Supplier Quality Manual

Supplier Quality Terms and Conditions

Introduction

Suppliers of Inalfa Roof Systems are one of the fundamental pillars to achieve our goal to meet the highest expectations of our customers and end users. This Supplier Quality Manual is the foundation of a “Performance Partnership” to achieve “Quality Everyday, Everywhere”.

The Supplier Quality Manual defines our general quality related requirements for development, production, verification of delivered parts and services and is in line with IATF 16949:2016. The Purchasing and Quality strategies in this Quality Manual are a “Global” policy where we expect a commitment from our suppliers to achieve zero defects. Suppliers demonstrate this commitment through:

- Deliveries On Time In Full (OTIF)
- Delivery of fully conforming products and services
- Rigorous adherence to approved processes and requirements
- Pro-active risk management
- Continual improvements

Inalfa Roof Systems is aware of the fact that suppliers have a high influence on the total performance. Therefore suppliers must ensure that sub-suppliers also work according to this Supplier Quality Manual and meet the requirements. It is required that suppliers have a Quality Management System (QMS) in place according to the international quality standard IATF 16949:2016, while a minimum standard of ISO 9001 in the current revision is required (as stated in the IATF 16949:2016 manual).

Transparency, one of the key values of Inalfa Roof Systems, is that all information for suppliers is available on the supplier portal. Suppliers can access the Inalfa Roof Systems Supplier Portal via the following link:

For Europe: http://supplier.inalfa-roofsystems.nl
For USA: http://supplier.inalfa-roofsystems.us/supplyWeb/account/login
For Asia: http://irscnedi02/supplyWeb/account/showLogin

Defined terms (abbreviations) in this manual have the meaning as mentioned in Chapter 7 of this manual

Included in the scope of this manual are only the suppliers that supply Bill-Of-Material (BOM) components used in the manufacture of Inalfa Roof Systems. Suppliers of goods and services not on the BOM are managed by the Inalfa Roof Systems Purchasing department.

Table of Contents

2. *COMPONENTS* **5**

2.1 Component categories **5**

3. SUPPLIER QUALIFICATION **6**

3.1 Supplier Selection and Approval **6**
3.1.1 Potential Supplier Questionnaire 6
3.1.2 Potential Supplier Self-Assessment 7
3.1.3 On-Site Assessment 7

3.2 Periodic Re-evaluation **7**

3.3 Corporate Social and Environmental Responsibility **7**

3.4 Access to Supplier's premises and access to sub-suppliers **8**

4. ADVANCED PRODUCT QUALITY PLANNING **8**

4.1 System Overview **8**

4.2 Nomination and Kick-Off Review Process (KOR) **9**
4.2.1 Key characteristics matrix 10

4.3 Frequent reporting **10**

4.4 Project Phase Requirements **11**

4.5 Part Qualification **12**
4.5.1 Sample delivery 12
4.5.2 Design and usage of gauges and tools 12

4.6 Documents and Forms in APQP Phase **13**
4.6.1 Part History List 13
4.6.2 APQP Open Issue List 13
4.6.3 New Product Label 13
4.6.4 Part marking 14
4.6.5 Dimensional Workbook 16
4.6.6 Supplier Corrective Action Plan 16
4.6.7 PPAP Checklist 17
4.6.8 Run at Rate 17

4.6.9 APQP Planning 17

4.7 Final PPAP Submission 17
4.7.1 PPAP nomenclature 20
4.7.2 Deviations on PPAP 20
4.7.3 Sending PPAP to Inalfa Roof Systems 21
4.7.4 Delay in PPAP submission 21

4.8 Ongoing Production 21

4.9 Product safety and liability 22

4.10 Information Security 23

5. SUPPLIER MANAGEMENT 24

5.1 Continual Improvement 24
5.1.1 Change request 24
5.1.2 Contingency plans 24

5.2 Supplier Performance 25
5.2.1 Non-conformity and escalation 27
5.2.1.1 Project phase escalation 27
5.2.1.2 Running production escalation 27
5.2.2 Top Focus 28

5.3 Supplier Complaint Management 28

5.4 Supplier Award and Recognition 29

5.5 Supplier Business Review Meeting 29

6. FINAL PROVISIONS 30

7. ABBREVIATIONS 32

APPENDIX 33

2. *Components*

2.1 Component categories

Inalfa Roof Systems has defined three different component categories. By using categories, both Inalfa Roof Systems and suppliers can effectively plan and utilize all resources, identify the Advanced Product Quality Planning (APQP) sign off level and establish on-going production and process controls.

The purpose being that, the more significant or critical components will receive more detailed and in-depth control. The component category shall in all cases be determined by Inalfa Roof Systems prior to any APQP activity.

Table 1: Component Categories Overview

Component Categories			
Component Number	**1**	**2**	**3**
Component description	Safety critical parts / Influences customer significant characteristics / Product is performance related / Part has an FMVSS or Economic Commission for Europe (ECE) regulatory callout	Non safety critical part / Does not influence customer significant characteristics	Standard "off-the-shelf" or miscellaneous item
Examples	- Glass panels, raw or encapsulated - Motors / Sun roof control unit - Guides - Large injected plastic parts - Middle beams - Glass brackets - Primary seals - New mechanism tools - Wire Harness - Other Safety critical products	- Non-functional castings, mouldings or pressings - Mechanism components (carry over usage) - Secondary seals - Glass seals	- Gaskets - Fasteners - Connectors - Felt - Tape - Grease / Lubricants - Plastic bags - Chemicals
Requirements	- APQP - PPAP (all elements unless otherwise agreed) - Safe launch plan - Run at Rate - Annual dimensional re-qualification - Capability study ≥30 pcs - Re-PPAP frequency based on agreement with Inalfa SQD - Annual business review with purchasing department. - Yearly self-assessments - IMDS - Other items	- Assessment of risk to product conformity and uninterrupted supply of supplier (IATF 8.4.1.2.a) - PPAP(all elements unless otherwise agreed) - Annual dimensional re-qualification - Capability study ≥30 pcs - Yearly self-assessment unless otherwise agreed - IMDS	- PPAP (all elements unless otherwise agreed) - Annual dimensional re-qualification - IMDS

3. Supplier Qualification

3.1 Supplier Selection and Approval

All suppliers of production goods to Inalfa Roof Systems must be approved qualified suppliers. Suppliers that already deliver to Inalfa Roof Systems are maintained in an approved supplier list together with a supplier scorecard. Depending on the score of the supplier, Inalfa Roof Systems decides to continue the quotation and selection procedure or to nominate a different supplier.

The selection process of potential suppliers includes (per IATF 8.4.1.2):

a) An assessment of the selected supplier's risk to product conformity and uninterrupted supply of the organization's product to their customers
b) Relevant quality and delivery performance
c) An evaluation of the supplier's quality management system
d) Multidisciplinary decision making
e) An assessment of the software development capabilities, when applicable. Or demonstrate the implementation and maintenance of a process for sotware quality assurance (as per IATF 8.4.2.3.1)

Potential suppliers and/or new production sites of approved suppliers can be added to the approved supplier list when fulfilling all of the following requirements:

- Potential supplier questionnaire is filled in and approved by Inalfa Roof Systems.
- Potential supplier self-assessment form is filled in and approved by Inalfa Roof Systems.
- Inalfa Roof Systems or an authorized agent of Inalfa Roof Systems has performed an on-site Potential Analysis according VDA 6.3 (or IATF 16949 equivalent) with a positive result, measured against the VDA 6.3 requirements (or IATF 16949 equivalent) and possibly a Materials Management Operations Guideline / Logistics Evaluation.
- The supplier has a valid certificate (minimum requirement: ISO 9001 in the current revision) provided by a certified body.

