MD PLASTICS.

Supply Agreement

Components and raw materials supplied to MDP

Index

1. Introduction

The purpose of this agreement is to establish a clear understanding of MDP requirements regarding supplier product quality and reliability. It is the intention of MDP to follow the lead and direction of our customer base in embracing the quality philosophies and practices contained in ISO 9001 and IATF 16949 and we expect that our supply base will do the same.

This agreement defines the quality guidelines to be used by all MDP suppliers that supply materials, components and/or subcontracted services that will integrate MDP products. It describes the minimum quality assurance requirements for all supplier production materials whether directly provided by the supplier or indirectly provided through a sub-supplier.

2. Purpose

The requirements defined in this agreement are provided as a supplement and do not replace or alter other terms and conditions set forth in purchasing documents or included as requirements of engineering drawings or specifications. Acceptance of this agreement is recognized with the receipt of a MDP Purchase Order.

3. MDP's Quality and Environmental Policies

The following quality and environmental policies should provide the supplier an orientation which focus is to be considered in regard to these subjects.

3.1 Quality policy

To ensure a high global competitiveness and required profitability, MDP is committed to:

. Meet the expectations of its customers and be a preferred supplier of all of them;

. Continuously improve processes, providing high standard products and services to the industry;

. Comply with legal, customer and regulatory requirements;

. Guide our decisions by the principles of professional ethics and transparency in internal and external relationships

Meeting customer requirements and fulfilling internal quality targets are the highest company priority. We also expect this procedure from our suppliers, who should have an effective, successful quality management system available.

3.2 Environmental policy

MDP is committed to protecting the environment. In order to implement this environmental policy, MDP plants are certified according to ISO 14001. We require our suppliers to meet the relevant valid environmental legislation. We expect effective environmental management from our suppliers, which guarantees adherence to the relevant valid environmental regulations and improves the supplier's environment situation continuously and efficiently. On request, the supplier must be able to demonstrate appropriate waste-avoidance, recycling and disposal concepts for both products and packaging. Evidence is recommended in the form of a certified environment management system.

The adequacy of supplier's organization to the MDP quality and environmental policies is the first step for a successful business relationship.

4. Language

Considering that most of documentation received from supplier will potentially be shared with MDP's customer, English shall be the official communication language. Documents may display the native language when integrated in parallel translation. Any deviations to this requirement must have previous agreement of MDP's person in charge of supplier development.

5. Quality System Requirements

5.1 Quality Manual

The quality policy and management system shall be duly documented, namely through the quality manual or other manuals that shall be updated periodically, including:

- A quality policy that reflects both the principles and goals of the supplier and the commitment of management to reach these goals;
- A current organizational chart indicating the reporting relationship of the quality assurance personnel, including the management level employee appointed to have the responsibility and authority for ensuring that the quality policy is implemented, effectively documented and carried out;
- A description of the quality system procedures and documents used to monitor and evaluate the process;
- A revision section documenting amendments to the quality system and manual;
- A table of contents indicating page numbers of the manual where specific areas are discussed.

5.2 Quality requirement as a condition for delivery

In order to meet the high expectations of the automotive industry, MDP trusts on the performance and commitment of its own employees to a large extent and expects the same attitude towards employees and partners from its suppliers. This is a major precondition for the quality capability the supplier has to prove:

- All suppliers of MDP are required to be IATF 16949 certified. ISO 9001 certification along with the capability of applying the AIAG Core Tools (FMEA, APQP & Control Plan, MSA; SPC; PPAP) or VDA methodologies when specifically required.
- Environment management activity is acceptable but ISO 14001 certification by a third party is preferable;
- Creation of organizational and technical requirements for collection and evaluation of quality information;
- Methods for avoiding faults, systematic processing of faults and avoiding repeated faults are demanded, such as: small Quality Circles problem-solving techniques, cause-effect analysis, feedback to development and engineering change process;
- Regular internal audits (system, process, product).

5.3 Quality planning

Suppliers must establish and implement an advanced product quality planning process supported on cross-functional teams. These teams should use appropriate techniques identified in the ***Advanced Product Quality Planning*** and ***Control Plan*** reference manuals and the ***Potential Failure Mode and Effects*** reference manual.

The supplier considers the following activities, as appropriate, in meeting the specified requirements for products, projects or contracts.

CONCEPT PREPARATION/QUOTATION PHASE:

- Revision of contract;
- Feasibility study;
- Benchmark analysis;
- Performance specification/deadlines/prices.

