GLOBAL SUPPLIER QUALITY MANUAL

(GSQM effective from 17.11.2023)

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0	February 2017	February 2017	Created	S.Kučera	Ch.Billaud
1	12.1.2019	February 2017	Revisions without changes	S.Kučera	P.Helmich
2	21.6.2021	1.7.2021	4.3 - added audit according to VDA 6.3 4.3 – up date FMEA according AIAG and VDA	S. Kučera	M.Makovec
3	13.06.2023	30.07.2023	8. Criteria evaluation of suppliers - updated 10.1 CSR – sustainability requirements	L. Adamcová	M. Makovec
4	09.11.2023	17.11.2023	10.1 CSR – sustainability requirements	A. Komárková	M. Makovec

CONTENT:

1. Terms and Conditions of Purchase

General ITW terms and conditions of purchase you can find here and are available also in language mutation at official ITW web address: **http://www.itw.com/about-itw/suppliers/page/en/supplier-terms-and-conditions/**

All other purchase specification and conditions relevant for ITW PRONOVIA s.r.o. and nominated suppliers will be defined in these documents:
ITW Terms and Conditions of purchase
ConfidentiSality agreement
Tool loan contract – in case of outsourcing tool
Supplier Award Letter – in case that supplier will be nominate at new project including creation of new tool by supplier

1.1 Glossary

APQP	Advanced Product Quality Planning. A structure activity which plans, tracks and reports the development of a process to manufacture a component/material/assembly to meet customer requirements.
AIAG	Automotive Industry Action Group. A North American automotive organization, which publishes standards.
ASN	Advance Shipping Notice
CC	Critical Characteristics
Cpk	The capability index for a stable process.
CR	Cost Recovery
CS	Controlled Shipping.
DC	Designated Characteristics
DFMEA	Design Failure Modes Effect Analysis. A document generated during the design phase that identifies and establishes controls for potential failures in a component/material/assembly.
DLN	**DV**

Dual Launch Netting.	supplier(s).
Joint product assurance activity between ITW and	Design Validation. Testing that assures that a component/ material/ assembly meets the users' requirements.
EDI	Electronic Data Interchange
ELV/IMDS	End-of-Vehicle-Life/International Materials Data System. ELV is a regulatory requirement to eliminate hazardous materials from current production components. IMDS is the data system used to collect and report on the materials that make up components and assemblies.
IATF 16949	Standard 16949 for the automotive industry (International Automotive Task Force, IATF) and guarantees the quality of automotive products, less product diversity and less unnecessary waste within the entire supply chain.
LRA	Launch Readiness Audit. An audit conducted one or more times throughout the APQP process to determine a supplier's state of readiness to start serial production.
OEM	Original Equipment Manufacturer. Applies to automotive corporations, i.e., BMW, Ford, Daimler-Chrysler, GM, Volkswagen, etc.
OIL	Open Issues List. A detailed list of nonconformances or issues to be addressed.
PFD	Process Flow Diagram. A diagram outlining the process for a component
PFMEA	Process Failure Modes Effects Analysis. A team process that identifies and controls potential failures before the product goes into production.
PMA	Production Management Assessment - A score-based audit of the Supplier's implementation and execution of manufacturing standards and processes.
PPAP/VDA2	Production Part Approval Process. A defined process for the validation of new materials and subsequent process changes.
Ppk	The performance index of a process. Normally used as part of the PPAP/VDA2 process.
PV	Production Validation. Testing that assures that the manufacturing process produces product that meets the customers requirements.
QIP	Quality Improvement Plan. A supplier intensive improvement tool used by SQA.
SC	Significant Characteristics
Shall	Use of the word "shall" indicates mandatory requirements.
Should	Use of the word "should" indicates recommended requirements.
SLP	Safe Launch Plan. A supplier's plan to provide increased assurance for products covered by Dual Launch Netting (DLN).
SDE	Supplier Development Engineer. A quality engineer who is primarily responsible for APQP activity and development of a supplier's systems.
SQA	Supplier Quality Assurance. A quality engineer who is primarily responsible for suppliers' quality after the start of production.
TF	Top Focus. A supplier intesive improvement tool used by ITW.
TISAX	

	Trusted Information Security Assessment Exchange – is a rating exchange mechanism for information security in the automotive industry.
VDA 6.3	is a detailed audit process tool developed by the VDA-QMC and the German automotive industry for organizations that provide products or services to the automotive industry.