3.1.1 Potential Supplier Questionnaire

In the early stages of the supplier selection process, potential suppliers are sent a questionnaire. This questionnaire solicits general information about the company:

- Location(s), size, capabilities
- Financial stability
- Conflict minerals reporting
- Availability of business continuity plans
- Confirmation that an insurance is in place to cover all possible setbacks
- Questions regarding the company's (quality) management system and quality history
- Adherence to Automotive Industry Guiding Principles to Enhance Sustainability Performance in the Supply Chain

- Strategy on contingency plans

3.1.2 Potential Supplier Self-Assessment

When a potential supplier is being considered based on the Potential Supplier Questionnaire, a self-assessment survey request will be sent consisting of:

- A Quality aspect: VDA 6.3 self-assessment (or IATF 16949 equivalent)
- A Logistics aspect: Materials Management Operations Guideline / Logistics Evaluation

The supplier completes the self-assessment and returns it along with a copy of its certificates and other supporting documents. Subsequent evidence will be collected from feedback based on the Potential Supplier Questionnaire. Inalfa Quality, Purchasing, Logistics and Engineering will review the documentation to determine if the potential supplier meets Inalfa's requirements.

3.1.3 On-Site Assessment

For potential suppliers of Inalfa, an on-site assessment of the supplier's facility is performed. The on-site assessment includes four components:

- A quality review by Inalfa Roof Systems Supplier Quality Development (SQD) according to VDA 6.3 Potential Analysis (or IATF 16949 equivalent) to determine whether the supplier's quality management system is in place and functioning effectively.
- A business resource assessment by Inalfa Purchasing to confirm the supplier has financial resources, production capacity, items mentioned in Chapter 3.1.1 and other business resources needed to fulfil Inalfa Roof Systems production needs.
- A technology assessment by Inalfa Roof Systems Engineering to determine whether the supplier has the needed Project Management skills and technical resources, including production and inspection equipment, facilities, engineering resources, software systems, etc.
- A Logistics Process Review if necessary. Please refer to Chapter 8.2 of the Inalfa Roof Systems Logistics Manual.

If the review team determines that the supplier meets Inalfa Roof Systems' requirements, the audit team qualifies the supplier to bid on new business.

3.2 Periodic Re-evaluation

Inalfa periodically re-evaluates suppliers through the use of quality performance data and/or on-site assessments, using VDA 6.3 or IATF 16949 methodologies.

When requested, the supplier shall make their facility available for onsite process and product verification, by Inalfa Roof Systems' personnel and relative customer, within reasonable notice.

Inalfa Roof Systems always has the option to review and assess sub-suppliers if deemed necessary

3.3 Corporate Social and Environmental Responsibility

Suppliers are obliged to report on Corporate Social Responsibilities upon request of Inalfa Roof Systems.

Please refer on www.inalfa.com or www.inalfa-roofsystems.com to the Supplier Code which can be found by clicking the “Processes” tab followed by the “Purchasing” tab:

“Inalfa has agreed to abide by moral and ethical values in the management of the company. We expect our third party suppliers to respect and adhere to the same philosophy in the management of their own companies. We seek to work with suppliers that agree to comply with the requirements of this Supplier Code which also abides by the principles stipulated in the Conventions of the International Labour Organization, the Universal Declaration on Human Rights, the guiding principles of the OECD (Organization for Economic Co-operation and Development) and the principles of the Global Compact. Any breach of conduct or any violation of this code of conduct by our suppliers or their subcontractors will result in a review and possible termination of the business relationship.”

As Inalfa we stimulate suppliers to conform to ISO 14001 and OHSAS 18001 standards. This is reflected in additional points which contribute to the SMS score. See Chapter 5.2 of this manual.

For environmental aspects please refer on www.inalfa.com or www.inalfa-roofsystems.com to the General Terms & Conditions which can be found by clicking the “Processes” tab followed by the “Purchasing” tab.

3.4 Access to Supplier’s premises and access to sub-suppliers

Inalfa has the possibility to visit the supplier or its sub-suppliers at any time if the situation requires, Inalfa customers may attend such meetings. The supplier will be notified of these visits, Inalfa Roof Systems will not visit sub-suppliers without prior notice. Preferably the supplier should be on site during Inalfa Roof Systems visits to sub-supplier’s premises.

4. Advanced Product Quality Planning

Advanced Product Quality Planning (APQP) is paramount in achieving a successful product launch and in setting the foundation for on-going process control and continual improvement. The supplier is in all cases responsible for the entire APQP process and needs to communicate/report this to Inalfa Roof Systems on a regular basis.

The APQP process shall be conducted according to the VDA Volume 2 or to the AIAG Reference Manual “Advanced Product Quality Planning”. During the Kick-Off Review supplier shall check which process needs to be followed.

4.1 System Overview

Inalfa Roof Systems and the supplier will work together to achieve “Production Readiness”. Inalfa Roof Systems will specify the requirements to suppliers, in terms of pre-production planning techniques and documentation requirements. Supplier shall abide by these requirements.

Inalfa Roof Systems expects the supplier to be pro-active and take the initiative during the product and process development stage, which will include “self-led” multi-disciplined project management

where possible. This pro-active approach also requires that the supplier takes the initiative to run and improve tools until parts are to print and capability is achieved.

Annual layouts, scrap, rework, repair, variation, cost of quality, first time through, PPM, reject analysis and process reviews should be some of the techniques used to verify the on-going product and process controls throughout the product life cycle. Also, examining and comparing capability such as products/processes through the use of statistical control are techniques that are requested to be used.

Although Inalfa Roof Systems has a Global APQP policy, some elements may differ between regions.

4.2 Nomination and Kick-Off Review Process (KOR)

The supplier will be informed by the Inalfa Roof Systems Purchasing department of the nomination for the development of the Inalfa Roof Systems component(s), subject to the terms in the nomination letter and successful KOR process. Inalfa Roof Systems Engineering will be in close contact with supplier's engineering to develop the 3D models and 2D drawings. Once all is agreed, the KOR process will start where the supplier:

- Agrees on the Customer Specific Requirements (for example VW Formel-Q, GM BIQS, etc.) mentioned on the 2D drawings cascaded down from OEM via Inalfa Roof Systems to supplier
- Guarantees robust and capable reproduction of each dimension and tolerance
- Fully understands each test requirement
- Understands the requirements for the checking fixture and respects the datums as marked on drawing
- Agrees on the future PPAP deliverables (see chapter 4.6) and confirms that each deliverable will be sent as soon as the development of the tool allows
- Has a packaging proposal ready
- Agrees on Logistics demand flexibility (see Logistics Manual chapter 3.2)
- Agrees on Logistics capacity flexibility (see Logistics Manual chapter 3.3)
- Commits to the timing (according APQP or VDA book 2)
- Agrees on country specific legal certification required activities and re-qualification (such as China Compulsory Certificate (CCC))
- Agrees on the terms of this Supplier Quality Manual
- Agrees on the remaining items in the KOR

The Purchase Order (PO) can be officially released by the purchasing department only when the complete KOR document is "green" meaning all the topics on the checklist have been discussed and agreed. If the KOR is "red" it means that on one or more topics there is no agreement between Inalfa Roof Systems and the supplier. Release of PO usually takes place on the basis of a purchase contract between Inalfa Roof Systems and the supplier ("Purchase Contract"). The General Terms & Conditions as referred to above will apply to these Purchase Contracts and POs, all other terms are explicitly rejected by Inalfa Roof Systems.

