

**Global Supplier Manual**  
MANN+HUMMEL

Revision 10  
04/2024

## Revision History

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08	<b>01/03/2021</b>	Risk Man- agement	Strategic Purchasing
09	<b>15/09/2022</b>	Supplier Quality	Supplier Development
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## List of Abbreviations

<b>8D</b>	8 Disciplines Problem Solving
<b>AIAG</b>	Automotive Industry Action Group
<b>APQP</b>	Advanced Product Quality Planning
<b>ASL</b>	Approved Supplier List
<b>CIP</b>	Continuous Improvement Process
<b>Cmk</b>	Machine capability index
<b>CSL</b>	Controlled Shipping Level
<b>CP</b>	Control Plan
<b>Cpk</b>	Long-term process capability index
<b>CQI</b>	Continuous Quality Improvement
<b>D-U-N-S®</b>	Data Universal Numbering System: nine-digit coding scheme to clearly identify companies
<b>eCONN</b>	MANN+HUMMEL Supplier portal (electronic connection)
<b>EDI</b>	Electronic Data Interchange
<b>ELV</b>	End of Life
<b>EL</b>	Escalation Level
<b>EPC</b>	Early Production Containment
<b>eRFQ</b>	Electronic request for quotation
<b>ERS</b>	Evaluated Receipt Settlement
<b>EUTR</b>	European Timber Regulation
<b>FMEA</b>	Failure Mode and Effects Analysis
<b>GADSL</b>	Global Automotive Declarable Substance List
<b>Gauge R&amp;R</b>	Gauge repeatability and reproducibility
<b>GASG</b>	Global Automotive Stakeholders Group
<b>HSE</b>	Health, Safety & Environment
<b>IMDS</b>	International Material Data System
<b>M+H</b>	MANN+HUMMEL Group
<b>MSA</b>	Measurement Systems Analysis
<b>NPM</b>	Non-production material

<b>PM</b>	Production Material
<b>PPAP</b>	Production Part Approval Process
<b>Ppk</b>	Preliminary process capability index
<b>PPM</b>	parts per million
<b>PRFPP</b>	Product Requirements for Purchased Parts
<b>PSW</b>	Part Submission Warrant
<b>QAA</b>	Quality Assurance Agreement
<b>RCI</b>	Root Cause Investigation
<b>REACH</b>	Registration, Evaluation, Authorization and Restriction of Chemicals
<b>RoHS</b>	Restriction of Hazardous Substances Directive
<b>RPS</b>	Rapid Problem Solving
<b>SCR</b>	Supplier Change Request
<b>SOP</b>	Start of Production
<b>SPC</b>	Statistical Process Control
<b>T&amp;C</b>	Terms & Conditions of Purchasing
<b>TCM</b>	Technical Change Management
<b>VRS</b>	Vendor Rating System

# 1 General Information

## 1.1 Purpose and Scope of the MANN+HUMMEL Supplier Manual

Purpose of this supplier manual is to provide information about MANN+HUMMEL's policies, processes and procedures for our supplier base.

This manual will assist suppliers in understanding both our commercial and quality/HSE processes and requirements in order to avoid quality problems and to ensure legal compliance and efficiency to minimize costs.

These expectations are based on MANN+HUMMELs vision & values as well as legal regulations and Quality and HSE management system requirements

It is our aim that by providing this information, a clear understanding of our goals is developed so that together we may exceed the needs and expectations of our mutual customers.

All suppliers doing business with MANN+HUMMEL have to comply with the guidelines given in this document.

This supplier manual applies within the entire MANN+HUMMEL Group for suppliers of production material, trading goods and non-production material. Chapter three "Quality Processes & Requirements" is only applicable for production material and trading goods suppliers.

Following the regulations in this manual is required to ensure that all our suppliers use our systems and adhere to our processes.

Latest released version of MANN+HUMMEL Supplier Manual is located in the [Supplier Area](#) on the MANN+HUMMEL website.

All documents referred to in this supplier manual can be found in the appropriate section in the supplier area on the MANN+HUMMEL website or on our supplier portal.

Suppliers are responsible to use the current version of the MANN+HUMMEL supplier manual and therefore check updates on MANN+HUMMEL website.

## 1.2 Management Policy

### Our Vision:

**Leadership in Filtration by inspired people delivering outstanding solutions and superior results.**

**Management Policy**

**WE FIRMLY COMMIT TO**

- A goal of **zero accidents** with a focus on "Health & Safety first".
- A goal of **zero defects** with a focus on "Quality always".
- Understand and meet our **customers'** expectations and requirements and therefore contribute to their success.
- Respect, consult and involve our **employees** as well as their representatives. Provide **healthy** and **safe working conditions** and protect the **environment** from pollution by elimination of hazards and reduction of risks to an acceptable level.
- Provide a great place to work as outlined in our **FILTER values**.
- Comply with all statutory requirements as well as binding obligations and live the **MANN+HUMMEL Code of Conduct**.
- Understand our organization, its interested parties as well as the internal and external issues that affect it, in order to set and meet our **objectives**.
- Cooperate with our **suppliers** in a fair partnership to achieve best quality, cost, service, safeguarding employees, environmental protection and legal compliance.
- Strive for excellence and meet our goals by assessing **risks** and **opportunities**, acting preventively as well as evaluating and communicating our performance.
- Provide the necessary resources to maintain and continually improve our **management system processes**.
- Be our **customers'** first choice in terms of quality, best service and innovative technologies.

*Kirk Wilks*  
Kirk Wilks  
President & CEO

*Emese Weissenbacher*  
Emese Weissenbacher  
Executive VP & CFO

POL-008, Rev. 3, Issue: 01/2022  
This management policy is binding for all MANN+HUMMEL locations worldwide as defined within the Corporate Business Manual.

## 1.3 Purchasing Strategy

MANN+HUMMEL purchasing wants to provide best sourcing solutions for materials, equipment and services with optimized **quality, costs and delivery service**.

Fairness and cooperation is important in purchasing in order for mutual success.

We offer reliability, flexibility, innovations and a passion for quality with the expectation that our business partners do as well.

As one Purchasing Team we want to enable "Operation Excellence", "Best Sourcing Solutions" and "Supplier Development". To achieve our goals in purchasing and our common goal "Leadership in Filtration", we have defined the following key enablers:

- **Global Focus:** Drive innovation with our purchasing organization with a focus on developing global supplier footprints.
- **Professional Material Group Management:** Encourage consistent supplier portfolio strategies worldwide with our global Material Group Management.
- **Reliable Quality and Performance:** Innovation and cost gains the business, while quality retains the business. Facilitate innovation and improvement. The quality of purchased parts and services affects our products and thereby our customers. Our customers require perfect quality.
- **Advanced Standardization:** Improve transparency, efficiency and collaboration both between our employees and business partners by standardizing systems and processes.