2. Language

Official language for communication regarding Quality issues with ITW PRONOVIA s.r.o. is English if our customer doesn't require different language. All official communication regarding ISO 9001:2015 or IATF 16949:2016 requirements will be done in English. Documents (including PPAP/VDA2 and APQP documents) may display the native language but must also include an English translation. For this manual, English is the only controlled version.

3. Government regulatory compliance, Environmental policy, REACH and IMDS

3.1 Government regulatory compliance

ITW PRONOVIA s.r.o shall comply with all applicable laws, governmental regulations and rules in the countries in which it operates. ITW PRONOVIA s.r.o. suppliers shall also comply with all applicable governmental regulations in countries in which they operate. These regulations relate to the health and safety of workers, environmental protection, use of toxic and hazardous materials and free trade. Suppliers should recognize and comply with applicable government regulations including those in the country of manufacture as well the country receiving the products and the final country of sale.

Suppliers should be able to estimate greenhouse gas (GHG) emissions, energy and water usage and the generation of wastes from manufacturing, testing and engineering facilities.

Furthermore, ITW PRONOVIA s.r.o supports the Automotive Industry **"Guiding Principles to Enhance Sustainability Performance in the Supply Chain"** and expects that our suppliers will uphold these standards and cascade them down their supply chain. The guidelines describe the automotive industry's minimum expectations towards business ethics, working conditions, human rights, and environmental leadership. ITW PRONOVIA s.r.o shall also comply with the AIAG Global Working Conditions (GWC) Guidance Statement and expects its suppliers and sub-suppliers to adopt and adhere to the GWC principles as referenced in the AIAG Global Working Conditions Guidance Statement. Suppliers shall enforce policies which provide a safe and healthy workplace, protect the environment, promote human rights and provide equal opportunity for employees at all levels of the company, as well as provide access to vehicles which encourage training and development. In addition, suppliers are to engage in sound and ethical business practices in all business dealings.

Suppliers and sub-suppliers shall, upon request, provide evidence of adherence to these and other global requirements. Suppliers who are interested to self-assessment in the area of Corporate Responsibility and Sustainability are encouraged to utilize the "Supplier Sustainability

Self-Assessment", which is a standardized tool for gap analysis and process improvement developed by AIAG member companies.

3.2 Environmental Policy

ITW PRONOVIA s.r.o. promotes strong relationships with its suppliers and the supply chain to minimize Health, Safety and Environmental (HS&E) risks and impacts and prevent business interruption and damage to our reputation. These relationships should also be used to reduce total costs by carefully considering all costs; direct and indirect, associated with the acquisition of goods and services. HS&E performance shall be included in the criteria for the selection and continued use of suppliers and must be assessed as part of the Supplier Quality Assurance (SQA) process. HS&E requirements should be considered similar to any other specification and supplier's conformance to them documented accordingly. ITW PRONOVIA s.r.o. HS&E criteria are described as follows:

1. Customer Requirements – Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)/End-of-Life Vehicle (ELV)/International Material Data System (IMDS) Compliance:
a. Suppliers with chronic non-performance may be nominated for placement on bid suspension and/or new business hold.
b. Suppliers must submit screenshots of their IMDS classification as part of the required PPAP/VDA2 documentation. Without this PPAP/VDA2 process can't be a finished and PSW can't be signed.
2. International Standards - ISO 14001 Certification
a. Highly recommended and expected but not mandatory.

Suppliers are strongly encouraged to evaluate emerging issues that could impact HS&E and Corporate Social Responsibility at **http://aiag.org**. Suppliers shall, upon request, provide evidence of adherence to HS&E legal requirements and the HS&E standards specified in this document.

3.3 REACH

The European Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) entered into force in June 2007. Suppliers shall comply with all applicable REACH requirements that affect the products that they supply to ITW PRONOVIA s.r.o..

ITW PRONOVIA s.r.o. expects that suppliers will have a dialogue with their own supply chain and with regarding all applicable aspects of REACH.