4.2.1 Key characteristics matrix

During the KOR process all items of the 2D drawing will be discussed and agreed. Part of this are the Customer Key Characteristics (C-items) and Functional Key Characteristics (F-items) as shown in the table below. All C-items re-validation of the component shall be performed annually and shall be clearly mentioned in the Control Plan. The evidence shall be submitted to Inalfa Roof Systems upon request. See also Chapter 4.8 for more details.

KEY CHARACTERISTICS MATRIX

"Special" Characteristics: Criteria requiring extra care (monitoring) to assure conformance.

1) Customer "Key (Special) Characteristic" Symbol: C

2) Inalfa "Key (Special) Functional Characteristic" Symbol: F

"Standard" Characteristics: Criteria requiring normal care (monitoring) to assure conformance.
Inalfa "Standard Characteristic" Symbol: NONE. All characteristics are considered "Standard", unless otherwise designated.

"Special" Characteristics Definition	
C	(Customer) Key Characteristics are typically the key requirements that affect vehicle occupant safety and compliance with legislative (government) regulation. (FMVSS, ECE, CNCA, etc.)
	The number of assigned "C" characteristics, per commodity, shall be determined by Customer Specification, with no limit to quantity (typically, less than 5).
F	(Inalfa) Key Functional Characteristics are the key dimensions and tests that determine, with > 90% certainty, if the item/assembly will meet all of it's "fit and function" requirements. Includes Customer Characteristics (but not identified as Critical Characteristics).
	The number of assigned "F" characteristics, per commodity, to be minimal (typically, less than 8).
Ppk / Cpk calculated in accordance with AIAG Statistical Process Control Manual (latest issue).	

4.3 Frequent reporting

As from the week after the PO is issued, the supplier shall send on a weekly basis to the Project Team and assigned SQD an update of the timing with a clear indication of the progress, risks (related to part timing, quality and/or delivery) and delays. This timing shall include at least:

- A timing on a week-to-week basis showing in detail the planned activities
- A visual projection of the week-to-week timing
- The Inalfa Roof Systems milestones (PL1/NOTE6, PL2/NOTE3, Run at Rate, PPAP/NOTE1)
- The customer milestones

In all cases of delays a very detailed plan on recovery of the lost time is mandatory and shall be sent proactively and frequently.

Continuously improve part quality by improving production tooling and processes. Pro-actively inform Inalfa Roof Systems in order to align on preparations for these improvements (bank build, change over moment, traceability, etc.).

4.4 Project Phase Requirements

Table 2: Project Phase Requirements

Requirements:	Note 6 ~~PL1~~	Note 3 ~~PL2~~	Note 1 ~~PPAP~~
Tooling	Serial tooling	Serial tooling	Serial tooling
Tooling location	No requirement	Serial location	Serial location
Manufacturing process	No requirement	Serial process	Serial process
Manufacturing facility	No requirement	Serial facility	Serial facility
Surface	No requirement	Grained (applicable in EU for VAG group)	Grained
Colour matching	Serial colour	Serial colour	Serial colour
Dimensional status	Deviations allowed with action plan in place.	All F dimension in tolerance.	All dimensions in tolerance.
Process capability (F dimensions)	No requirement	All F-dimensions min. Pp>2	All F dimensions min. Ppk>1,67
Test results	No requirement	Laboratory test results where possible	All tests passed and confirmed based on laboratory report
Traceability of samples	Part history list + all parts labelled	Part history list + all parts labelled	Part history list + all parts labelled
Boundary sample	Temporary boundary sample agreed with IRS SQD Engineer.	Temporary boundary sample agreed with IRS SQD Engineer.	Final boundary sample agreed with IRS SQD Engineer.
Rework	Allowed	Allowed	Not allowed
Part measurement	5 pcs. all dimensions for each batch	5 pcs. all dimensions for each batch. 25 pcs. F-dimensions when applying for PL2 status	5 pcs. all dimensions 25 pcs. F-dimensions
PPAP deliverables	All possible PPAP deliverables (Material data sheet, IMDS (initial submission), Control Plan, etc.)	All possible PPAP deliverables not submitted so far.	All PPAP deliverables as agreed during KOR. Including final IMDS accepted.

4.5 Part Qualification

The supplier is responsible for submitting data requested by Inalfa Roof Systems on the sampling requirements. Inalfa Roof Systems and the supplier will agree on the total number of the samples to be checked and submitted in the sampling phase until fully approved PPAP. The Dimensional Workbook has to be sent to the SQD contact person before the shipment of the samples. SQD will sign a “Pre launch evaluation sheet” as agreement that parts can be used. Material shipped without the written authorization of the SQD contact person can be rejected and all involved costs can be charged back to the supplier.

4.5.1 Sample delivery

Each delivery of samples shall contain:

- Hard copy or digital copy of the Part History List. See Chapter 4.6.1 of this manual for details
- Agreed amount of samples, packed in such a way that part quality in every aspect is not compromised
- Marking on the part in such a way that parts are still usable. See Chapter 4.6.4. of this manual for details
- Hard copy or digital copy of the dimensional workbook. See Chapter 4.6.5 of this manual for details
- Hard copy of the Supplier Corrective Action Plan (SCAP). See Chapter 4.6.6. of this manual for details
- Proper labelling on the outside of the box. See Chapter 4.6.3. of this manual for details

Dimensional workbook + SCAP + latest ballooned drawing shall be sent as digital file to the involved SQD Engineer.

The supplier shall plan for packaging of products shipped to Inalfa. The supplier will provide a documented packaging plan including container size, a number of parts per container, packaging configuration, etc. Packaging will be designed to provide protection from any damage that may occur. Packaging, labelling, and shipping materials must comply with the requirements discussed during KOR sessions and agreed with the Logistics department. Refer to the Inalfa Roof Systems General Terms & Conditions and the Logistics Manual, both available on the Inalfa Roof Systems Supplier Portal or Inalfa Roof Systems homepage.

4.5.2 Design and usage of gauges and tools

Parts are to be measured according the 2D drawings and taking into account that:

- The part can be placed on the datum points unconstrained without movement of the part
- The part shall not be forced onto the datum points by pulling, pushing or otherwise deforming the part to fit onto the measurement gauge
- Clamping of the parts is done only to make sure the part is touching the datum points and (CMM) measurements are possible
- Go/no-go gauges can be used

4.6 Documents and Forms in APQP Phase

Due to standardization Inalfa Roof Systems requires the use of specific documentation to have a clear status of components in terms of delivery and quality condition. All documents and forms are available on the Inalfa Roof Systems Supplier Portal or can be requested of your SQD contact.

Table 3: Inalfa specific documents and forms

Number:	Document:	To be delivered:
1.	Part history list	For the whole life of the program
2.	APQP Open Issue List	Open Issue List to be used during APQP phase
3.	New product label	With all deliveries until PPAP approval
4.	R@R	Filled in Run-at-Rate document
5.	Dimensional workbook	For all deliveries until Ppk > 1,33 reached (1,67 for F dimensions) (or different agreement with SQD)
6.	PPAP Checklist	During KOR process and with PPAP delivery
7.	Run at rate	Run at rate validation

Supplier shall have a process in place to frequently monitor for possible new releases of standards and/or Customer Specific Requirements.

4.6.1 Part History List

A part history shall be available from the moment the first parts are produced until the end of production. This list is available on the Inalfa Roof Systems Supplier Portal for all regions. All part modifications and product optimization measures must be listed here. Each line represents a new event in the history of the part for example:

- Change in settings
- Change in location
- Change in tool design
- Change in material etc.

Please make sure enough detail is added to the Part History list to be able to fully understand, also by a new person many months later, the reason for the change. Add details on process settings, add a picture of a change, refer to a separate document. DO NOT mention: “new settings”, or “fixture improved” as it will not be detailed enough.