- **Excellent Competitiveness:** Foster continuous cost improvement to maintain cost/price balance is a key success factor. We like active input from and permanent cooperation with our suppliers.
- **Top People:** Maintain focus on training and qualification. A capable and well trained purchasing team is a MUST to be successful in our business environment every day.

## 1.4 Responsibility and Sustainability

### 1.4.1 Supplier Code of Conduct

As a successful, global company, MANN+HUMMEL has a particular corporate and social responsibility. All ethical, social and legal guidelines and principles are documented in the [Supplier Code of Conduct](#).

This Supplier Code of Conduct is based on the MANN+HUMMEL Code of Conduct and is part of the contractual relationship between MANN+HUMMEL and its suppliers.

MANN+HUMMEL will only do business with suppliers who share our expectations for and commitment to sustainable business practices. We believe in fair, constructive and loyal cooperation with our suppliers. We oppose all anti-competitive measures and practices, and reject dubious business practices.

Our business partners and suppliers will be encouraged to introduce comparable principles in their corporate structures and to apply them in the context of their own corporate policy. We regard those principles as a suitable criterion for lasting business relationships:

- Compliance with laws and contracts
- No bribery and collusion

- We do not allow gifts or advantages granted to us to influence our decisions.
- We do not collude on prices, markets, customer areas, delivery conditions, calculations and other competitive topics.

- Discrimination, sexual harassment, bullying or verbal abuse are not tolerated. Interactions are open and honest, marked by respect and responsibility.
- No child, slave and enforced labor
- Compliance with national laws pertaining to work hours, wages and other stipulations under labor law.
- Occupational safety, health and environmental protection – a matter for all of us.
- Environmental protection and economical utilization of resources in product development, purchasing, production, logistics and waste disposal.
- Climate protection in product design, production processes and total value chain.

Important elements of our success are cooperation and communication within the company and when dealing with our business partners, based at all times on mutual appreciation and recognition.

### 1.4.2 Information Security Management

to protect information and information systems from unauthorized access, use, disclosure, disruption, modification, perusal, inspection, recording or destruction suppliers have to comply with the following regulations according to ISO/IEC 27001 and 27002:

- Obligation to pass on all requirements to sub-suppliers.

- Obligation to notify MANN+HUMMEL in case of (expected) security incidents as well as having an information security incident management.
- Obligation to provide information security trainings to the employees on a regular basis.
- Obligation to have adequate physical security measures (safety zones, access security, alarm system, video control, fire prevention, safe removal and disposal methods etc.).
- Obligation to implement fundamental technical safety measures (user authentication; access control; network, email, portable media and disposal management procedures; prevention of malicious software).
- Obligation to have necessary organizational safety measures (contact person for information security, procedure for on-/off-boarding, procedure for permissions assignment)
- Right for MANN+HUMMEL to do on-site inspections (incl. regulation of frame conditions like frequency, cost consequences, (also at sub suppliers)).



## 2 Commercial Processes & Requirements

### 2.1 Supplier Portal

MANN+HUMMEL has implemented a [supplier portal](#) to improve communication with suppliers worldwide. It is used to handle the supplier registration process (2.2), the supplier master data management process (2.3), the eRFQ process (electronic request for quotation) (2.5) and to display the vendor rating (3.7).

All suppliers should use this communication portal. Reasons to use a centralized system of communication are e.g.:

- Process standardization
- Master Data Management
- Management of quality & environmental certificates
- Management of eRFQs
- Exchange of documents
- Access to the Vendor Rating System

### 2.2 Supplier Registration Process

#### 2.2.1 Supplier Invitation

The registration process of all new MANN+HUMMEL suppliers must be initiated by a MANN+HUMMEL employee. If companies are interested in becoming a supplier to MANN+HUMMEL, they have to fill out the self-assessment questionnaire on our [website](#).

This request will be forwarded to the responsible purchasing representative.

MANN+HUMMEL uses two different registration processes for new suppliers depending on the material group they will deliver:

1. The registration process is handled completely by MANN+HUMMEL without involvement of the supplier (for most NPM material groups) or
2. Suppliers will receive an invitation email to the supplier portal (for all PM and some NPM material groups).

In case suppliers receive an invitation email they shall submit a completed supplier profile (master data & supplier questionnaire) before establishing a business relationship.

Depending on whether it is a non-production material supplier or a production material supplier the questionnaire contains mainly some general questions or is more comprehensive including questions about e.g. logistics, quality (incl. upload of certificates) or environment as well as some material group specific questions.

#### 2.2.2 Supplier Approval Workflow

Each new supplier must pass the MANN+HUMMEL internal approval workflow.

Based on the supplier questionnaire and depending on material group(s) supplier will deliver to MANN+HUMMEL, the workflow steps vary and different selection criteria will be taken into account e.g.:

- Content of **supplier questionnaire** and correct **master data** (incl. D-U-N-S® Number)
- **Quality requirements** (certificates, audit etc.)  
→ see chapter 3

- **Contractual situation**

Necessary contracts have to be signed to enter into a business relationship with MANN+HUMMEL. These are: Terms and Conditions of Purchasing (T&C) (2.4), Electronic Data Interchange Agreement (EDI) and Quality Assurance Agreement (QAA)

- **Health, Safety and Environmental requirements**

→ see chapter 4, 5

- **Capability & Capacity**

- Knowledge/skills/competencies, physical/material resources, financial resources
- deliver products in time, ability to meet seasonal or varying demand levels

As soon as a supplier is approved by all instances a SAP vendor number will be generated which is the basis for doing business together (receive purchase orders, book invoices etc.).

All suppliers of MANN+HUMMEL are classified in the Approved Supplier List.

## 2.3 Master Data Management

Master data of suppliers are managed through the supplier portal. Suppliers of MANN+HUMMEL are obliged to keep their master data up-to-date, including the upload and update of required certificates (after expiry) and to verify all data at least once a year. The suppliers must promptly notify us if the certificate is revoked.

In case suppliers do not yet have access to the supplier portal, they should contact [srm-portal@mann-hummel.com](mailto:srm-portal@mann-hummel.com).

If any master data are changed in the supplier portal, MANN+HUMMEL will be informed about it automatically. A new registration could be necessary in case several major information are modified. Suppliers will be informed about it separately via email.

## 2.4 Contracts

In order to ensure the business relationship between MANN+HUMMEL and suppliers mandatory contracts must be signed. Purchasing Terms and Conditions

MANN+HUMMEL Terms and Conditions of Purchasing are the legal base for doing business with the suppliers. Due to the international focus of the company, T&Cs that apply on a regional level were developed. MANN+HUMMEL differentiates between a version for production material and a version for non-production material suppliers. All **current valid versions of T&Cs can be found on [MANN+HUMMEL website](#)**. MANN+HUMMEL T&C of Purchasing generally are not negotiable.

