Items to be supplied shall be identified with name of the part and its manufacturer, part No., Lot/Batch No.

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

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

 Hanwha	SUPPLIER QUALITY ASSURANCE REQUIREMENTS	Doc. No.	Q3000
		Pages	4 OF 7
		Rev. No.	2
		Rev. Date	2017. 09. 01

5.1.2.7 The trading agent shall manage to prevent any damage or loss of the items and check to ensure the manufacturers and distributors do the same on a regular basis.

5.1.2.8 Trading agent shall establish a procedure to verify that the items and the relevant documents meet the customer's requirements prior to their delivery.

5.2 Purchase, Material Management

5.2.1 Suppliers shall procure all the quality assurance documents including certificates of conformance and inspection/test reports of all the supplied raw materials and parts, and they shall conduct quality inspections and allow only the raw materials and parts that have passed the inspection to be supplied to Hanwha. (In case of the domestic raw material, the physical and chemical reports which are tested and confirmed by certified test bodies designated by customers shall be included.)

5.2.2 Suppliers shall verify the reliability of certificate of conformance/test report of the supplied raw material/subsidiary materials. When necessary, suppliers shall provide Hanwha with test specimen so that the reliability of quality can be verified.

5.2.3 Suppliers shall maintain and manage all the quality verification documents and quality inspection report of raw material/subsidiary material. These documents must be present to Hanwha upon its request.

5.2.4 Suppliers shall establish a procedure to be used to keep the identification of the specification, serial number, and batch/lot number intact on raw materials supplied by Hanwha.

5.3 Traceability Control

5.3.1 Suppliers shall devise a procedure to identify and control traceability throughout receiving, storage and overall production process of the raw materials and parts.

5.3.2 Traceability control of materials and products are to be implemented throughout entire the production process. In any cases, even the mixture of different items and Batches/Lots shall be prevented. Hanwha can request the suppliers to compensate for any financial loss or aircraft accident attributing to mixture of different items and Batches/Lots.

[5.3.3 Group 3B, 3C Suppliers shall secure manufacturer's certification and confirm the identification and conformity of the materials\(products\). If the certifications and traceability information of intermediary stockist are not sufficient on domestic raw materials, suppliers shall meet Para 5.2.1 requirements. In case of overseas raw](#)

 Hanwha	SUPPLIER QUALITY ASSURANCE REQUIREMENTS	Doc. No.	Q3000
		Pages	5 OF 7
		Rev. No.	2
		Rev. Date	2017. 09. 01

materials, suppliers shall comply with the requirement in the contract, procedures of the customer or its quality plan. If the supplier is designated by Hanwha's customer, the supplier can submit their certification only.

5.3.4 Suppliers shall identify all the raw material/subsidiary material with their part No., part name, specification, type, class, grade, and traceability information on each and every item prior to shipment.

5.4 Shelf Life Item Control

5.4.1 Suppliers shall provide the following information if they supply raw material/subsidiary material with limited shelf life.

5.4.1.1 manufacture and cure date

5.4.1.2 expiration date or shelf life

5.4.1.3 lot or batch number

5.4.1.4 warning and caution for handling and storage

5.4.2 All shelf life raw materials/subsidiary materials to be supplied to Hanwha shall have over 2/3 of their full shelf life unless otherwise specified on the contract or purchase order.

5.4.3 Suppliers shall devise a proper means of managing 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 delivery by providing adequate package and environment.

5.5 Test Report

5.5.1 Test reports shall include data acquired by comparing the actual value obtained through heat treatment of materials and the specific value required by the material's specification.

5.5.2 Suppliers shall record and maintain test reports which include the following information unless otherwise specified on the contract or purchase order. When requested by Hanwha, suppliers shall submit the reports.

5.5.2.1 Specifications of raw material, its Rev. No.

5.5.2.2 Batch/Lot No.

5.5.2.3 Date of manufacture(test)

5.5.2.4 Chemical composition test report required by specification of material

5.5.2.5 Physical properties test report required by specification of material

5.5.2.6 Other Specifications or test reports required by the contract/purchase order

5.6 Corrective and Preventive Action

5.6.1 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.

 Hanwha	SUPPLIER QUALITY ASSURANCE REQUIREMENTS	Doc. No.	Q3000
		Pages	6 OF 7
		Rev. No.	2
		Rev. Date	2017. 09. 01

5.6.2 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.

5.6.3 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.

6. Delivery Control

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 3A (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. 5.4

b) Material Test Report : Refer to Para. 5.5

6.1.1.2 Group 3B (Distributor) Supplier

a) CoC (Certificate of Conformance from a supplier)

- Name of Distributor
- [Name of Manufacturer and CoC No. 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. 5.4

[b\) CoC of intermediary supplier : Refer to Para 5.3.3](#)

c) Material Test Report : Refer to Para. 5.5

6.1.1.3 Group 3C (Trading Agent) Supplier

a) CoC (Certificate of Conformance from a supplier)

- Name of Trading Agent
- [Name of Manufacturer and CoC No. or Attach the Manufacturer' CoC](#)
- Part Name/Part No.
- Specification and Condition
- Purchase Order No.

 Hanwha	SUPPLIER QUALITY ASSURANCE REQUIREMENTS	Doc. No.	Q3000
		Pages	7 OF 7
		Rev. No.	2
		Rev. Date	2017. 09. 01

- Quantity
- Batch/Lot No.
- Shelf Life Information, if applicable : Refer to Para. 5.4
- [b\) CoC of intermediary supplier : Refer to Para 5.3.3](#)
- c) Material Test Report : Refer to Para. 5.5

6.2 Suppliers shall use a proper means of packing shelf life materials in order to protect them from environmental factors which can affect the shelf life of the materials when necessary.

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