4.6.2 APQP Open Issue List

This document shall be used to monitor the progress of open topics to reach PPAP. This document is available on the Inalfa Roof Systems Supplier Portal.

4.6.3 New Product Label

This label shall be placed on every box to be delivered. Make sure the text is very easy to read and place the label on at least 1 side of each box. This label is available on the supplier portal.

New product label

(For any delivery prior to PPAP approval this label is mandatory)

Inalfa Part No:			
Revision:		Number of parts:	
Part description:			

Detail of parts (Pre-Launch parts, PPAP samples)

- ☐ IRS Dimensional workbook report included (mandatory)
- ☐ Material report included
- ☐ Action plan applicable and signed by Inalfa Roof Systems Engineering and Supplier Quality Development included
- ☐ Full PPAP doc. included

	Affix sticker here or enter generation

Inalfa Roof Systems Ordernr:	

Supplier name:			
Authorised by:		Date:	

4.6.4 Part marking

In the pre-series phase each part must be marked with one of these stickers:

1. A round yellow sticker in a position which would not be visible if the part were to be fitted in a vehicle. (Preferable diameter 15 mm)
2. If the parts are 100% in accordance with the drawing and specifications a round green sticker is allowed.

The sticker must be marked with a unique consecutive number (following the production process). Below this there shall be two numbers and one letter. An example is given in figure 1.

The number on the sticker (generation number and letter) MUST match with the Part History List information.

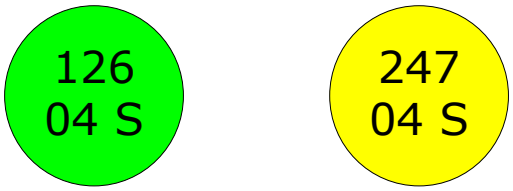


Figure 1: Part designation sticker

The first consecutive number will start with #1. The other two numbers represent the generation of the parts (in our example 04S). The first generation is generation 01. If the part or process is altered in any way (change on material, production location, machine, design, process setup, etc.) the parts become generation 02 (previous generation plus 1 – irrespective of the number of changes made). If no changes are made from one generation to the next, the generation number is not changed.

The **code** (letter) to the right of the two figures indicates the type of tooling used.

- Parts from **auxiliary and handmade samples** (=not suitable for sampling) are marked with an **H**.
- Parts from **limited series tools** (=suitable for sampling) are marked with a **L.**
- Parts from **series tools and produced on serial location** are marked with an **S.**

When the tool type is changed, the generation always starts at 01. Example:

1. Delivery: Parts generation 01 manufactured using auxiliary tools, designation = **01H**
2. Delivery: After agreement on master jig; parts have been modified as agreed. Parts still manufactured using auxiliary tool, designation = **02H**
3. Delivery: Parts with same drawing / change status, but manufactured using a different tool type, e.g. now using series tool, designation = **01S**

If labelling is not possible due to the size of the component, or if the sticker would impair the function of the part (also glue residue which cannot be removed easily), the round sticker must be applied to the smallest packaging unit (bag, box, etc.) in a highly visible position.

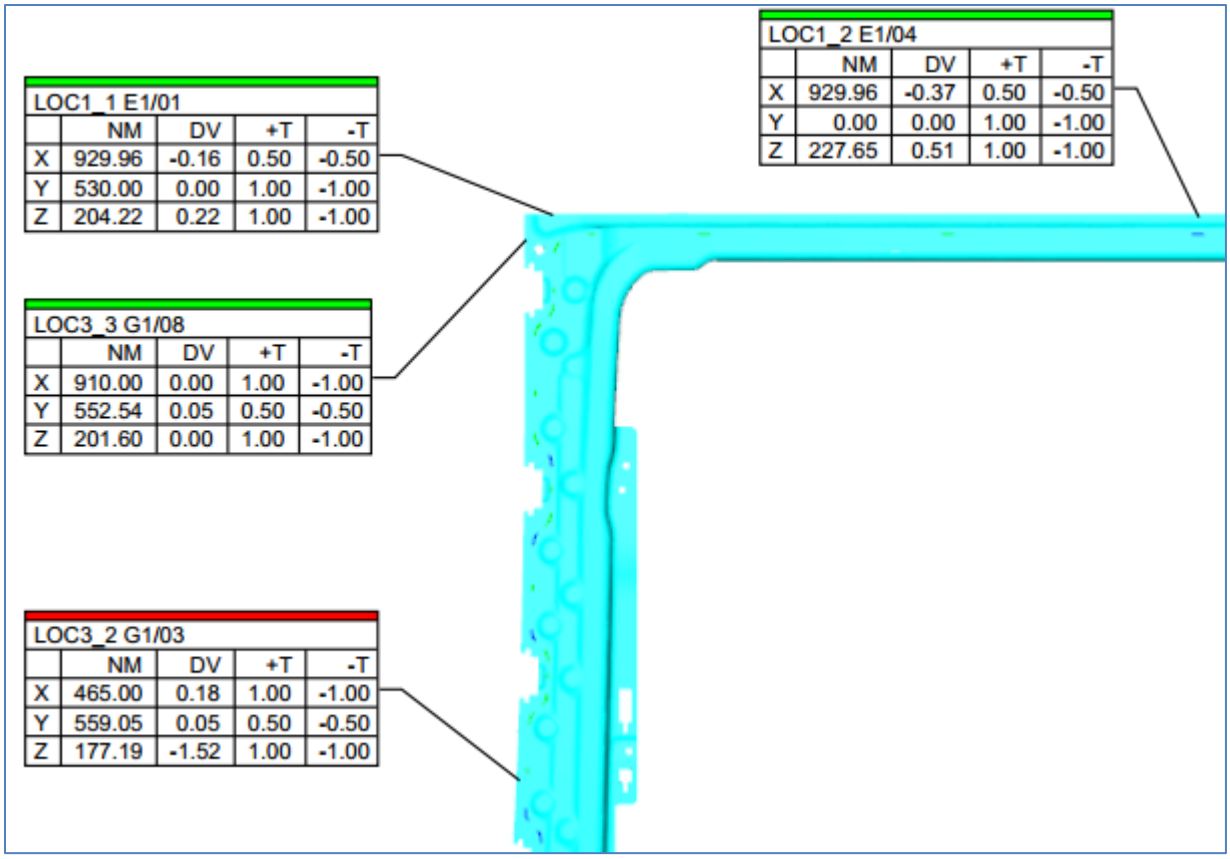
Labelling with a sticker ensures that old and new parts generations can be identified simply, and provides information on the tool type used.

This type of sticker must be applied to the appropriate section of the quality record form for the pre-series phase. This ensures that the form can be assigned to the appropriate generation.

Inalfa Roof Systems will invoice the supplier for work involved in identifying a part if the part designation is incomplete or missing.

4.6.5 Dimensional Workbook

This is the standard lay-out for reporting the dimensional status of the delivered batch of parts. This file shall be used to report the “5 parts all dimensions” as well as the “25 parts all F-dimensions”. The dimensions may be *car grid* or *normal direction* but it must be clearly stated which is used.
Each dimension shall refer to the number on the ballooned drawing. The dimensional workbook shall show against which drawing revision and DMU number the parts were measured.
The SCAP is filled in partially automatic. It DOES NOT show F-dimensions with low Pp and Ppk values. Supplier shall scan the dimensional workbook and add these manually. This document is available on the Inalfa Roof Systems Supplier Portal.
In case Inalfa Roof Systems requires, the supplier shall report each dimension on drawing as follows:



4.6.6 Supplier Corrective Action Plan

It is not allowed to ship products that deviate from the drawing, specification limits or design without written authorization from Inalfa Roof Systems. If such condition exists, the supplier may request Inalfa Roof Systems (SQD Engineer) to allow shipment of the product. This is accomplished by communicating a completely filled Supplier Corrective Action Plan (SCAP) as deviation request.