### 2.4.1 Quality Assurance Agreement (QAA)

The QAA specifies and regulates all quality assurance measures designated by the parties and is an integral part of the contractual relationship between MANN+HUMMEL and its suppliers.

Signing the QAA is a crucial and fundamental step to be nominated for business with MANN+HUMMEL. The QAA is generally not negotiable.

## 2.5 Procurement Process

It is important that all suppliers of MANN+HUMMEL are aware of the procurement process. Therefore this chapter provides a brief

overview about the process starting with the request and ending up with invoicing and payment.



### 2.5.1 Request for Quotation (RFQ) & Submitting Quotes

MANN+HUMMEL issues numerous RFQs for new or revised products in order to get comparable offers. Depending on the requesting site, the material groups of the demand and the value limit our supplier portalis used to process eRFQs and to receive quotes. If the eRFQ process is used suppliers shall provide feedback via the supplier portal, either upload their quotes or reject the request. With a portal account suppliers can easily handle all their eRFQs at one place.

All relevant information is typically provided with each request. It needs to be considered and adhered to:

- 2D Drawings
- 3D Drawings (transferred via SWAN)
- Specifications & Standards
- Contracts
- Costbreakdown
- Contact information (Purchasing, Design)
- etc.

If additional information is needed to complete the quotation, suppliers should either notify the purchasing contact for commercial issues or the design contact for technical issues. If any templates are sent together with the RFQ suppliers shall use them.

When quoting, suppliers must provide detailed cost information. If requested the MANN+HUMMEL standard cost breakdown has to be used.

### 2.5.2 Sourcing Decision and Nomination

MANN+HUMMEL assesses and selects suppliers on the basis of capabilities to meet particular requirements. The regulations for comparing quotes depend on the material groups.

The following criteria might be taken into account as part of the nomination process:

- Total costs (incl. e.g. product costs, release costs, duties, freight, payment terms, currency, travel costs)
- Capability / Capacity
- Supplier risk
- Contractual situation
- Classification in MANN+HUMMEL Approved Supplier List
- Vendor Rating (Quality & Delivery performance)
- EDI implementation for Purchasing and Accounting
- Strategic aspects

**!** Nomination is not ensured before receiving an appropriate contract or a purchaser order / scheduling agreement. **!**

### 2.5.3 Purchase Order / Scheduling Agreement

MANN+HUMMEL uses purchase orders (mainly for NPM / individual orders) and scheduling agreements (recurring demand) to cover the request of goods & services. Purchase

orders and scheduling agreement releases specify the quantities and delivery time. The releases are transferred by EDI or WebEDI. Suppliers should not start production before receiving an order to be sure that the agreed requirements have not been changed. Precondition to receive orders / releases is a MANN+HUMMEL SAP vendor number (2.2).

Requirements for eCatalog suppliers can be found in the Supplier Area on M+H website.

## 2.5.4 Payment / Invoicing

### Invoicing Requirements

When issuing invoices, the invoices should include the following data. It may vary depending on local requirements:

- Name and address of supplier & MANN+HUMMEL location
- M+H SAP vendor number
- Description of goods / services & quantity
- Order number (where applicable) / Delivery note number (where applicable) / Invoice number
- Invoice type (invoice, credit note, debit note)
- Date of supply & Invoice date
- VAT ID / GST ID / relevant tax number of the supplier
- VAT ID / GST ID / relevant tax number of MANN+HUMMEL company (where applicable)
- Bank details
- Tax rate (in %), Amount of tax, Amount without tax, Total amount
- Currency
- Delivery terms
- Harmonized code
- Weight (net & gross)

- Further legal requirements applicable for respective country

The items on the invoice must match with the items on the order. MANN+HUMMEL reserves the right to return invoices with incomplete or inaccurate order data or with inaccurate or incomplete billing address to the supplier. In order to proceed with the payment, supplier master data in supplier portal/SAP must fit to supplier data on the invoice. If necessary suppliers shall update data on the MANN+HUMMEL supplier portal.

### eInvoicing

Some MANN+HUMMEL locations offer the electronic receipt of invoices via e-Mail in PDF format.

Therefore MANN+HUMMEL implemented specific email addresses that should be used (see link below).

### Evaluated Receipt Settlement (ERS)

ERS is a procedure for settling goods receipts automatically. The system posts the invoice document automatically on the basis of the data in the purchase order and goods receipts. This eliminates invoice variances. Therefore suppliers have to transfer the task of invoicing to MANN+HUMMEL. Suppliers do not have the administrative work to create an invoice anymore and payments on time are secured. To put it into practice suppliers have to contact their purchasing contact in order to sign the MANN+HUMMEL Self Billing Declaration.

## 2.6 Logistics

### 2.6.1 Global Supplier Handbook

To reach MANN+HUMMEL’s common goal of Leadership in Filtration, not only the quality of our products and efficient purchasing processes are important but also smooth communication and efficient logistic processes.

To point out the importance of logistics and provide clear guidelines to the suppliers, MANN+HUMMEL has created a separate [handbook for logistics](#).

The handbook comprises a general section containing the instructions applicable to all sites and a plant-specific section dealing with specific features of individual sites.

Content of the Supplier Manual Logistics in detail:

- Cooperation between MANN+HUMMEL and the supplier
- Scheduling Agreements and Orders
- Communication
  - EDI
  - WebEDI
- Packaging
  - Empties management
  - HSE requirements
  - Special instructions
- Dispatch to MANN+HUMMEL
  - Shipping notification and delivery date
  - Delivery services
  - Accompanying documents for material
  - Loading and transport
  - Custom clearance for third-country imports
  - Purchases form EU
  - License obligations and US exports
  - Security in the supply chain
- Irregularities
  - Cancellation of order
  - Supplier evaluation – Vendor Rating System

- Errors in delivery

## 2.6.2 Risk Assessment

MANN+HUMMEL requires its suppliers to perform regularly a logistics risk assessment (e.g. according MMOG) and to provide this on request.

### 2.6.2.1 Supply Chain Risk Assessments

MANN+HUMMEL requires its suppliers to have a risk assessment process in place to identify areas within the supply chain process that could affect the ability to meet the organization’s requirements. A suppliers risk assessment process prioritizes which processes should be documented within the contingency /back-up procedures based on probability of occurrence, severity of the impact, detection etc. This process could include the use of analytic tools as appropriate.

### 2.6.2.2 Contingency Plan

MANN+HUMMEL requires its supplier to develop contingency plans that would be implemented in the event of a deviation or disruption from the normal business process. This could include EDI, transportation, packaging, equipment failure etc.

### 3 Quality Processes & Requirements

It is imperative for MANN+HUMMEL to be our customers' first choice in quality, service and innovation. This is why we always strive to fulfill the expectation of our customers. As the quality of our purchased components has a significant impact on the performance of our MANN+HUMMEL products, we expect the same approach and enthusiasm from our suppliers.