PLACING ORDERS:

- Binding order documents, specifications, deadlines, prices with suitable suppliers (material, components, controls, processes, equipment, fixtures, resources and skills that may be needed to achieve the required quality).

IMPLEMENTATION OF CONCEPT:

- Advanced quality planning;
- Control Plans/Production Steering Plan;
- Product/design FMEA;
- Fault tree analysis/risks.

DEVELOPMENT:

- Design review;
- Study design;
- Design for manufacturing/Assembly;
- Design for reliability.

PRODUCTION PREPARATION:

- Process FMEA;
- Control Plan.

PRE-SERIES:

- Analysis and evidence of capability for testing equipment, machines and processes;
- Run@Rate test/process audit;
- Cleanness requirement according to specification.

SERIES PRODUCTION START-UP PHASE:

- Process release;
- Initial sample inspection report PPAP (AIAG) or PPA (VDA2 when required);
- Define boundary samples;
- The identification of any measurement requirement that exceeds the supplier’s current capability, in sufficient time for the capability to be developed;
- The identification of suitable verification at appropriate stages in the manufacture of the product.

5.4 Quality control in supplier's series production, conditions for delivery

The quality assurance actions in the series production are based on knowledge gained during the development phase and field observation, use of comparable products, consolidation and continuous improvement of the quality level.
Self-regulating processes and automated tests should be used to progress and meet customer expectations:

PROCUREMENT - Securing of delivery quality by:

- Acceptance test certificates in compliance with DIN EN 10204 type 3.1;
- Evaluation of supply reliability.
-

TESTS – Continuous supervision of process capability by:

- SPC/control chart technique;
- Results using suitable IT programs;
- Pareto analysis.

COMPLAINTS PROCESSING:
8D Report for cause-effect analysis; corrective and preventive measures to avoid repeated faults.

6. Quality agreements and ppm management

The mass production approval of a reference requires the PPAP (AIAG) or when required PPA (VDA) submission in accordance with content table below:

Requirement	Material Type	Requirement	Material Type
PSW front sheet (in the case of the raw materials this might be replaced by a Quality Agreement form or a Product Specification provided that these are controlled and signed documents) Cover sheet for PPA report/PPA evaluation	Raw material / Components of direct incorporation	FMEA Process (to be available for consultation at the supplier site)	Components of direct incorporation
Appearance Approval Report	Raw material / Components of direct incorporation	Control Plan	Components of direct incorporation
" X " initial samples (number of samples to be agreed with MDP buyer)	Raw material / Components of direct incorporation	Assurance of SC`s Preliminary Capacity Study (unless otherwise specified, requirement is 125 parts/cavity), poka-yokes, 100% inspection etc.)	Components of direct incorporation

Updated drawing	Components of direct incorporation	Process Capacity Study	Components of direct incorporation
Dimensional Report	Components of direct incorporation	Certificate of analysis	Raw material
Engineering Tests (when applicable material, function, haptics, acoustics, odour, surface, cleanliness, reliability, ESD. Electrical safety, EMC etc. tests	Raw material / Components of direct incorporation	Surface and/or Thermal Treatment certificates	Components of direct incorporation
Flow Diagram	Components of direct incorporation	Packaging Specification	Raw material / Components of direct incorporation
Design FMEA (if applicable)	Components of direct incorporation	Safety & Security Data Sheet	Raw material / Components of direct incorporation
Measurement System Analysis MSA-AIAG or when required VDA5 – Capability of measurements systems.	Components of direct incorporation	Part History Evidence of compliance with legal requirements. Environmental Requirements: IMDS submission and (when applicable) declaration of compliance with customer standards and Registration, Evaluation, Authorisation and Restriction of Chemicals is a European Union (REACH)	Raw material / Components of direct incorporation

A requirements list will be issued per each new reference and a submission term will be established. In the case of VDA2 methodology a prior PPAP agreement for the PPA process will be performed by Supplier and MDP. MDP goal is to have the PPAP/PPA submitted in the due date and approved firstly. In case of deviations (parts and/or documents) MDP will request corrections/corrective actions to be completed in the shortest term.

In terms of service the supplier is requested to meet MDP orders. Any deviations in terms of quantity or delivery term must be agreed in advance. Concerning quantity, a variation of 5% (+/-) will not be penalized, as long as it does not cause disturbances in the production. Regarding delivery term, MDP does not penalize early deliveries, if delivery is not anticipated more than five calendar days. A delay of one day will also not be penalized, unless it causes disturbances in the production. A disturbance is understood as a production stoppage or a need to re-plan production planning.