If the supplier establishes deviations between the drawing and the initial samples which are outside the tolerances, they must be listed / documented on the SCAP and discussed with the responsible

Inalfa Roof Systems engineer in a timely manner prior to shipment of the parts. The signed document must be accompanied by the delivered parts.

NOTE:

In case Inalfa Roof Systems is receiving parts with missing or incomplete measuring reports or deviations without defined actions in the SCAP including reasonable due dates, the parts will be considered as nonconforming and placed ON HOLD for usage during any builds. In this case the supplier will be held responsible and accountable for any delay and/or costs caused by this status.

Communicating a SCAP and acceptance by Inalfa does not release supplier of its responsibilities under the Purchase Contract / Purchase Order and the General Terms & Conditions, as referred to above.

4.6.7 PPAP Checklist

This document is available on the Inalfa Roof Systems Supplier Portal and will be agreed during KOR phase.

4.6.8 Run at Rate

This document is available on the Inalfa Roof Systems Supplier Portal.

4.6.9 APQP Planning

Timing shall be provided in the form of a Gantt chart or comparable, see chapter 4.3 for details.

4.7 Final PPAP Submission

- For all Inalfa Roof Systems purchased parts, used for sunroof production, PPAP submission is required and material can be used only with Full Approval or Interim Approval (with defined expiration date). PPAP submission is at default level 3, according to the AIAG PPAP Manual and level 2 according to VDA volume 2, if not specified otherwise by Inalfa Roof Systems based on the AIAG/VDA guidelines and risk assessment.
- Please note:
  - Final IMDS status in PPAP shall be “accepted” (MDS report ID number evidence available)
  - In case IMDS points out Conflict Minerals, these shall be reported via a Conflict Mineral Reporting Template (CMRT) that currently can be obtained at this website: http://www.conflictfreesourcing.org/
- In case the parts need to be delivered according to the AIAG PPAP manual, the supplier has to deliver documentation according Table 4 + Table 6.
- In case the parts need to be delivered according to VDA volume 2, te supplier has to deliver documentation according to Table 5 + Table 6.

- By default it is required to provide documentation according to VDA volume 2, unless specified otherwise by Inalfa Roof Systems. When applicable, such specifications will be noted in the Kick-Off-Review and Purchase Contract.

- Submissions must be made in adherence to the naming and folder hierarchy as outlined within this manual.

Table 4: AIAG Deliverables

AIAG item num	AIAG item name
00.	PSW
01.	Design record (ballooned)
02.	Engineering change documents
03.	Customer engineering approval
04.	Design FMEA
05.	Process flow diagrams
06.	Process FMEA
07.	Control plan
08.	Measurement system analysis studies
09.	Dimensional results
10.	Material, performance test results
11.	Initial process studies
12.	Qualified laboratory documentation
13.	Appearance approval report
14.	Sample products
15.	Master sample
16.	Checking aids
17.	Customer-Specific Requirements
18.	Part submission warrant

In case the parts needs to be VDA approved, the supplier has to deliver documentation according Table 5 + Table 6.

Table 5: VDA Deliverables

VDA item num	VDA item name
00.	Cover Sheet
01.1	Geometry, dimension check
01.2	Function check
01.3	Material check
01.4	Haptic check
01.5	Acoustic check
01.6	Odour check
01.7	Appearance check
01.8	Surface check
01.9	ESD test
01.10	Reliability tests
02.	Samples
03.	Technical specifications (ballooned)
04.	Product FMEA
05.	Design release
06.	Compliance with legal requirements
07.	Material data sheet/IMDS
08.	Software test report
09.	Process FMEA
10.	Process flow chart
11.	Control plan
12.	Confirmation of process capability
13.	Achievement special characteristics
14.	List of test / inspection equipment
15.	Capability study testing equipment
16.	Tooling list
17.	Confirmation of agreed capacity
18.	Written self-assessment
19.	Part history
20.	Confirmation of suitability of transport equipment
21.	PPA status of supply chain
22.	Approval of coating systems
23.	Others

Table 6: Inalfa Roof Systems Deliverables

IRS item num	IRS item name
24.	Process settings
25.	IRS tool tag picture (tool, gauges, jigs, etc.)
26.	Rough tool info (lxwxh, weight)
27.	Packaging instruction
28.	Packaging info (type, material, size)
29.	IMDS (in case of IATF 16949)
30.	Safe launch plan (if applicable)
31.	Graining certificate/evidence document

4.7.1 PPAP nomenclature

Upon submitting PPAP documentation to Inalfa Roof Systems please consider the following items:

- Each deliverable shall have a separate file
- Do not use symbols like: & < > . ( ) @ * ? etc. in the file name
- Files may be delivered as PDF
- The file name of each file shall be as follows:
  FolderNr#_PartNumber_RevisionIndex_FileName
  Examples:
  - **11_10046824_B00_Frame_Control_Plan**
  - **04_10046824_ B00_Frame_ProdFMEA**
  - **01_2_ 10046824_B00_TL52476**
- When scanned please make sure the scan is in colour and high quality
- Note that all folders must be populated. If a certain item is not required then an empty .txt file should be added with the title *Not Applicable*

4.7.2 Deviations on PPAP

The supplier shall perform 100% inspection of 25 pieces per batch until capability (variable, attributive and appearance) is proven with zero defects. Once the supplier has proven long and short term capability, the Safe Launch Plan will go into effect with the approval of the SQD Engineer. In the event a defective part reaches Inalfa Roof Systems during the Safe Launch period, the Safe Launch Plan will restart at 100% inspection until capability with zero defects criteria is proven. Only then the Step Down Plan can be restarted from the beginning.

4.7.3 Sending PPAP to Inalfa Roof Systems

When sending the PPAP please create 1 ZIP file containing all requested documents. This file can be uploaded through the Inalfa TruFusion system or may be uploaded using suppliers own File Transfer Protocol. Please consider the naming convention as mentioned in chapter 4.7.1. Please note that Inalfa Roof Systems has a zero tolerance approach on IP infringements (including software for drawings etcetera). The supplier will be held responsible and must ensure that the correct licences are in place and presented to Inalfa Roof System upon first request.

Note that the supplier is free to choose any licensed software program to create the *ZIP* file and that the allowed formats are both .zip and .7z

4.7.4 Delay in PPAP submission

Supplier on-time PPAP delivery and approval is critical to the success of Inalfa Roof Systems as well as our customers, this means PPAP delays and rejections will be dealt with high priority. As such, Inalfa Roof Systems is entitled to charge costs incurred for not delivering a PPAP on time per original committed timeline. The same applies for a rejected PPAP, for more information please refer to your component PO for penalty details.