Therefore, suppliers have to respect the MANN+HUMMEL quality requirements described in this section and the terms which finally are agreed in the Quality Assurance Agreement. Suppliers are fully responsible for the quality of their products.

In order to ensure zero defects, an effective Quality Management System must be in place. As a minimum requirement, suppliers are expected to work in accordance with the requirements described in ISO 9001. Additionally, we are requesting suppliers to work towards IATF 16949 specification esp. respecting the Automotive Core Tools such as:

- Advanced Product Quality Planning (APQP)
- Production Part Approval Process (PPAP)
- Failure Mode and Effects Analysis (FMEA)
- Control Plan (CP)
- 8 Disciplines Problem Solving (8D)
- Measurement Systems Analysis (MSA)
- Statistical Process Control (SPC)

The following diagram "Supplier Quality Lifecycle" gives a brief overview of processes, methods and tools being applied by

MANN+HUMMEL to manage supplier quality. Starting with the supplier selection, followed by the Advanced Product Quality Planning (e.g., APQP) and the Production Part Approval Process (e.g., PPAP), we are regularly monitoring parts' quality and the quality and delivery performance of our supply base during series production.

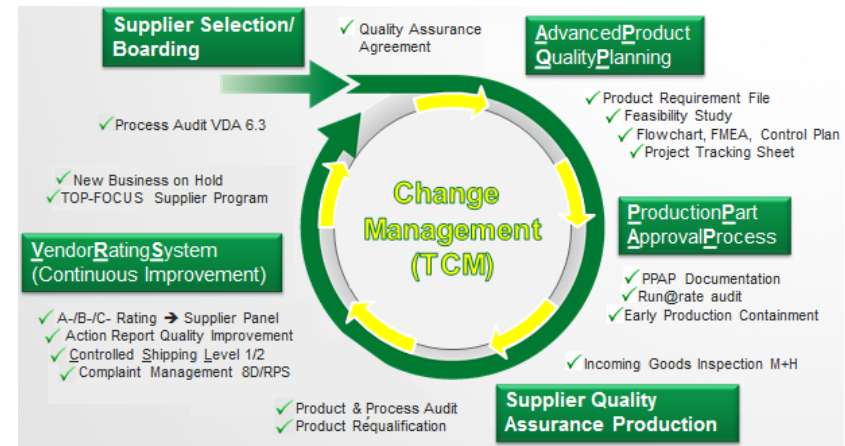


Diagram "Supplier Quality Lifecycle"

In order to remain competitive and to assure a long-term business success for MANN+HUMMEL and its suppliers, we have to continuously improve the efficiency of processes, finding effective ways to eliminate waste and to reduce the cost of our products together. In addition to complying with the quality expectations defined in this section, suppliers must also comply with the additional quality expectations, where applicable, of specific MANN+HUMMEL locations or customers.

### 3.1 Advanced Product Quality Planning (APQP)

APQP is a structured process with focus on quality aspects and preventive quality assurance, to be applied during the entire project phase.

The supplier shall perform an APQP process that is in compliance with the AIAG APQP manual or VDA "Maturity level assurance for new parts" and the VDA 2 "Quality Assurance for Supplies" for all new parts and also for changes.

As an input to this project planning the supplier will receive all product related requirements from MANN+HUMMEL put together in the PRFPP (Product Requirement File for Purchased Parts). The PRFPP is part of the contract between MANN+HUMMEL and the supplier. PRFPP needs to be signed by the supplier accordingly.

PRFPP is covering topics such as feasibility commitment, FMEA, control plan, continuous improvement and project tracking.

The PRFPP consists of two parts:

**Part 1:** contains the general description of all product requirements, drawings as well as additional technical and logistics requirements. Also the Production Part Approval Process (PPAP) is defined here including special characteristics and handling of certificates for any measurement.

**Part 2:** includes the templates to be used by the supplier like the APQP status report and logistic requirements.

During the contract review, the supplier shall check the feasibility of all technical requirements outlined in the relevant specifications, drawings, CAD data, logistic requirements and standards upon receipt. The supplier shall promptly inform MANN+HUMMEL of any mistakes, missing documentation, risks and improvement possibilities hereby discovered.

The supplier shall have a defined product development process incorporating the APQP process. During this development process the supplier shall apply suitable preventive quality planning methods, e.g. feasibility analysis, risk analysis and FMEA.

The supplier shall take experiences from previous/similar projects (processes, process data, feasibility studies etc.) into account.

#### 3.1.1 Run@Rate Audit

As verification of the supplier's production readiness, MANN+HUMMEL may require completion of a R@R process audit based on form MHG-PU-F-0014 prior to start of production (SOP). Following topics need to be considered:

- MANN+HUMMEL determines level of Run@Rate activity in the PRFPP.
- Supplier conducts a Run@Rate self-audit, completes forms along with supporting documentation, and returns to MANN+HUMMEL.
- MANN+HUMMEL may require formal Run@Rate presentation meeting/audit.
- MANN+HUMMEL and supplier agree on corrective action plan, if required. All temporary and permanent corrective actions must be in place prior to start of series production.
- All equipment and processes must have been verified at documented capacity rates and be ready to run production at the peak quoted capacity rate. Validation for equipment and tooling must be completed with positive result.
- Operators and support personnel must be trained in the requirements of the current/updated control plan, equipment, and gauges.

- Process capability, operator instructions, and Gauge R&R studies must be completed and documented. This also applies to all sub-suppliers.
- Material handling systems, packaging, and routings must be in place.

MANN+HUMMEL will decide whether the Run@Rate audit will be completed on-site or a self-assessment can be accepted.

### 3.2 Production Part Approval Process

The PPAP is the confirmation that a manufacturing process is ready to produce parts consistently meeting all customer requirements for series production.

All products shall be approved following the requirements of the AIAG PPAP manual or the VDA 2 manual, according to what has been defined by MANN+HUMMEL and agreed upon in the PRFPP (Product Requirement File for Purchased Parts).

The supplier is responsible to meet all requirements before submission of the PPAP to MANN+HUMMEL, including obtaining MANN+HUMMEL approval for any deviation prior to sending the documentation to us. If the supplier recognizes that requirements cannot be met, the purchasing department at MANN+HUMMEL must be informed immediately. MANN+HUMMEL shall make a decision about further action together with the supplier. In addition, the supplier is responsible for all sub-supplier PPAP/ PPA submissions and approvals, including those suppliers MANN+HUMMEL has directed for use (if not specified differently).

A series delivery may only be started once the approval from MANN+HUMMEL has been given by signing the Part Submission Warrant (PSW) or PPA cover sheet. The approval does not free the supplier from its liability for defects.

Special characteristics require capability studies (Cmk / Ppk / Cpk) and have to be monitored during series production.