With regard to the operational implementation of the strategic “Zero-Defects” target, MDP and the supplier agree on measurable objectives for the quality of deliveries (ppm target agreements) relative to a period to be defined.

The target value is specified in

$$Fault\ Share\ (PPM) = \frac{defective\ parts}{total\ \ parts\ delivered}\ x\ 10^6$$

(ppm = parts per million / number of defective parts per million of delivered parts)

To simplify communication and wherever technically practical and feasible, only one target value should be agreed for each product family delivered by suppliers or, if possible, for all products delivered. Target value for ppm will be agreed in the beginning of the project and up-dated yearly.

The ppm result is recorded by MDP, informed to the supplier and is part of supplier evaluation. At the same time, they form the basis for specific actions for continuous quality improvement.

The agreement on ppm values does not mean a quality level accepted by MDP. All purchasing parts which are recognized as defective will basically not be accepted and will be charged to the supplier.

The supplier has to issue a corrective action plan whenever:

. the monthly ppm level is out of the agreed target;

. the periodic evaluation result is out of the class A goal.

7. Engineering change management/Q-problems

The supplier shall inform MDP about any quality problems or blocking of products or processes, immediately and in writing, usually before the products are delivered, and to agree on the necessary corrective actions with the Quality Assurance of MDP production plants.

The supplier must inform MDP as soon as possible of any technical changes he intends to introduce for the delivery of released contractual objects. MDP reserves the right to carry out tests and a release process before the change is implemented. Required time for change implementation needs to be agreed between both parties.

The supplier informs MDP Purchasing before carrying out all the planned changes in products and processes, both before and after SOP, e.g. in the case of:

- Changes in design, specification and material;
- Use of new, modified or replacement tools;
- Manufacturing methods or production processes;
- Relocation of production within a manufacturing location or to other locations;

- Changes in suppliers of products, components, materials, services or software;
- Restart of production equipment after shut down lasting more than 12 months;

A new PPAP/PPA submission is required and supplier cannot start supplying modified parts/materials before getting the written approval of MDP.

The supplier shall also inform MDP if one of the above points is applicable to a sub-supplier. The supplier coordinates the scope of new approval tests (initial samples) with MDP. He makes sure that serial production deliveries to MDP are carried out only after the initial samples have been approved by MDP.

The changes are to be documented during the part lifetime.

If old versions still exist at the time of the change, MDP must be informed of the quantities bound by purchasing obligation so that a decision can be taken about their use.

After changes, the first deliveries must be specially marked on the delivery note, containers and parts themselves, if appropriate. Details of this must be agreed in writing between MDP and the supplier before the parts are delivered.

If this procedure is not followed, MDP reserves the right to charge any related costs incurred to the supplier.

8. Methods of supplier escalation

8.1 Escalation process for suppliers

Whenever supplier´s performance is not meeting the desired goal - in Red or Yellow status in any of the evaluation parameters - MDP will place the supplier in one of the four escalation levels described below.

8.2 Escalation levels

There are four escalation levels:

- Level I - Supplier with identified problems
- Level II - Supplier is not succeeding in what concerns problem's solving
- Level III - Supplier needs external help in order to meet deliveries
- Level IV - Supplier is not capable the meet required quality level (MDP)

8.3 Quality Costs

Suppliers are required to establish and maintain a documented system for tracking cost of poor quality.

9. Contract Review

The supplier must establish and maintain documented procedures for the review of contracts and/or contract amendments.

10. Design Control

(Applicable only where design responsibility is a requirement of the contract)

The supplier must establish and maintain documented procedures to control and verify the design of the product to ensure that the specified requirements are met. The supplier's design activity must be qualified in the following skills as appropriate:

- Geometric Dimensioning and Tolerancing (GD&T);
- Design for Manufacturing (DFM) and Design for Assembly (DFA);
- Design of Experiments (DOE);
- Failure Mode and Effects Analysis (FMEA);
- Finite Element Analysis (FEA);
- Solid Modeling;
- Simulation techniques;
- Computer Aided Design (CAD) and Computer Aided Engineering (CAE);
- Reliability Engineering Plans.

Organizational and technical interfaces between different groups with input to the design process must be defined and the necessary information documented, transmitted and regularly reviewed. Design reviews must be documented.

11. Design Input Requirements

Design input requirements relating to the product, including applicable statutory and regulatory requirements, must be identified, documented and their selection reviewed by the supplier for adequacy.