4.8 Ongoing Production

During the lifetime of the project (from start of production to end of life) the following activities will be carried on by the supplier. The supplier is responsible to comply with these requirements, track and document them to ensure availability upon request, as well as communicate updates to the Inalfa Roof Systems Supplier Quality Engineer:

1) Keep the Functional Characteristics as defined on the drawing in control (Ppk
2) 1,33 or 1,67 for F dimensions) by the use of proper statistical tools (X/R chart) and inspection ongoing as agreed in the Control Plan. The evidence has to be submitted to Inalfa Roof Systems upon request.
3) Self-assessment of the process according to VDA 6.3 P5, P6 and P7 (or IATF 16949 equivalent) at least once per 12 months. The evidence shall be submitted to Inalfa Roof Systems upon request.
4) Self-assessment of the product according to VDA 6.5 (or IATF 16949 equivalent) at least once per 12 months. This is an Annual Lay-out inspection which means:
    a. Five parts per cavity
    b. All dimensions (F-dim, normal dim, others)
    c. An update of the PSW or VDA Cover sheet explaining the reason for the update
    d. The evidence shall be submitted to Inalfa Roof Systems upon request
5) Re-qualification of the complete PPAP once every 5 years (or more frequently if specified by OEM-customer requirements such as is the case for VW/Audi – for whom the re-qualification rate is once every 3 years). The supplier has the obligation to check this frequency.
6) Yearly reporting on Conflict Minerals (scope = product level) via the CMRT template that can be currently obtained via http://www.conflictfreesourcing.org/ . Yearly reporting shall be done before September 1 of each year by sending the documents to the following email address: Conflict.Minerals@Inalfa.com

7) Yearly re-validation of flammability test
8) Keep the tool in a normal condition of use by performing the required maintenance
9) Pro-actively inform Inalfa Roof Systems Commodity Buyer in case of upcoming tool refurbishments
10) Pro-actively inform Inalfa Roof Systems in case of actions that might influence part quality, including but not limited to changes in production, machine, location, tooling, material etc. as stated in:

a. IATF 16949:2016 Chapter 7.1.4
The organisation must determine what environment is required for the execution of the processes to meet the requirements of the products and services, meet these requirements and maintain them.
b. PPAP Manual Chapter 1.1, The organization shall obtain approval from the authorized customer representative for:
    i. A new part or product (e.g., a specific part, material or colour not previously supplied to the specific customer)
    ii. Correction of a discrepancy on a previously submitted part
    iii. Product modified by and engineering change to design records, specifications or materials
    iv. Any situation required by section iii
c. PPAP Manual Chapter 3.1, table 3.1, note 3 and 7
    i. Production following upgrade or rearrangement of existing tooling or equipment
    ii. Product and process changes related to components of the production product manufactured internally or manufactured by suppliers

11) Traceability of products shall be set-up in accordance with IATF 16949:2016 Chapter 8.5.2.1.
    a. Enable the organisation to identify nonconforming and/or suspect product
    b. Enable the organisation to segregate nonconforming and/or suspect product
    c. Ensure the ability to meet the customer and/or regulatory response time requirements
    d. Ensure documented information is retained in the format (electronic, hardcopy, archive) that enables the organisation to meet the response time requirements
    e. Ensure serialized identification of individual products, if specified by the customer or regulatory standards
    f. Ensure the identification and traceability requirements are extended to externally provided products with safety/regulatory characteristics
12) Packaging shall use EDI labels with bar codes as described in the Inalfa Roof Systems Logistics Manual, chapter 6.
13) Supplier shall have a process in place to monitor on frequent bases for possible new releases of standards and/or Customer Specific Requirements.
14) Components with a CCC-marking need to be re-qualified as agreed during the Kick Off Review

4.9 Product safety and liability

The primary product liability for the purchased goods used in the end product lies with the supplier. The supplier must therefore take all organizational and technically feasible and reasonable measures

to increase the product safety of its parts and the parts of its subcontractors and to minimize the risks of product liability. The supplier and its sub-suppliers shall ensure that:

- A sufficient covering product liability insurance in concluded and maintained
- A highly-developed appreciation of quality exists throughout the company
- The required product safety is guaranteed when components are developed
- Special consideration is given to product safety during the quality planning stage
- The quality capability of the production processes is guaranteed and proven
- Appropriate series quality assurance measures are taken to minimize the probability of defective products occurring
- Defective products are identified early on in the production workflow using appropriate measures
- Quality data and the legally required compliance tests are documented in sufficient detail in order to prove that the products have been manufactured in accordance with all relevant laws and safety standards
- A material tracking system can be used to pinpoint the effects of any faults that occur if required
- Detailed information and training for the relevant staff on "Product safety and product liability"
- A Product Safety Officer (PSB) or main contact in case of emergencies is appointed and communicated to Inalfa Roof Systems
- Components with a limited durability meet special labelling requirements

Per IATF 16949:2016 chapter 4.4.1.2 (K/L), the supplier shall have documented processes for the management of of product safety related products and manufacturing processes which includes (but is not limited to):

- Transfer of requirements with regard to product safety throughout the supply chain, including Inalfa Roof Systems designated sources
- Product traceability by manufactured lot (at a minimum) throughout the supply chain

The supplier is also entitle to comply with all applicable statutory and regulatory requirements and special product and process characteristics requested by IRS and when applicable the supplier should cascade such requirements to its supply chain to the point of manufacture (as per IATF 16949 8.4.3.1 Information for external providers – supplemental).

4.10 Information Security

Per IATF 16949:2016 7.5.3.2.1 The supplier organisation should define, document and implement a record retention policy ensuring that data is to be handled according ISO 27001 or another data protection system in such a way that any risk against theft, misuse and other types of unintended use by a third party is prevented while availability is guaranteed.

5. Supplier Management

5.1 Continual Improvement

Inalfa Roof Systems is committed to quality and the fulfilment of our customer requirements. This can only be achieved through the consistent use of proven methods for assuring product and process quality as well as fully understanding and commitment by all employees. As such suppliers to Inalfa Roof Systems shall ensure effective Quality Management Systems that ensure correct functionality with corresponding documented evidence. Our customers demand continual improvement and a "zero defects" mentality and we expect the same from our supply chain. Sustainability is the key to a long-term successful partnership, therefore it is expected that our supply chain implements a continual improvement program that might be audited.

5.1.1 Change request

In case of changes requested by the supplier resulting in a change (see also Chapter 4.8, number 7 and IATF 16949:2016 manual Chapter 8.5.6.1) that might influence part quality, including but not limited to changes in production, machine, location, tooling, material, etc. a request in the form of an email can be sent to the following Inalfa Roof Systems persons:

- Commodity SQD Engineer
- Commodity Buyer

For Europe you may use the *Supplier Request for Engineering Change Form*, which is available on SupplyWeb, and send this to the Supplier Quality Engineer.

Depending on the type of change an action plan will be set-up and responsible persons will be appointed accordingly.

For delivery of products the supplier shall follow EDI as this is the leading tool for to provide correct revision levels.

5.1.2 Contingency plans

As stated in IATF 16949:2016 Chapter 6.1.2.3 Suppliers to Inalfa Roof Systems shall:

a. Identify and evaluate internal and external risks to all manufacturing processes and infrastructure equipment essential to maintain production output and to ensure that customer requirements are met
b. Define contingency plans according to risk and impact to the customer
c. Prepare contingency plans for continuity of supply in the event of any of the following: key equipment failures; interruption from externally provided products, processes and services; recurring natural disasters; fire; utility interruptions; labour shortages or infrastructure disruptions
d. Include, as a supplement to the contingency plans, a notification process to the customer and other interested parties for the extent and duration of any situation impacting customer operations
e. Periodically test the contingency plans for effectiveness (e.g. simulations)

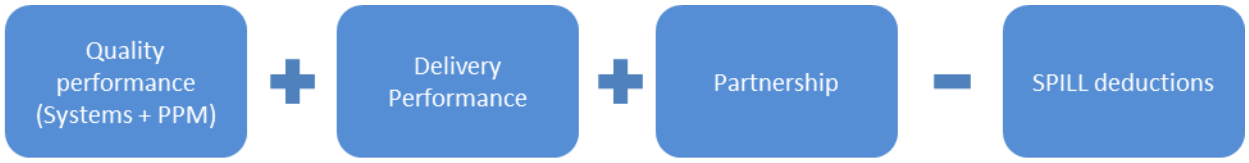
f. Conduct contingency plan reviews (at a minimum annually) using a multidisciplinary team including top management, and update as required
g. Document the contingency plans and retain documented information describing any revision(s), including the person(s) who authorised the change(s)

The contingency plan shall include provisions to validate that the manufactured product continues to meet customer specifications after the re-start of production following an emergency in which production was stopped and if the regular shutdown processes were not followed.