Target values for capability are:

- Cmk  $\geq$  2.00 (machine capability)
- Ppk  $\geq$  2.00 (preliminary process capability for S-characteristics)
- Ppk  $\geq$  1,67 (preliminary process capability for F-characteristics)
- Cpk  $\geq$  2,00 (long-term process capability for S-characteristics)
- Cpk  $\geq$  1,67 (long-term process capability for F-characteristics)

In individual cases other requirements can be agreed in writing per project.

Capable processes are expected both, in the PPAP phase and in series production and may be checked during Run@Rate audit by MANN+HUMMEL. The Supplier may also be required to submit these data periodically.

Unless otherwise specified by MANN+HUMMEL, if the process does not meet any of the capability targets, the supplier must supply a containment plan describing the 100% inspection method that prevents non-conforming parts from being shipped to us, and a corrective action plan for capability improvement.

#### 3.2.1 Early Production Containment (EPC)

Early Production Containment must be implemented for all pre-production and production runs that require the Production Part Approval Process, and whenever mandated by MANN+HUMMEL on any part that presents significant risk to a MANN+HUMMEL plant, e.g. at annual shutdown, model year change, etc.



The purpose of EPC is:

- To reduce the risk to MANN+HUMMEL and to protect customers as well as the supplier itself, through increased detection
- To document supplier efforts to gain control of its processes during start-up and launch so that any quality issues that may arise are quickly identified and corrected at the supplier's location and not at the customer's manufacturing location.

The development and documentation of the EPC plan is expected to occur during the Advanced Product Quality Planning Process. The EPC requires a documented launch or pre-launch control plan that is a significant enhancement to the supplier's production control plan. Therefore, the supplier is responsible for the implementation of a containment process that respects the following elements:

- Identification of the person responsible for the containment process
- Off-line, separate and independent check from the normal production process
- Additional checks and 100% inspection of at least the product characteristics defined in the PRFPP and all applicable specifications
- Increased verification of label accuracy
- Additional controls regarding the production process, i.e. set-up procedure, machinery, fixture, tooling, operator, preventive maintenance, and error proofing verification
- Increased involvement and visibility by top management, including increased internal audits
- Increased frequency/sample size of receiving goods
- Defined sub-supplier containment and sub-supplier support, which may include on-site audits.

The EPC quantity/timeframe will be agreed with the supplier during the APQP process and documented in the PRFPP. The supplier has to record all inspection and testing results to be able to present to MANN+HUMMEL on request. To indicate compliance with the EPC requirements, suppliers will attach a special label to each shipment and/or apply special marking as agreed to between the supplier and MANN+HUMMEL.

Supplier will be eligible to exit EPC after the quantity/timeframe is achieved and no discrepancies are found at supplier or MANN+HUMMEL. Information about the planned termination of EPC has to be provided to MANN+HUMMEL and approval has to be given. Otherwise, EPC plan must be kept in place until process controls and capabilities will be proven effective and exit criteria are met.

### 3.3 Supplier Quality Assurance

The target is a Zero Defect production. In case MANN+HUMMEL and the supplier agree on certain PPM failure rates/targets this shall not relieve the supplier in any way from its obligation to deliver conform products and shall in no way limit the liability of the supplier.

Therefore, suppliers have to ensure that production is monitored systematically by using appropriate testing methods and applying statistical methods, where applicable. The supplier shall keep continuous records of all tests. MANN+HUMMEL at any time has the right to view the testing documentation and when needed to demand test certificates in accordance to EN 10204 requirements. MANN+HUMMEL will inspect shipments of products/material only with respect to identity, quantity and externally visible damage, e.g. transport damage. MANN+HUMMEL is not obligated to conduct

any other testing before using the product supplied. Any non-conformity detected during incoming goods inspection and/or at a later point of time during manufacturing will immediately be indicated to the supplier.

To this extent the supplier waives all rights to raise objections because of non-inspections of incoming products and/or delayed notification of defects.

Products that don't meet the specification shall only be delivered to MANN+HUMMEL after obtaining special written approval from MANN+HUMMEL. In this case the supplier has to submit a request for special approval to Purchasing prior to shipment. These deliveries may only be made for a specific time and in a specified amount and have to be labeled accordingly.

Based on risk evaluation suppliers have to implement a traceability system which ensures that final components and subcomponents can be traced back to the manufacturing date, equipment, tool number and the respective inspection/conformity results. The purpose is that in case of non-conformities the amount of affected parts/products/product batches can be limited.

Nevertheless, suppliers are required to ship material on a "first in – first out" (FIFO) basis.

### 3.3.1 Requalification

To maintain validation that PPAP documentation matches with current process practices and capability, suppliers will agree to a regular requalification of all MANN+HUMMEL production parts/ materials. If not otherwise defined in the PRFPP the requalification shall be performed once a year, covering all product characteristics and other applicable requirements. Where appropriate logical product groups can be used. Suppliers are required to have the relevant requalification documentation, incl. components/material from sub-

suppliers available for submittal or review upon MANN+HUMMEL's request.

### 3.3.2 Supplier Self-Audits

In order to prove process effectiveness and to support continuous improvement, MANN+HUMMEL expects suppliers to perform yearly internal process and product audits.

Internal process audits shall cover all processes which might have an impact on the fulfillment of the agreed specifications and requirements. The process audit should be based on the current VDA 6.3 audit approach.

Product audits are required to verify conformity of agreed product characteristics, such as product dimensions, functionality, packaging and labelling, at a defined frequency. The product audit should be based on the current VDA 6.5 audit approach.

### 3.3.3 CQI-Requirements

Unless otherwise agreed in written, suppliers are requested to follow the (for their business/product) applicable AIAG CQI standards:

- CQI-9 Heat Treat System Assessment
- CQI-11 Plating System Assessment
- CQI-12 Coating System Assessment
- CQI-15 Welding System Assessment
- CQI-17 Soldering System Assessment
- CQI-19 Sub-Tier Supplier Management Process Guideline
- CQI-23 Molding System Assessment
- CQI-27 Casting System Assessment

The CQI manuals can be obtained directly from the official AIAG website.

Goals of these standards are the development of a specialized management system, defect prevention, reduction of variation and continuous improvement. Therefore, suppliers, especially for metal and/or plastic parts, are expected to perform annual self-assessments, including job audits, as defined in the relevant CQI manual.

MANN+HUMMEL reserves the right to conduct its own on-site assessment.

### 3.4 Complaint Management

MANN+HUMMEL will immediately notify the supplier if non-conforming products/material are/is found and issue an official complaint. A product/material is non-conforming if deviations to agreed specification or requirements are noticed. Non-conformities can be either detected at the incoming goods inspection, warehouse, production, at MANN+HUMMEL customers or in field. Complaints can be initiated in serial production, as well as in project phase.