12. Design Output Requirements

Design output must be documented and expressed in terms that can be verified and validated against design input requirements. The design output must:

- Meet the design input requirements;
- Contain or reference acceptance criteria.
- Identify those characteristics of the design that are crucial to the safe and proper functioning of the product (e.g., operating, storage, handling, maintenance and disposal requirements)

Design output documents must be reviewed prior to design release.

13. Document Control

The supplier must establish and maintain (change control) documented procedures to control and approve for use all documents of internal and external origin.

14. Lending right

Whenever the Buyer lends to the Supplier molds for the accomplishment of the agreement as listed in attachment (Mod.08.17), the Supplier shall:

a) Identify the molds with a label enabling the evident and legible identification of the owner;
b) Keep the molds in good condition, defending also its ownership, integrity and value;

c) Inform the Buyer of all and any acts whatsoever that might change or disturb the domain and/or ownership of the lent molds, or diminish them or put in danger those goods or the respective value.;
d) Keep the molds in perfect operating condition ensuring the respective periodical maintenance, if applicable.

All cases omitted herein shall be resolved by the parties, jointly or in accordance with the enforceable legal provisions and the ones mentioned in articles 1129º *et seq.* of the Portuguese Civil Code.

15. Purchasing and Sub-Supplier Control

Suppliers are required to establish and maintain documented procedures to ensure that purchased product and materials conform to specified requirements. Only MDP purchasing department is authorized to make purchase commitments on behalf of MDP. MDP corporate engineering staff or plant personnel are not authorized to instruct suppliers to proceed with new work or changes to existing orders. Instruction to suppliers for billable work will only come from the Purchasing department. Any supplier work done without a purchase order and prior approval from Purchasing will not be paid.

16. Subcontractor Evaluation, Approval and Development

The supplier is required to evaluate, approve and develop subcontractors based on their ability to meet the product requirements including the quality system and any specific quality assurance requirements. It is left to the discretion of the supplier to define the type and extent of control exercised over subcontractors, depending on the type of product, the impact of the subcontracted product on the quality of the final product and, where applicable, on the quality audit reports and/or quality records of the previously demonstrated capability and performance of sub-contractors. Assessments of subcontractors should occur at an appropriate frequency specified by MDP.

It is the organization's responsibility to ensure MDP Purchasing Department has a copy of the current quality certificate at all times.

The status of quality planning for purchased parts must be reported regularly. The production process and product release of products from sub-suppliers has to be concluded before production process and product release of MDP suppliers.

For further details regarding the MDP purchasing process, please see the most recent version of the Terms and Conditions located at https://www.mdgroup-global.com/supplierstermsandconditionsagreement.pdf.

MDP and/or MDP customers reserves the right to audit the organization's sub-suppliers both as part of subcontracted supplier selection and/or as consequence of subcontracted supplier bad performance negatively impacting MDP's production.

17. Product Identification and Traceability

The supplier shall guarantee the traceability of the supplied products and must establish and maintain documented procedures from the receipt of raw material to the supply of the final product.

The products must be marked or some other suitable method chosen to ensure that in the event of a defect being discovered, all other products which could be defective can be identified and blocked until subsequent measures have been agreed between the supplier and MDP.

18. Control of MDP Supplied Product

The supplier must establish and maintain documented procedures for the control of verification, storage and maintenance of MDP supplied product provided for incorporation into the product or for related activities. Any such product that is lost, damaged or is otherwise unusable must be recorded and reported to MDP.

19. Capability of testing equipment, machines and processes requirements

By applying suitable statistical procedures, the supplier must ensure that the used machines, tools, measuring and test equipment as well as the processes in which these are introduced are suitable and capable for the production of products supplied to MDP.

The characteristics for which capability studies have to be provided will be agreed between MDP and the supplier. However this does not release the supplier from his responsibility of defining further characteristics related to his processes or characteristics of the sub-suppliers.

20. Capability of testing equipment

The supplier defines the testing method for all characteristics with the appropriate testing equipment. For the planned measuring equipment a suitability of the testing process has to be proven. The measuring process and the tolerances of the characteristic to be measured have to be considered for this.

Evidence has to be brought in accordance with the requirements of Measurement System Analysis AIAG Reference Manual for each type of measuring and test equipment system.

The supplier must establish and maintain documented procedures to control, calibrate and maintain inspection, measuring and test equipment used by the supplier to demonstrate the conformity of product to the specified requirements.

21. Evidence of machine and process capability

The investigation of machine capability and process capability are basically described in SPC AIAG Reference Manual or VDA, Volume 4, Part 1, and must be performed according to this.