Substances of Very High Concern (SVHC) on the REACH Candidate List (CL) is a specific list of substances that are identified as candidates for the "authorization" requirements of REACH Annex XIV **http://echa.europa.eu/web/guest/candidate-list-table.** Placing a chemical on the SVHC list is an interim step to placing the chemical on the REACH "authorizations" list in Annex XIV. Therefore, ITW PRONOVIA s.r.o. restricts the use of REACH Candidate List (CL) substances in purchased materials and components supplied to ITW PRONOVIA s.r.o., and approval by Engineering for use is necessary. For all newly developed parts, suppliers shall develop suitable substitutes to Candidate List substances. In cases where

the supplier is not able to perform the substitution, they must inform their Engineering contact at ITW PRONOVIA s.r.o. and secure the necessary approval.

Substances listed on REACH Annex XIV must not be used to produce or be present in materials and components supplied to ITW PRONOVIA s.r.o. after the given sunset date. For all new developments as well as for parts being produced after the sunset date, suppliers shall develop suitable substitutes. In cases where the supplier is not able to perform the substitution, they must inform their contact at ITW PRONOVIA s.r.o. and secure the necessary REACH authorization. In this case, suppliers are responsible for securing REACH authorizations for continued use of any materials or preparations containing REACH Annex XIV listed substances and to ensure that ITW's "use activity" is contained in the authorization. Other than certain specific exemptions, continued use of Annex XIV substances after the chemical's sunset date requires that an authorization for that use be granted by the European Chemicals Agency (ECHA). Authorizations under REACH are granted to individual manufacturers, importers and downstream users for specific use activities.

Suppliers located outside the EU/EEA and export products (parts or materials) to ITW PRONOVIA s.r.o. sites within the EU/EEA shall nominate an EU "only representative" to undertake any applicable REACH importer obligations.

3.4 International Material Data System (IMDS) Reporting, Verification & Safety Data Sheets

To ensure compliance with the various legal and customer requirements, ITW PRONOVIA s.r.o. requires its suppliers to report material and substance information for all types of purchased materials, components or items supplied to ITW PRONOVIA s.r.o. All substances and/or materials shall be reported to ITW PRONOVIA s.r.o. using the International Material Data System (IMDS) (**www.mdsystem.com**). Contac person directly for IMDS in ITW PRONOVIA s.r.o.

Suppliers shall submit the required IMDS to ITW PRONOVIA s.r.o. as soon as possible upon award of new business, or in any case, prior to PSW or as part of the PPAP/VDA2. The supplier IMDS information shall be subject to ITW PRONOVIA s.r.o. review and approval. Once approved by ITW PRONOVIA s.r.o., the supplier of the material or component shall indicate such approval in the PPAP/VDA2 documentation supplied to ITW PRONOVIA s.r.o. without IMDS we can't signed PSW and finishe PPAP/VDA2 process. The supplier shall also implement procedures or controls necessary to prevent the introduction of prohibited and restricted substances in materials as specified herein into the final product and/or component supplied to ITW PRONOVIA s.r.o.

Certificates of conformance from raw material suppliers may be used to guarantee the absence of prohibited materials as long as an analysis is made of the entire manufacturing process to ensure that all possible areas of material introduction are included. However, it is highly recommended that final product be subject to a chemical analysis to verify the absence of any prohibited materials.

For materials and mixtures, suppliers shall also provide the ITW PRONOVIA s.r.o. Buyer and associated ITW PRONOVIA s.r.o. Plant locations with Safety Data Sheets (SDS), including hazard information and safe use practices in accordance with the United Nation's Globally Harmonized System (GHS) of

Classification and Labeling of Chemicals and the European Classification, Labeling & Packaging (CLP) regulation.

Any change or update of the legal requirements must prompt a re-check and subsequent update of the data provided to ITW PRONOVIA s.r.o. (IMDS submission, SDS, compliance declaration, etc.).

4. Criteria for Selection of an ITW PRONOVIA s.r.o. Suppliers

4.1 Quality management system requirements

The goal for all Automotive suppliers of materials and services affecting production material is to demonstrate compliance to IATF 16949:2016. Suppliers shall also comply minimum with ISO 9001:2015 Automotive specific requirements defined in the Supplier Quality Manual (GSQM).