Suppliers are requested to immediately implement containment actions, analyze root-causes, introduce suitable corrective actions and validate reestablished process effectiveness. For documentation of all actions, suppliers are requested to use the MANN+HUMMEL 8D/RPS form (**R**apid **P**roblem **S**olving).

#### 3.4.1 Containment Actions

In order to protect MANN+HUMMEL and its customers, the implementation of containment actions within 24 hours is mandatory, such as:

- Complete identification of all potentially affected products/materials, batches and shipments.
- Use of quarantine areas to prevent further use of non-conforming products/material.
- Sorting and/or replacement of suspect products/materials.
- Implementation of 100% inspection and special labeling of further shipments.
- Rework, only if possible and after written authorization of MANN+HUMMEL.
- Check whether similar products or processes are affected.

All non-conforming units are counted toward the supplier's PPM rate, no matter if sorting is done by MANN+HUMMEL, the supplier or a sorting company. If parts are returned to the supplier, the supplier has to document and forward the total number of found non-conforming parts, otherwise the full amount of returned units is PPM relevant. In certain cases, an extrapolation of a defect rate can be applicable.

In case of packaging or labeling issues (e.g. wrong packaging material label/part no., label not according to specification, missing part index, etc.) a complaint is raised, but only the amount of non-conforming packaging units is counted as PPM relevant. In case of mixed parts, the amount of parts with wrong reference is essential. In case of Trading Goods Aftermarket, each separately packed filter element is relevant.

MANN+HUMMEL will not issue a complaint if the supplier received an approved deviation permit (see also chapter "3.8 Technical Change Management") or another equivalent MANN+HUMMEL approval stating that the existing deviations are accepted, prior to shipment. The same rule applies if the supplier proactively notifies a potential quality concern prior to the concern being found by

MANN+HUMMEL and replaces all suspect parts/material before any costs at MANN+HUMMEL side arise.

### 3.4.2 Rapid Problem Solving (8D/RPS)

Suppliers are requested to use the MANN+HUMMEL 8D/RPS form, which the supplier will receive in the event of a claim. In addition, this form is published on the official MANN+HUMMEL website.

The supplier is responsible for keeping records of all problem solving activities and has to respect the following deadlines for reporting:

8D status	Send to MANN+HUMMEL
3D	< 1 working day
6D	< 10 working days
8D	< 60 working days

Extensions of this due dates are only possible in agreement with the claim originator prior to the deadline is reached.

In order to implement suitable corrective actions and avoid reoccurring complaints, MANN+HUMMEL requests a proper root-cause analysis, considering at least following quality tools:

- IS/IS NOT
- Cause and effect / Fishbone diagram
- 5 Why

More details regarding problem solving can be obtained on the official AIAG website, in standards like CQI 20 “Effective Problem Solving Practitioner Guide” and CQI 21 “Effective Problem Solving Leader Guide” as well as through the MANN+HUMMEL RCI toolbox (Root Cause Investigation - MHG-QU-F-0018).

If permanent changes to product or process are required, the MANN+HUMMEL Change Management approach must be followed (see chapter “3.8 Technical Change Management”).

MANN+HUMMEL and its customers reserve the right to verify product and process conformity on-site at the supplier and, if applicable, sub-suppliers. In specific cases, suppliers might be asked to present containment actions on-site at the affected MANN+HUMMEL plant. As soon as all corrective actions are implemented and effectiveness verified by the supplier and MANN+HUMMEL, the claim initiator will approve and close the 8D/RPS.

### 3.4.3 Charge Back / Cost of Poor Quality

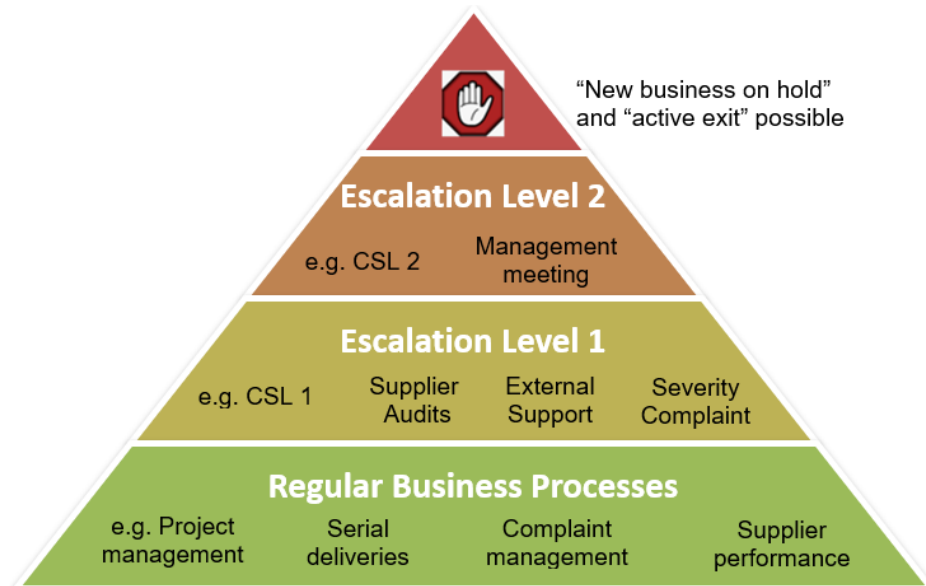
The Supplier accepts financial responsibility for the consequences of non-conforming products and rejected PPAP submissions including, but not limited to, costs incurred for:

- Sorting actions
- Re-working/scrappage (parts, semi-finished products/finished products)
- Production line shutdowns
- Additional internal logistic expenses
- Additional freight charges
- Activities related to analyses (internal and external costs)
- Expenses for initial sampling, when rejected
- Necessary process releases caused by faults
- Expenses for customer claims caused by suppliers
- Customer charges
- Expenses relating to involvement in escalation by customers
- other associated costs to the specific case

As the MANN+HUMMEL chargeback process and the relevant charges for containment activities may differ from site to site, local circumstances have to be respected.

### 3.5 Escalation Levels (EL)

On top of the regular claim handling process, MANN+HUMMEL defined Escalation Levels (EL) which require appropriate actions. The escalation process applies during serial production and can be applied during project and pre-production phase. Different circumstances can lead to an escalation such as unsatisfying claim handling, supplier performance issues (e.g. quality, logistic, communication) or major project delays.



The first escalation step is called EL 1, which includes different measures like CSL 1 (see 3.5.1), audits or external support. If the

supplier is not capable of implementing effective corrective actions within a given timeframe, MANN+ HUMMEL may announce EL 2. Additional actions, on top of the already implemented EL 1 actions, are requested and the escalation is raised to management attention. All costs related to EL 1/2 are at the suppliers' expense. If EL 2 is not clearly leading to a de-escalation, the supplier will be blocked for new business and eventually put on active exit.