The following capability indexes can be agreed for special and critical characteristics or process parameters:

- Machine capability index: Cmk $\geq$ 2.0

In this case, a large number of random checks is taken and evaluated within a short period of time:

- Preliminary process capability index: Ppk $\geq$ 2.0;
- Process capability index: Cpk $\geq$ 1.67.

In this case, smaller numbers of samples are taken and evaluated over a longer period.

For all other agreed characteristics, the following capability indexes are binding:

- Machine capability index: Cmk ≥ 1.67;
- Preliminary process capability index: Ppk ≥ 1.67;
- Process capability index: Cpk ≥1.33.

If these minimum requirements are temporarily not met, 100% tests must be carried out until the capability is achieved through corrective actions. Deviations from this must be agreed with MDP.

22. Process Monitoring and Operator Instructions

The supplier must prepare documented process monitoring and operator instructions for all employees having responsibilities in the operation of processes, whenever the missing instructions might have impact in terms of product's quality and might affect safety or statutory requirements.

23. Verification of Job Set-Up (First / Last Pieces Inspection)

Job set-ups must be verified as producing parts that meet all requirements.

24. Government, Safety and Environmental Regulations

A supplier must have a process to ensure compliance with all applicable government safety and environmental regulations, including those concerning handling, recycling, eliminating or disposing of hazardous materials.

Supplier must have a management role defined as "Product Safety & Conformity Representative (PSCR).

The products must not have any design, material or processing defects and must comply with the specifications and properties contractually agreed. The supplier has to bring evidence of composition of the materials used and their individual components as well as environment related aspects. All the materials must be proved to be registered in the IMDS (International Material Data System).

A quality control report is used to inform suppliers about non-conforming deliveries.

MDP assumes that all substances for use in products delivered to MDP (e.g. raw materials, process materials, components, assemblies) that require registration in line with REACH (EC directive 1907/2006: Registration, Evaluation and Authorization of Chemicals) have been pre- registered by the supplier or sub-supplier and then registered at MDP for the purpose of application within the timeframe prescribed by REACH. If, contrary to expectations, this is not the case, MDP must be informed immediately.

REACH implies that every supplier of a product (including packaging) has to declare to MDP all SVHC-substances within the product, whenever concentration is higher than 0.1% by weight.

SVHC („substances of very high concern") are listed in a EU publication which is permanently enlarged.

25. Preventive and Predictive Maintenance

Suppliers must identify key process equipment and provide appropriate resources for machine equipment maintenance and develop an effective planned total preventive maintenance system. As a minimum this system must include:

- A procedure that describes planned maintenance activities;
- Scheduled maintenance activities;

- Predictive maintenance methods.

26. Inspection and Testing

The supplier must establish and maintain documented procedures for inspection and testing activities in order to verify that the specified requirements for the product are met. The required inspection and testing, and the records to be established, must be detailed in the control plan or documented procedures. Results need to be provided to MDP or MDP's customer on request at any time.

The inspection and test status of product must be identified by a suitable means, which indicates the conformity or non-conformity of product in regard to inspections and tests performed, independently of the stage on which test and inspection might occur.

26.1 Receiving Inspection and Testing

The supplier must ensure that incoming product is not used or processed until it has been inspected or otherwise verified as conforming to specified requirements.

26.2 In-process Inspection and Testing

The supplier must inspect and test the product as required by the control plan and/or documented procedures.

26.3 Final Inspection and Testing

The supplier must carry out all final inspection and testing in accordance with the control plan and/or documented procedures to complete the evidence of the finished product to the specified requirements.

26.4 Layout Inspection and Functional Testing

A layout inspection/functional testing shall be performed yearly. In the beginning of the project there will be an agreement regarding the dimensions and/or tests that should be performed annually. The results of this inspection are to be submitted to MDP within 48 hours, upon request.

26.5 Inspection and Test Records

The supplier must establish and maintain records, which provide evidence that the product has been inspected and/or tested.

27. Corrective and Preventive Action

The supplier must establish and maintain documented procedures for implementing corrective and preventive actions.

27. Handling, Storage, Packaging, Preservation, Labeling and Delivery

27.1 Handling

The supplier must provide methods of handling product that prevent damage or deterioration.

27.2 Storage

The supplier must use designated storage areas to prevent damage or deterioration of product, pending use or delivery.

Regarding materials with a specific shelf life, supplier must assure that such materials are not dispatched to MDP without less than 2/3 of shelf life and thus the production planning and stock's policy should take into account this requirement from MDP.