Suppliers to ISO 9001:2015 Automotive shall have a plan to achieve conformity to IATF 16949:2016. Unless otherwise specified, conformity may be demonstrated by third party certification to ISO 9001:2015 (at minimum) or IATF 16949:2016. Note that certification to this specification will only be accepted when issued by an IAOB recognized registrar. This is consistent with the expectations of ISO 9001:2015's customers and our business system that complies to IATF 16949:2016 requirements. The scope of the requirement affects subassembly, sequencing, sorting, re-work and calibration services in addition to direct material suppliers.

Suppliers and sub-suppliers who are identified as special process providers are to adhere to the specific requirements as set forth in the AIAG manual.
ISO 9001:2015 Automotive does not have a special policy for IATF 16949:2016 exemption for small businesses. ISO 9001:2015 Automotive expects all of their direct material suppliers to meet the above stated criteria. Additionally, suppliers shall, at minimum, maintain and update their certification status once per year. Suppliers shall immediately communicate any change in certification or status to their respective Purchase Manager and Supplier Development Engineer (SDE or SQA). Suppliers must to send copy of certificates and also after any changest copy of certificates or new information regarding quality management to SDE or SQA. Missing certificates or old certificates can be evaluated as situation with status New Business Hold (NBH). Certification status influenced also supplier evaluation which is done 4 times per year.

ISO 9001:2015 Automotive requires that its suppliers use the latest Automotive Industry Action Group (AIAG) version of the Advanced Product Quality Planning and Control Plan (APQP), Potential Failure Mode and Effects Analysis (FMEA), Measurement System Analysis (MSA), Production Part Approval Process (PPAP/VDA2), Statistical Process Control (SPC) and Machinery FMEA manuals as guidelines for their system development.
For these publications, visit **http://www.aiag.org.**

4.2 New Supplier/Location Qualification

New suppliers who wish to supply to IATF 16949:2016 Automotive shall:

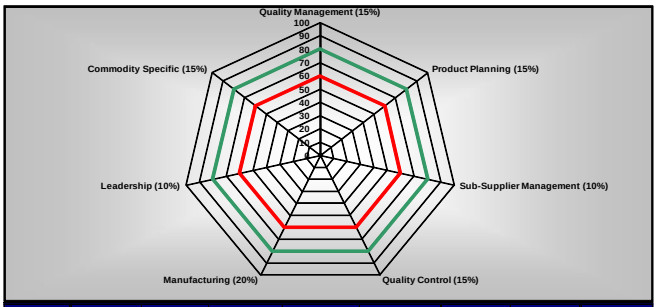
- Demonstrate compliance at a minimum to ISO 9001:2015
- New suppliers who have not completed their registration process may be awarded business on the condition, unless otherwise specified by a customer to ITW PRONOVIA s.r.o., that they successfully pass the New Supplier Assessment Audit (NSA) or VDA 6.3 and have a reasonable plan to meet the GSQM and ISO/IATF 16949:2016 requirements

• Meet all commercial and financial requirements of the relevant ISO 9001:2015 product line (ITW Purchase and Term condition - **http://www.itw.com/about-itw/suppliers/page/en/supplier-terms-and-conditions/**
• Complete the Supplier Questionnaire
• Successfully pass a IATF 16949:2016 New Supplier Assessment Audit with an overall minimum score of 80% including commodity specific elements where specified or VDA 6.3.
• Demonstrate compliance at a minimum to ISO 9001:2015. a. Uncertified locations with more than 12 months of operation experience are eligible for certification to ISO/IATF 16949:2016. Those facilities with less than 12 months of operation will need to contact their registrar regarding qualification for a Letter of Conformance. Suppliers directed for use by a IATF 16949:2016 customer shall also meet the criteria defined by this document. For better understanding and overview regarding process selection, co-operating, APQP and launch process please see map of supplier sourcing process in GSQM

4.3 New Supplier Assessment Criteria

During supplier selection and assessment, IATF 16949:2016 will perform various audits to confirm supplier capability beyond the certification level. The primary focus areas are depicted in NSA Audit (Figure 1) or VDA 6.3. Suppliers that initially do not score acceptably may be allowed to develop action plans and timelines to correct any deficiencies and then request a re-audit to verify implementation of these actions.