In each escalation step, the supplier will be notified in writing about the escalation status and what actions are requested. Escalation Levels effect the suppliers' Vendor Rating System (see chapter 3.6) negatively.

#### 3.5.1 Controlled Shipping Levels (CSL)

CSL requires a supplier to add an additional inspection process for a specific non-conformance on top of the existing measures. This temporary inspection needs to continue as long as the containment actions are fully validated and approved by MANN+HUMMEL.

**CSL 1** is a 100% inspection of the complained criteria in addition to the existing checks defined in the control plan. This temporary quality wall/inspection can be performed by the supplier or a third party service provider separated from the production line.

**CSL 2** is a 200% inspection (100% on top of CSL 1) of the complained criteria in addition to the existing checks defined in the control plan. This temporary quality wall/inspection shall be performed by a third party service provider separated from the production line.

### 3.5.2 TOP-FOCUS Supplier Program

The TOP-FOCUS Supplier Program is considered in case a supplier continuously causes serious problems, e.g.:

- Severe quality and/or delivery issues, which disturb the supply chain to the customer.
- Continues lacks in performance in terms of quality or logistics, also indicated by special status EL 1/2 and/or a B- or C-rating in the VRS.

The announcement of the TOP-FOCUS program is done by sending an official entry letter to the supplier, including a brief guideline about the upcoming measures. The program usually starts with a kick-off meeting at MANN+HUMMEL where the Top-Management of the supplier has to participate in. The purpose is to get a common understanding of the current performance and the gap to what is expected by MANN+HUMMEL. Therefore, MANN+HUMMEL will prepare a kick-off presentation showing the major issues the supplier needs to work on. The supplier is requested to present what has been done so far to overcome these issues and what additional actions are in implementation and planning. Using quality methods such as IS/IS NOT, Pareto, Fishbone, 5 Why are strongly recommended.

During the meeting, MANN+HUMMEL and the supplier will agree on measurable targets which shall be reached within a defined timeframe. Possible targets might be PPM rate, amount of claims, audit result etc. A related action plan shall be agreed with clear milestones.

After kick-off, regular follow-up meetings on expert level are required to track and verify implementation of actions. As soon as all corrective actions have been implemented and confirmed by

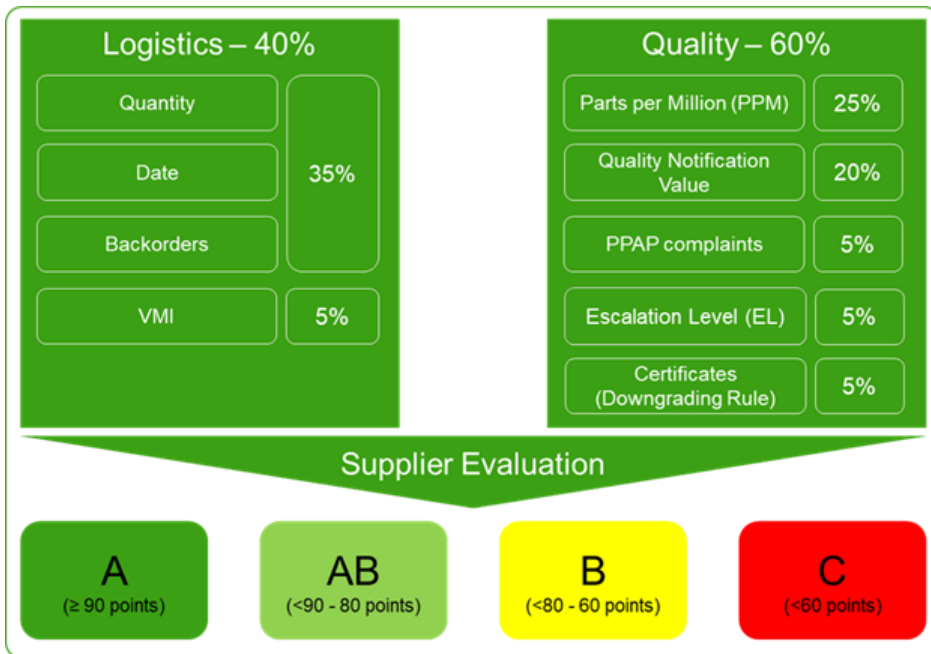
MANN+HUMMEL, the TOP-FOCUS Supplier Program will be closed officially.

For strategic suppliers, the TOP-FOCUS Supplier Program can be used for development reasons as well. The aim is to find and overcome potential risks, which might have a negative impact on the growing business partnership.

### 3.6 Vendor Rating System (VRS)

In order to support the continuous improvement processes, MANN+HUMMEL systematically evaluates the performance of its suppliers with regard to quality and logistics.

Within the first column, MANN+HUMMEL evaluates the suppliers' logistic performance, based on: Quantity, Date, Backorders and potential deviations to Vendor Managed Inventory (VMI), in alignment with VDA 9003 recommendations. Within the second column, MANN+HUMMEL evaluates the suppliers' quality performance, based on: Parts Per Million (PPM), Quality Notifications, PPAP complaints, Escalation Level status and available Management System Certificates. If mandatory certificates are missing, an automatic downgrading applies.



The suppliers' evaluation has a direct impact on the business relationship between MANN+HUMMEL and the supplier, such as:

<b>A</b> (≥ 90 points)	<b>Preferred Supplier</b> <ul style="list-style-type: none"> <li>Unconditionally approved for sourcing</li> <li>Besides 8D/RPS management no further actions required</li> </ul>
<b>AB</b> (<90 - 80 points)	<b>Approved Supplier</b> <ul style="list-style-type: none"> <li>Unconditionally approved for sourcing</li> <li>Besides 8D/RPS management no further actions required</li> <li>Development of their Management System (ISO/IATF) possibly needed</li> </ul>
<b>B</b> (<80 - 60 points)	<b>Approved Supplier</b> <ul style="list-style-type: none"> <li>Room for improvements in quality and/or logistics performance</li> <li>Action plan has to be established and presented on demand to M+H</li> </ul>
<b>C</b> (<60 points)	<b>Blocked Supplier</b> <ul style="list-style-type: none"> <li>New Business on Hold</li> <li>Action plan has to be established in presented within 4 weeks</li> <li>Focus supplier, preferably will be considered for "Top Focus Supplier Meeting", process audits or improvement workshops</li> </ul>

### 3.7 MANN+HUMMEL Audits

MANN+HUMMEL and its customers reserve the right to verify product and process conformance by performing audits at the supplier. In special cases, MANN+HUMMEL might raise the request to audit a sub-supplier.

Reasons for conducting audits are:

- Potential supplier approval or additional business
- Assurance of smooth Start of Production
- Quality issues in project phase or serial production at the supplier or sub-supplier
- Capacity issues or supply chain disruptions
- Evaluation of present or potential product or process risks
- General review of product and process capability

MANN+HUMMEL mainly focuses on process audits, according to VDA 6.3. Product audits follow the VDA 6.5 product audit approach. More details regarding the different audit types and relevant questionnaires are available on the official website of the German Association of the Automotive Industry.