27.3 Packaging

Packaging is specified between MDP and Supplier in accordance with MDP Data Sheet Packaging.

The following basic principles must be followed:

. Adjust the dimensions to the standard load unit measures **1200X800 mm** or **1200X1000 mm**.

. Maximum height including pallet and cover **is 1100 mm**.

. The pallets for delivery of material should be in a perfect condition:

. Broken pallets will not be accepted.

. Paper pallets are not allowed.

Any deviations to this standard have to be agreed previously by MDP and/or be listed in MDP's Material Specification.

Each package should be placed correctly on the pallet in order to guarantee the safe transport of the contracted product and packaging.

27.4 Labeling of Shipping Units

All shipping units are to be identified by a master label.

The following minimum data is required:

- Order Number / Blanket Order Number;
- Delivery Note Number;
- MDP Part Number;
- Quantity;
- Name of Supplier/ Supplier Number;
- Batch Number;
- Shelf life / Expiry Date.

Any deviations to this standard have to be agreed previously with MDP and/or be listed in the MDP Material Specification.

27.4.1 Format and Attachment

All barcodes must correspond to code 39.

The master label on the shipping unit must be in DIN A5 landscape format.

The secondary label must be 210 x 74 mm (VDA standard format Label 4902).

27.5 Delivery

The supplier must establish a goal of 100% on time shipments to meet MDP production and service requirements. If this goal is not met, the supplier must implement a system to improve delivery performance, including communication of delivery problem information to MDP.

27.5.1 Delivery note

Required data:
- Delivery Note Number;
- Delivery Note Date;
- Sender's Address;
- Supplier Number;
- Order Number / Blanket Order Number;
- Recipient's Address (receiving plant, unloading point as per delivery call-off);
- MDP Part Number;
- Total quantity in delivery and quantities per shipping unit;
- Batch Number and, where appropriate, Shelf life/Expiry Date;
- Part Modification / revision status;
- Gross Weight of Package;
- Unit of Weight.

27.5.1 Order Processing

All suppliers are obliged to send only the material requested, in the agreed quality, in the right quantity, at the right time and to the right place. Costs resulting from violation of this obligation (especially in and outbound transport, warehousing, labor and additional inspection) must be fully covered by the supplier.

27.5.1.1 Production and Material Release

Production releases are legally binding purchase orders of finished goods.

However, regarding delivery dates the last updated delivery call-off/ scheduled release is decisive.

Material releases are the basis for MDP's obligation to reimburse respective materials purchased by SUPPLIER, if any. Production and material releases relate to dates of receipt by MDP.

Production authorization: 2 weeks

Material authorization: 4 weeks

The production and material release expresses the obligation of MDP to absorb product and/or material costs in case of sudden cancellations.

If the agreed release periods are not sufficient to maintain the ability to delivery, the supplier may, in individual cases, request an extension for production and/or material release.

27.5.1.2 Confirmation of the Call Off

Order confirmations are only required in case of a non-conformance to the specified delivery date or quantity. Only those call offs which the Supplier can perform only with deviations must be reported by the Supplier in writing within a period of 2 (two) working days after receipt of the relevant call off.

Supplier checks if the received delivery call-off/ release is complete, correct and plausible (e.g. part number, quantity and delivery dates are correct).

If any discrepancies are noticed the Supplier must inform MDP at once.

27.5.1.3 Flexibility and Reaction Time

All our customers expect a high level of flexibility from us. For this reason, the supplier shall ensure that he is able to react with the same flexibility in the event of changes in demand. If no other agreement exists, a flexibility of +/- 20 % of the quantity within the lead-time is expected from the supplier.

Appropriate solutions in the event of fluctuations going beyond this shall be developed in cooperation between the Supplier and MDP Buyer.

Suppliers must develop, establish, and implement emergency plans to ensure that supplies to MDP are not disrupted.

All suppliers are required to appoint contact persons who can be reached at any time in case of emergency. Any changes in contact persons must be communicated to MDP in advance by the supplier.

28. Control of Quality Records

Tooling records and amendments shall be maintained for the length of the time that the part (or family of parts) is active plus one calendar year. A part is to be considered “active” as long as MDP ordered at least 1 piece in the last 24 months.

The following records are to be maintained for one calendar year after the year of creation: lot traceability, production inspection and all control charts (if applicable). If the product supplied to MDP is deemed as a safety item (or part of an assembled safety item) for MDP’s customer, the above mentioned records shall be maintained for 15 years after the product’s end of life. The same maintenance period (15 years) applies to test records.