5.2 Supplier Performance

Supplier performance is monitored on a monthly basis and reported to Inalfa Roof Systems Management by means of the Supplier Management Score (SMS). Upon request the SMS score will be sent out to the supplier. For IRS-US and IRS-EU the SMS score reflects performance in running production, for IRS-CN it also reflects performance in projects.

The SMS score consists of several elements which forms a maximum of 100 points, for details see the table below and APPENDIX I



100 pts =	40 pts		30 pts	30 pts

The **Quality System score** is given with the following criteria:

Quality System	Expired or no certificates	ISO 9001	IATF 16949	OHSAS 18001* or ISO 14001 (in addition to 9001 or 16949)	OHSAS 18001 and ISO 14001 (in addition to 16949)
Score (points)	0	4	+2 (= 6)	+2 (each) (= 6 or 8)	+4 (= 10)
Sub-Evaluation	Unacceptable (D)	At Risk (C)	Good (B)	Good (B)	Excellent (A)

*Note: OHSAS 18001 is scheduled for replacement by ISO 45001 – either certificate it valid

The **Quality score** is given with the below criteria:

PPM	>600	600-301	300-101	100-0
Score (points)	0-14	15-20	21-25	26-30
Sub-Evaluation	Unacceptable (D)	At risk (C)	Good (B)	Excellent (A)

**Note that more than 3 quality issues in a single month will results in a further 10pts deduction regardless of PPM*

The **Delivery performance** is given with the below criteria:

Adherence by date (%)	0-89	90-94	95-96	97-100
Score (points)*	0-16	17-22	23-27	28-30
Evaluation	Unacceptable (D)	At risk (C)	Good (B)	Excellent (A)

Deductions will be made if **premium freight was needed due to supplier issues causing (possible) disruptions at Inalfa production*

The **Partnership score** is given with the below criteria:

Total score	0-9	10-19	20-24	25-30
Score assigned	0	15	24	30
Evaluation	Unacceptable (D)	At risk (C)	Good (B)	Excellent (A)

**Note: a Inalfa Customer warranty claim as a result of faulty parts from a supplier leads to a -10pts reduction on partnership*

The **OVERALL score** is given with the below criteria:

Total score	0-69	70-79	80-89	90-100
Evaluation	Unacceptable (D)	At risk (C)	Good (B)	Excellent (A)

5.2.1 Non-conformity and escalation

Appropriate countermeasures are started for any supplier who shows unacceptable performance in Project and Production phase.
Actions deployed by Inalfa Roof Systems can range from increased attention via Top Focus to termination of business.

5.2.1.1 Project phase escalation

In case of escalation during the APQP process (due to non-conforming timing, quality, etc.) a formal review can be arranged with the supplier. This formal review is set up by SQD Engineering in combination with the Commodity Buyer according this table:

	Level A	**Level B**	**Level C**	**Level D (Business on Hold)**
Description of the status	The part is conforming in timing, process and quality status.	The part is not conforming in timing, process or quality Status. Mid-management involved.	The part is not conforming in Timing, Process or Quality Status. No resolution at level B. Global - Management involved	The part is not conforming in Timing, Process or Quality Status. No resolution at level C. Top Management Team involved. Program delay imminent.
Actions	No additional actions required.	Formal review with the supplier at IRS in order to present the recovery plan. Formal notification to Management of Supplier	Formal review with the supplier at IRS in order to present the recovery plan. Formal escalation letter to Management of supplier	Business review meeting at highest level of management from both IRS and supplier at Inalfa Roof Systems
Responsible champion and team	SQD Engineer	SQD Engineer Commodity buyer	Manager SQD Manager PUR Manager ENG	CPO / CTO Director SQD, PUR, ENG
Supplier interface	Project Manager; Quality Engineer;	Supplier Management	Supplier Top Management	CEO level

5.2.1.2 Running production escalation

Depending on the severity of non-conformities Inalfa Roof Systems will follow its focus and escalation process in running production. Depending on the effectiveness of the measures taken by the supplier

a reduction or increase in the level of escalation will be determined. The escalation process ends either with de-escalation or the termination of business. Details on the escalation process can be obtained beforehand.

5.2.2 Top Focus

A supplier can be assigned to Inalfa's "Top Focus" program for quality issues, relocations, high-risk product launches, etc. At the time of assignment, this will be explained in written to the affected supplier. A written acceptance will be required by the supplier before executing the program. An SQD Engineer will be assigned to perform a VDA6.3 audit (or IATF 16949 equivalent), create an action plan (Open Issue List) and monitor the performance until supplier can prove it has met the goal which was set. Inalfa Roof Systems' management will analyse the "Top Focus" evidence and determine if the supplier can graduate successfully from the program or additional countermeasures are required in order to guarantee the continual flow of acceptable product quality.

5.3 Supplier Complaint Management

Parts failing to conform to current drawing, standards, master samples and/or function per design intent are considered "non-conform" where the supplier is required to:

- Undertake inspection, separation, and/or repair of suspect products
- Perform root cause analysis using automotive standard tools and methods
- Report results of sorting, suspect lot range information, repairs, investigations and corrective actions
- Prove effectiveness of corrective actions taken (testing, analysis, dimensional report, etc.)
- Submit a work instruction for Inalfa Roof Systems confirmation prior to actual repair, rework and/or sorting activity. Supplier/sort associates shall have knowledge of the required activities through a signed training document before activities start.

Inalfa charges the supplier for expenses and damages due to non-conforming product. Examples of items charged include (but not limited to):

- Downtime
- Inalfa materials the supplier uses to sort or repair products
- Inalfa Roof Systems' expenses for containing, sorting, repairing
- Shipping fees for replacement parts (including export customers)
- Investigation costs (e.g. audits, layouts, testing, etc.)
- Complete or partially complete roof assemblies that cannot be offered for sale due to supplier's non-conforming product
- Travel and lodging expenses
- Claim fees from Inalfa customers

The supplier will be notified of the charges as they are realized, that can be set-off against amounts due by Inalfa Roof Systems as per the General Terms & Conditions, referred to above

In the event of a received suspect / non-conforming delivery the corresponding Inalfa Roof Systems plant will contact the supplier immediately and kick-off the supplier complaint process. Communication between Inalfa Roof Systems plant and supplier will be managed through the Infor Supplier Exchange ®. Account and password have to be requested to suppliers' logistic partners at Inalfa Roof Systems.

Proper feedback through 8D report is expected with the following timing:

Table 7: 8D Problem Solving

Stage:	Description:	Supplier feedback expected
D1	Problem Description	Same business day
D2	Team Selection	Same business day
D3	Containment actions	24 hours after Non-conformity report (NCR)
D4	Verification of containment	10 business days after NCR start
D5	Root-cause analysis	20 business days after NCR start
D6	Corrective actions	25 business days after NCR start
D7	Verification of corrections	30 business days after NCR start
D8	Closure	35 business days after NCR start

In case a supplier defect results in a customer complaint (a complaint from an Inalfa customer) the 8D response times have to be in line with the customer requirement of this specific customer.

In case of any non-conformity, Inalfa Roof Systems may require supplier to receive support from Inalfa Roof Systems and/or third parties as directed by Inalfa Roof Systems, all at cost of supplier. Hourly rates that may be charged for the involvement of Inalfa Roof Systems own employees can be obtained beforehand.