Figure 1.



Section (Weight)	Quality Management (15%)	Production Planning (15%)	Sub-Supplier Management (10%)	Quality Control (15%)	Manufacturing (20%)	Leadership (10%)	Commodity Specific (15%)	Total Weighted Score
Score	0	0	0	0	0	0	--	0
Pts Awarded/ Total Pts Avail	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	--	0 / 0

NOTE: FAILURE TO SCORE "2" ON A 'KEY QUESTION' OR SCORING BELOW 60 WITHIN ANY CATEGORY WILL RESULT IN FAILING THE AUDIT.

Summary Remarks - (Reference "SWOT" Worksheet for Details)

Certification / Special Process Assessments	Date:	By Whom:	Result / Remark:

Initial Audit O/A Score / Date			Follow-up Audit O/A Score / Date			Follow-up Audit O/A Score / Date		

Supplier:
Address:
ity / State / Zip:
Commodity: SELECT COMMODITY / SELECT COMMODITY
ITW-EFC SDE:

Audit Date:
Score Valid for 1 Year After "Audit Date" if Not Awarded ITW-EFC
Country:
SELECT COMMODITY / SELECT COMMODITY
ITW-EFC SDE:

	≥ 80	Systems meet or exceed requirements (Minimal Risk)
	≥ 60 < 80	Systems acceptable, but improvement is needed. (Intermediate Risk)
	< 60	Systems unable to meet requirements (High Risk)

Supplier Development Plan Required: ○ YES ○ NO
Development Plan Start Date:

Sign-Off: Senior Supplier Representative (At Supplier)

4.4 Sub-Tier Supplier Management

Suppliers to IATF 16949:2016 Automotive shall have capabilities to manage their respective suppliers (regardless of how directed) including PPAP/VDA2 submission, supplier performance, APQP disciplines and periodic auditing. IATF 16949:2016 Automotive, when deemed necessary, will audit the critical

processes of sub-tier suppliers to assure that proper controls are in place throughout the entire supply stream. Suppliers to ITW PRONOVIA s.r.o. shall ensure they audit and manage critical processes such as heat treating and plating and when directed, use the designated format.
In the case customer follow AIAG shall sub-suppliers provide special process audits:
- CQI - 8 (Layered process audit guideline)
- CQI - 14 (Automotive warranty management)
- CQI – 19 (Sub-tier supplier management process guideline)

Based on technological process sub-supplier which follow AIAG requirements shall provide:
- CQI-9 (Heat Treat)
- CQI-11 (Plating)
- CQI-12 (Coating)
- CQI-15 (Welding)
- CQI - 17 (Soldering)
- CQI - 23 (Molding System Assessment)
- CQI - 27 (Special process: Casting system assessment)
These sub-supplier certifications and/or self-assessments must be sent to responsible SDE or SQA included actions plan on yearly base.

Sub-tier suppliers have a tremendous impact on the quality of the final component. Whether they provide raw materials, services or sub-components their influence is so profound that it is critical for each of ISO 9001:2015's suppliers to have a supplier management system in place. This system shall include a function that tracks and reports the quality and delivery performance of their sub-tier supply base. Suppliers must be able to demonstrate effective management of sub-tier suppliers through documented, corrective actions and verification activities.

4.5 ITW PRONOVIA s.r.o. Approved Heat Treat Suppliers

Due to the critical performance of Heat Treat processes, IATF 16949:2016 has taken steps to control the use of sub-tier heat treat suppliers. IATF 16949:2016 encourages its suppliers to use IATF 16949:2016 approved heat treatment suppliers. In the event that it becomes necessary to use a heat treat supplier that has not been pre-approved by ITW PRONOVIA s.r.o., the supplier must provide the contact name and information, a valid CQI-9 assessment for the heat treat supplier at the time of RFQ, Design Review or during APQP as IATF 16949:2016 reserves the right to audit the proposed supplier. The same assessment criteria will be applied for in-house heat treatment processes.