29. Internal Quality Audits

The supplier must establish and maintain documented procedures for planning and implementing internal quality audits to verify whether quality activities and related results comply with planned arrangements and to determine the effectiveness of the quality system. Results need to be provided to MDP or MDP’s customer on request at any time.

An yearly process self audit VDA6.3 has valid time period of max. 12 months is required performed by a certified auditor. The Supplier is required to conduct Product Audits according to VDA 6.5 Product Audit shall take place at least every 12 months for each product manufactured as a Series Production part. MDP can request the supplier to perform a potential analysis (new business) and a process audit VDA6.3 during development phase and/or in serial production.

If the organization supplies any products to MDP that utilize special processes (even if performed by an outside source), an annual self-assessment of the process shall be completed using the following AIAG forms:

- Plating – CQI-11
- Coating – CQI-12

An assessor knowledgeable in the process audited shall perform each assessment. Where any item found in the assessment is deemed “not satisfactory” or “needs immediate action”, a corrective action plan must be developed and tracked to completion. All completed self- assessments are to be sent to MDP at least once a year, with any corrective action plans available upon request.

30. Training and Education

The supplier shall ensure that only trained and qualified personnel are involved in the design and manufacture of MDP purchased products. This training shall include MDP customer specific requirements. Records of training on the MDP customer specification shall be traceable to the revision of the source training material.

31. Servicing

Whenever servicing is a specified requirement, the supplier must establish and maintain documented procedures for performing, verifying and reporting that service meets the specified requirements.

32. Control of Non-conforming Product

It is the responsibility of each supplier to MDP to supply parts that comply with all print requirements. The supplier must establish and maintain documented procedures to ensure that product that is either suspect or does not conform to specified requirements is prevented from unintended use. If any parts are found by MDP, customers plant or in warranty that do not comply with all requirements, the organization shall initiate and track to completion a corrective action plan and MDP manufacturing will start the Quality Concern Report (QCR) Process. If a part is supplied to more than one MDP facility, it is the responsibility of the organization to notify each facility of the potential issue within one business day.

The responsibility for review and authority for the disposal of non-conforming product must be defined. Disposal may include:

- Rework to meet the specification.
- Acceptance with or without repair by concession.
- Scrap

The proposed use or repair of product, which does not conform to specified requirements, must be reported to MDP for concession. The description of nonconformity that has been accepted, and of repairs (if any), must be recorded to denote the actual condition. The supplier must also maintain a record of the quantities authorized or the expiration date of the concession. The supplier must also ensure compliance with the original or superseding specifications and requirements when the authorization expires. Material shipped on an authorization must be properly identified on each shipping container. Repaired and /or reworked product must be re-inspected in accordance with the control plan.

The supplier has to reply to every complaint using a meaningful 8D report. Response time frame must be:

. 24 h for definition and implementation of the containment actions;
. 3 working days for investigation and communication regarding problem's root cause;
. 10 working days for corrective action plan definition and communication to MDP.

This period can be shortened if necessary. Interim containment measures must be initiated immediately and reported:

- to guarantee delivery of fault-free goods;

- to keep costs for the supplier and MDP as low as possible.

Interim reports must be presented on time if requested.

MDP has to be informed in writing in advance of any possible delays. The supplier must examine the products complained about carefully (defect-cause analysis).

The supplier has to summarize the results and planned corrective actions including deadlines for their implementation in an 8D Report without delay and forward this to MDP. Evidence must be provided to MDP of effective implementation of the corrective actions.

MDP reserves the right to carry out an audit on the supplier's premises in case of problems caused by the supplier and unacceptable reaction time, and to charge the costs incurred to the supplier.

All costs associated with non-conforming product are solely the responsibility of the supplier per the MDP Charge Back Schedule (See 34).

33. Field failure analysis

In the case that MD Plastics receive a field complaint supplier must integrate a joint analysis accordly FFA VDA procedure.

34. Performance Evaluation

MDP Supplier's Evaluation process is periodically performed and it is a demerit based system that evaluates the "Products Quality Performance", "Delivery Performance" and some management indicators:

Component	Management Indicators
Quality	Quality System status
	Number of complaints / non-conformity reports
	Response time to complaints / non-conformity reports
	PPMs
Service	Delivery quantity
	Delivery term
	Delivery troubles
	Response time

34.1 QUALITY SCORE

Periodic quality score is calculated in accordance with:

$$IQ_{F;monthN} = 100 - \left[\sum Demerits\left(Status\ QS; \#NCR; \mathrm{Re}\,sponseTime; PPM's\right)\right.$$

If calculated Final Score is less than zero, then zero points will be considered for a particular month.