5.4 Supplier Award and Recognition

Supplier performance is crucial for a long-term partnership and recognition is given to those suppliers with outstanding performance. As such, Inalfa Roof Systems will recognize those suppliers that have excelled on quality, service and competitiveness. A multidisciplinary review will be performed by Inalfa Roof Systems' management to identify the supplier that meets these categories. This recognition will be conducted on an annual basis.

5.5 Supplier Business Review Meeting

Annual Business Review Meetings will be held with category 1 suppliers. Other category suppliers may be involved in Business Reviews at Inalfa's request. Although regular communication is maintained throughout the year, the Business review Meeting will be the forum to:

- Review previous year's performance and achievements.
- Discuss the relationship between Inalfa Roof Systems and supplier.
- Establish the forthcoming years' targets and objectives, i.e.:
  - Inalfa Roof Systems' global supplier targets.

- Individual supplier targets, including the target performance in terms of PPM and on time delivery.
- Supplier continuous improvement strategy.

The Business Review Meeting is essential in “closing” the continuous improvement cycle and fulfilling the overall Supplier Management Systems requirements.

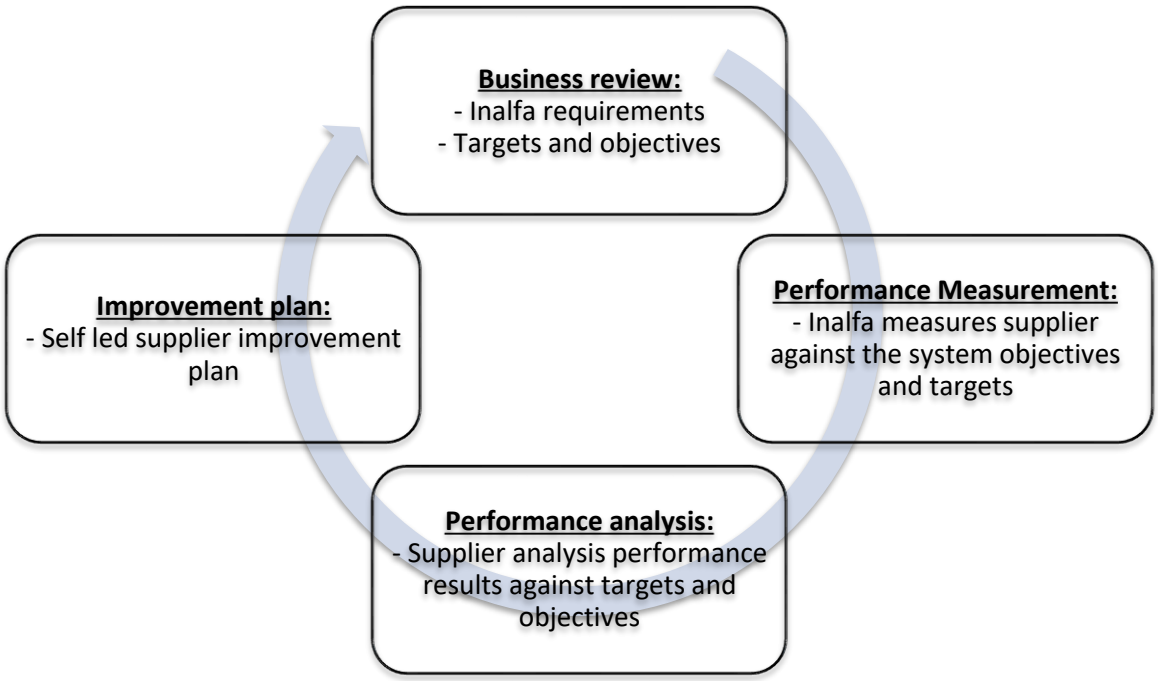


Figure 2: Continual Improvement Cycle

6. Final provisions

This Supplier Quality Manual applies to all suppliers during the development, production and delivery phase and forms part of the contractual documentation with Inalfa Roof Systems.

As per the General Terms & Conditions, any Purchase Contract (and any Purchase Order) is subject to all quality standards and policies of Inalfa as communicated to the supplier, as revised from time to time by Inalfa Roof Systems, and incorporated by reference into the General Terms & Conditions.

The General Terms & Conditions, at the last revision, remain fully applicable. In case of any inconsistencies between this Supplier Quality Manual and the General Terms & Conditions, the General Terms & Conditions shall prevail. Deviations from this Supplier Quality Manual in the Purchase Contract or Purchase Order are only valid in case it is explicitly mentioned that it is deviated from this Supplier Quality Manual.

This Supplier Quality Manual shall be governed by the laws of the registered office of the Inalfa Roof Systems entity issuing the Purchase Contract or Purchase Order.

7. Abbreviations

Acronym	Definition
8D	Containment and Permanent Corrective action
AIAG	Automotive Industry Action Group
APQP	Advanced Product Quality Planning
Category 1	Major parts that affect Safety, Fit, Form and/or Function
CN	China Region
DFMEA	Design Failure Mode and Effects Analysis
ENG	Engineering
EU	European Region
FMVSS	Federal Mandatory Vehicle Safety Standard
FOT	First Off Tool Parts
F's or F Dimensions	Dimensions on Inalfa Part Drawings indicated by an inverted Delta with an F inside are Functional to Sunroof Quality and must be PROVEN capable
General Terms & Conditions	The general terms and conditions of Inalfa Roof Systems as posted on www.inalfa.com or www.inalfa-roofsystems.com, which can be found by clicking the "Processes" tab followed by the "Purchasing" tab.
IMDS	International Material and Data System
IRS or Inalfa Roof Systems	Inalfa Roof Systems Group B.V., 'Inalfa' and 'Inalfa affiliates' as defined in the General Terms & Conditions
KO or KR	Korea Region
KOR	Kick Off Review (also called Design Review)
MSA	Measurement Systems Analysis (interchangeable with Gage R & R)
NA	North America Region
PFMEA	Process Failure Mode and Effects Analysis
PL1	Part maturity according Table 2
PL2	Part maturity according Table 2
PO	Purchase Order
Pp	Performance index
PPA	Production Part Approval (VDA version)
PPAP	Production Part Approval Process (AIAG version)
Ppk	Companion to Pp - Performance index
PPM	Parts per Million
PRE-SERIES	Same as Pre-PPAP. All (regardless of proto or production intent tooling) parts from Prototypes through and including anything shipped prior to full Dimensional/Function/Visual Approval
PUR	Purchasing
R@R	Run at Rate (capacity verification)
SCAP	Supplier Corrective Action Plan

SMS	Supplier Management Score
SQD	Supplier Quality Development
VDA	Verband Der Automobilindustrie E.V. (German Automobile Industry Association)

Appendix

APPENDIX I. Details on SMS score

PPM Score	Sub-score SMS	Sub-rating
0-19	30	
20-39	29	
40-59	28	**A**
60-79	27	
80-100	26	
101-140	25	
141-180	24	
181-220	23	**B**
221-260	22	
261-300	21	
301-350	20	
351-400	19	
401-450	18	**C**
451-500	17	
501-550	16	
551-600	15	
601-640	14	
641-680	13	
681-720	12	
721-760	11	
761-800	10	
801-840	9	**D**
841-880	8	
881-920	7	
921-960	6	
961-1000	5	
>1000	0	

LOG score	Sub-score SMS	Sub-rating
99-100%	30	**A**
98%	29	
97%	28	
96%	25	**B**
95%	23	
94%	20	**C**
90-93%	17	
80-89%	10	**D**
<80%	0	