5. New Product Launch Requirements

5.1 Introduction

New Product Launch initiates at design concept and runs through production of a new component or assembly. When specified by the ISO 9001:2015 SDE or SQA, suppliers shall use the ISO 9001:2015 Supplier Development Management Process when launching new product for ISO 9001:2015 Automotive. The ISO 9001:2015 Automotive New Product Introduction team will define the component priority during the product development cycle. This designation determines the involvement of ISO 9001:2015 Supplier Development in the APQP and launch process of suppliers. All suppliers, regardless of component priority, shall use a disciplined launch and APQP process.
It is essential that suppliers meet the necessary timelines for each project as set forth in form **D027- APQP & PPAP/VDA tracking**. In addition, completeness and accuracy of documentation submitted is vital to ensuring successful PPAP/VDA2 and launch.

5.2 Advanced Product Quality Planning (APQP)

Suppliers should provide APQP status reports for new products with regard to meeting program objectives including quality, cost, performance and timing. ISO 9001:2015 will provide the format, frequency and the required content of these reports. ISO 9001:2015 prefers their suppliers to use the forms included in this document. Suppliers shall use the ISO 9001:2015 Automotive forms available through this manual, and should complete those forms in English. Suppliers who wish to use an alternative format shall contact their Supplier Development Engineer and demonstrate equivalency between the forms before any submission is made.

Suppliers to ISO 9001:2015 are responsible for managing their new product introduction process to the guidelines provided in this document. ISO 9001:2015's APQP process consists of five phases.

APQP-1 This is the "Kick-off" phase. It begins once the supplier has been awarded new business. During this phase, via requirements of IATF 16949:2016 must the supplier define the key milestones, review time lines, follow up and expand on a detailed technical design review of product requirements and establish deliverables and expectations. This activity creates the foundation for the phases that follow.

APQP-2 This phase represents the time during which the supplier completes designs for their tooling, assembly lines/cells, gauging and identifies additional capital equipment required to manufacture the component/material.

APQP-3 This phase starts with the supplier's direction to manufacturers of the tooling, capital equipment, assembly cells and/or gauging and ends with the approval to ship product. The supplier shall collect data required to assure that the manufactured items meet drawing, specification and capacity requirements before approval to ship is given.

APQP-4 This is the Pre-PPAP or Pre-Validation phase. This phase starts with the delivery of the tooling, capital equipment, assembly equipment and/or gauging to the supplier's facility. It ends with the completion of the PPAP/VDA2 production run. The critical activity in this phase is the first parts off tool review by the supplier and subsequent tuning of the process to produce components/material that conform to the drawings and specifications.

APQP-5 This phase is the Product and Process Validation and Launch stage of the process. During this period, the supplier completes and submits a Production Product Approval Process.

As stated previously, regardless of component/material complexity, every supplier is expected to conduct and execute an APQP process. Suppliers who wish to use reporting formats other than those defined in this document shall have written approval from their respective Supplier Development Engineer (SDE or SQA). Determination of Manufacturing Feasibility will be required for every new or modified product design or manufacturing process based on engineering specifications or changes. Additionally, the Manufacturing Feasibility form will be signed by the supplier and product/applications engineer at the end of a Design Review to document consensus on the manufacturability of the component/material that is the subject of that review. **The Supplier Capacity Planning & Commitment form** is to be completed and submitted as part of the **Request for Quotation** and after Design Review. Key IATF 16949:2016 Automotive global APQP events/forms required to be developed and submitted are:

- **Supply Chain Map** – A pictographic layout of all the sub-tier contributors to any given component, or family of components, starting with the raw material supplier and ending with the ISO 9001:2015 using plant(s). This document shall include services that directly affect the production material,

including heat treat, plating or coating, secondary operations, 3rd party warehousing, etc. If distributors are used, the supply chain must include the actual production supplier(s) and service providers. This document is a foundation to the Product Characteristic Matrix (PCM) and will also be used to document the lot traceability from the lowest tier i.e., raw material to the finished product.