The global quality evaluation is reviewed based in the last 6 months result.

Based on the global quality evaluation, ***GYR (green yellow red)*** *rankings* are established as per following table:

IGQ_F	Ranking	Consequences
0 - 50	Red	**Non-Preferential Supplier (D):** Immediate quality improvement is required. Immediate corrective actions are needed in order to achieve the required quality level.
51-80	Dark Yellow	**Fornecedor Não Preferencial "C":** Implement Quality Wall in supplier side and 100% inspection in MD .Under process audit surveillance
81 - 89	Yellow	**Supplier under surveillance "B":** The supplied quality need and should be improved. Evidence of quality improvement should be noticed in the next deliveries. A corrective action plan must be submitted listing required actions to achieve the Preferential status.
81 - 100	Green	**Preferential Supplier "A":** Supplied product's quality is in accordance with MDP and its customer's expectations. Supplier's efforts should be directed to the maintenance of the quality level.

34.2 SERVICE SCORE

Periodic service score is calculated in accordance with:

$$IS_{F;mêsN} = 100 - \left[\sum Demerits\left(Quantity; Term; \mathrm{Pr}oblem'sType; \mathrm{Re}sponseTime\right)\right]$$

If calculated Final Score is less than zero, then zero points will be considered for a particular month.

The global service evaluation is reviewed based in the last 6 months result.

Based on the global service evaluation, ***GYR*** *rankings* are established as per following table:

IGS_F	Ranking
0 - 79	Red
80 - 89	Dark Yellow
89 - 94	Yellow
95 - 100	Green

35. Supplier Charge Back Schedule

ITEM	COST (EURO)
Late PPAP/PPA	€ 150 per occurrence
Rejected PPAP/PPA	€ 150 per occurrence
Administrative Fee (Single event having impact in terms of production)	€ 60 per issue
Administrative Fee (Repetitive Issue having impact in terms of production)	€ 60 *1,25 if there is a corrective action plan and improvement was noticed
	€ 60 *1,5 if there is a corrective action plan but no improvement was noticed
	€ 60 *2 if there is no corrective action plan
Sort / Rework / Material Handling	€ 15 per hour
Rework / Sorting (3rd Party)	Actual cost + Administrative Fee
Overtime charges due to working hours as a result of Non-Conforming material required to meet Customer releases	€ 25 per hour
Return of Accumulative Non-Conforming materials	€ 30 per issue Value of product Transport cost
Downtime due to material shortages	Actual cost: cost equipment + labor (15€/h * no. operators)
Premium Freight	Actual Cost
Costs incurred at MDP's customers due to a supplier issue – failures not detectable during inspection and that involve durability and reliability	Product value + Invoice * 1,1

a. Extra incoming inspection / sorting activities (MDP stock, customer plant or other external warehouses)	
b. Rejection of assemblies or sub-assemblies	Product value + labor cost (15€/h)
c. Rejects disposal	Product value 15€/ h (manpower) Waste treatment cost
d. Retrofit of assembled products	15 €/h (labor) + actual cost for transport + accommodation + meals
Cost of customer complaints involving durability and reliability	Actual cost *1,1 €
Costs due to tests at external laboratories	Actual cost *1,1 €
Additional costs (Traveling, Supplies, etc.)	Actual cost *1,1 €

36. Contingency Plan

Suppliers shall develop a contingency plan for potential catastrophes which may disrupt product flow to MDP and advise MDP at the earliest in the event of an actual disaster. In an actual catastrophe, suppliers shall provide MDP access to MDP's tools/MDP customer's tools and/or their replacements.

37. References:

The following materials are referenced in this manual. They are available from:

Automotive Industries Action Group www.aiag.org

Production Part Approval Process - Reference Manual PPAP

Production process and product approval PPA - VDA2

Measurement System Analysis - Reference Manual MSA

Capability of Measurement sustems – VDA 5

Potential Failure Mode and Effects Reference - Manual FMEA AIAG / VDA

Advanced Product Quality Planning and Control Plan - Reference Manual APQP

Maturity level assurance for new parts – VDA MLA

Fundamental Statistical Process Control - Reference Manual SPC-1

IATF 16949: Particular requirements for the application of ISO 9001:2000 for automotive

production and relevant service part organizations.

Process audit VDA6.3

Product audit VDA6.5

Field failure analysis – FFA - VDA