MANN+HUMMEL and the supplier will align on timing and scope of the audit with sufficient notice. The supplier is required to provide access to all production areas, testing facilities, warehouses and other relevant areas during normal business hours, as well as to view all applicable Quality and Health, Safety and Environment related documents, such as: FMEA, Control Plan, instructions, etc. The supplier has the right to limit the extent of the audit as appropriate in order to protect its industrial secrets and know-how. MANN+HUMMEL is under the obligation to treat gained information as confidential, including any information from and in regard to sub-suppliers.

As far as deviations are determined, the supplier is responsible for the implementation of containment and corrective actions within the agreed deadlines and to report the progress to MANN+HUMMEL in the agreed frequency.

### 3.8 Technical Change Management

Recognizing that managing change is of critical importance, MANN+HUMMEL has implemented a corporate-wide Change Management System. The trigger matrix acc. to VDA 2 has to be applied and respected. In case the customer involvement (either information or request of agreement) is required, suppliers must request approval as described below prior to the implementation of changes related to:

- Product design
- Material
- Technical data and/or specification
- Manufacturing and inspection processes
- Processing locations or warehousing
- Delivery quantities
- Sub supplier changes, e.g. switching vendors

Therefore, supplier must notify MANN+HUMMEL minimum one year in advance of any change, using our [Supplier Change Request form](#) (SCR).

The form must include all relevant information. MANN+HUMMEL may approve, reject and/or define conditions of approval to the SCR. The disposition is determined by the nature of the change, the impact on manufacturing and customer requirements, respecting lead times for qualification and validation requirements. Approval of the SCR does not authorize the supplier to ship - it is only the authorization to proceed with coordination of PPAP submission.

Suppliers shall never implement changes and ship such products before receiving full PPAP approval.

In case a supplier has implemented an unauthorized change and MANN+HUMMEL and/or its customers have been negatively impacted, the supplier will be responsible for compensating MANN+HUMMEL for all associated costs.

## 4 Health, Safety & Environment (HSE)

Our position as a leading company for filtration products makes us aware of our social responsibility. Therefore, occupational health,



safety at work, and environmental protection are linked to our policy and FILTER values and are a key element of our strategy. MANN+HUMMEL shelters employees, customers and suppliers from conditions which could influence their health and safety in a negative way.

It is a MANN+HUMMEL standard to act HSE friendly throughout the entire supply chain, from purchasing to disposal. MANN+HUMMEL expects the same from all suppliers, sub-suppliers and other contractors.

The supplier is under the obligation to take precautions for safe, healthy and environmental friendly production processes, working conditions and materials, conforming to the requirements of all valid legal HSE regulations or state regulations. *All products delivered to MANN+HUMMEL must meet all relevant global HSE legal requirements (e.g. REACH, RoHS, etc.) and technical standards valid in the country of production and country of use.*

MANN+HUMMEL prefers suppliers who have implemented certified HSE Management Systems according to ISO 14001 and ISO 45001 or comparable systems. This is in regards to process, surveillance and / or registration audits performed on-site at supplier and sub-supplier locations. MANN+HUMMEL also considers HSE aspects as part of these evaluations.

There are special legal requirements and automotive standards which need to be followed. Minimal requirements related to prohibited, restricted and declarable substances in MANN+HUMMEL products and material declaration forms are specified in MANN+HUMMEL standard [MHN 780 000](#) Material compliance requirements. The supplier is obliged to comply with this standard and check the website for possible updates at least

twice a year". Products that do not fully comply with those requirements must not be supplied to us.

Compliance with this standard does not release the supplier from the responsibilities given in further applicable legislation and specifications.

The MANN+HUMMEL Contractor Guideline (MHG-HS-I-0011) describes our HSE requirements for on-site services. This guideline is binding for all suppliers and external service providers working on our premise and regarding HSE. The guideline is applicable for single activities (e.g. construction activities, installation activities, repair or maintenance services) and frame work contracts like general services (e.g. cleaning service, IT-service, gardening service).

#### **Timber Regulation (EUTR, No 995/2010)**

The Timber Regulation (Directive of the European Union) aims to counter illegal logging and associated trade in timber and timber products.

The EUTR establishes obligations on 'operators' who place timber and timber products on the European market and on 'traders' who buy or sell timber or timber products already on the European market.

## **5 Climate Protection**

MANN+HUMMEL aims to achieve CO<sub>2</sub> neutrality across the entire value chain by 2050. The path to CO<sub>2</sub> neutrality is described in our Carbon Zero Strategy. MANN+HUMMEL expects all suppliers also to commit to the path to climate neutrality.

The suppliers are therefore obliged to:

- Develop and implement a climate protection strategy
- Identify the most important levers for optimizing the Company Carbon Footprint (CCF)
- Initiate corresponding improvements in the company's own production environment and along the supply chain.

MANN+HUMMEL would therefore like to encourage the suppliers to

- Increase the energy efficiency of manufacturing and logistics processes
- Increase the use of renewable energies
- Increase the use of secondary materials / recyclable materials, e.g. for steel, aluminum, plastics, packaging materials
- Apply Life Cycle Analysis (LCA) in the development of parts and components to optimize energy demand during the use phase and recyclability in close coordination with our engineers
- Apply methods and tools to calculate the Product Carbon Footprint (PCF) and identify CO<sub>2</sub> hotspots
- Involve the supply chain to optimize upstream CO<sub>2</sub> emissions

MANN+HUMMEL will take into account the improvements in the supplier evaluation.

## Referenced Documents

<b>Document</b>	<b>Where to find</b>
M+H Supplier Code of Conduct	<a href="#"><u>Website</u></a>
Supplier portal - Registration instructions	<a href="#"><u>Website</u></a>
Supplier portal - Update of certificates and questionnaire	<a href="#"><u>Website</u></a>
Supplier portal - Update of supplier master data	<a href="#"><u>Website</u></a>
MANN+HUMMEL Contractor Guidelines	<a href="#"><u>Website</u></a>
Information about DUNS Number	<a href="#"><u>Website</u></a>
MANN+HUMMEL Terms & Conditions of Purchasing	<a href="#"><u>Website</u></a>
Information about eInvoicing	<a href="#"><u>Website</u></a>
MANN+HUMMEL Supplier Handbook Logistics	<a href="#"><u>Website</u></a>
Supplier Change Request (MHG-OC-F-0007)	<a href="#"><u>Website</u></a>
Information about Vendor Rating System	<a href="#"><u>Website</u></a>
IMDS User Guide	<a href="#"><u>Website</u></a>
MHN 780 000 Material Compliance Requirements	<a href="#"><u>Website</u></a>