- **Save launch plan (SLP) - D_024** is generated in form and is updated as the APQP process progresses. (NOTE: For those components and materials that do not require a formal ISO 9001:2015 Design Review, the supplier shall use the PCM to submit summary process capability results as part of their PPAP/VDA2 package.) This document links designated and high Risk Priority Number (RPN) ranked features with the identified controls. The rating of Severity, Occurrence and Detection, associated with the potential failure mode must be in compliance with AIAG criteria ranking values. Identified Customer Touch Points (CTPs) and Pass Thru-Characteristics (PTCs) must be included on the PCM. Suppliers must submit a Measurement System Analysis (MSA) and demonstrate process capability for all identified Customer Touch Points and Pass Thru-Characteristics. The PCM also drives the identification of sub-tier suppliers who have an impact on these features and documents the controls they have established. Suppliers may use this document in support of the Pre-Production Control Plan; assuring product is manufactured under controlled conditions and meets the drawing and specification requirements. The Safe Launch Plan (SLP) is formulated using this document, when required.

- **Supplier Component / Process Design Review** A formal drawing and validation plan review involving a ISO 9001:2015 cross-functional team and supplier. This is a key event in the APQP process. Suppliers shall conduct an internal design review before attending any reviews held by ISO 9001:2015. It is also beneficial for suppliers to invite representatives from their sub-tier suppliers to join their team for this meeting. The SDE or SQA shall generate an action plan based on the open issues discussed during the review and will follow-up with all responsible parties to assure timely closure of those issues. The Manufacturing Feasibility Sign-Off form will be updated and signed by the supplier and product/applications engineer at the end of a Design Review to document consensus on the manufacturability of the component/material that is the subject of that review.

- **Launch Readiness Audit (LRA) - D028 / VDA 6.3** A score-based audit of the production process status and the supplier's plan to meet new production ramp-up. This score assesses the state of readiness of the supplier's process. All non-conformances are to be documented in an open issues list and require an action plan. Once all open issues have been addressed and a score of 90% has been achieved, the LRA is updated to reflect successful completion.

- **C 022 R@R_Verification** A formalized production capacity study that verifies proper cycle times, quality expectations and yields. For all new components, all suppliers regardless of priority rating are expected to complete and submit a copy of the Run at Rate Verification form when submitting their PPAP/VDA2 package. Data collected during the supplier PPAP/VDA2 run may be used for the initial Run at Rate. All open issues must be documented and tracked to closure.

- **Supplier APQP Overview –** Documents all open issues that arise throughout the APQP process and the respective corrective actions.
- **Safe Launch Plan** (Dual Launch Netting, Pre-Launch Control Plan, etc.) -A joint effort between the supplier and ITW PRONOVIA s.r.o. to have similar Pre-Launch Control Plans at both the shipping and receiving facilities. Safe Launch Plan (SLP) requires the creation of a Pre-Launch Control Plan, an enhancement to the supplier's Production Control Plan. The implementation of an elevated, short-term Quality Inspection process is also required. Safe Launch Plans will be documented using the **Save launch plan (SLP) - D_024** and shall be signed-off by the Supplier, ITW PRONOVIA s.r.o. SDE or and plant SQA representative. Suppliers will be required to submit data to the using plant(s) and/or the

Extra Safe Launch Process (ESLP) team as part of this process. Suppliers must utilize the latest version of the PCM for all pre-production shipments and all serial production shipments until the Safe Launch Plan (SLP) exit criteria has been met. Suppliers shipping parts under the Safe Launch Plan (SLP) shall create a separate label placed on each container showing "SLP" to indicate these parts. (See Figure 3 for an example) Exit criteria for the Safe Launch Plan is shipment of zero defect parts that meet either the defined period of time or number of pieces. Any defect discovered during the SLP period restarts the event to "0" pieces shipped. Please note: suppliers shipping product

Figure 3 – Example of Safe Launch Plane Label

Three key documents also associated with advanced quality planning are the Process Flow Diagram (PFD), PFMEA, and Control Plan. ITW PRONOVIA s.r.o. has definitive expectations for these documents that suppliers shall comply with.

Process Flow Diagram (PFD)

• Shall define the entire process flow starting with Receiving Inspection and finishing with Packaging and Shipping.
• Shall include any sub-tier, or outside, suppliers, along with the names of those suppliers.
• Shall include machine numbers or unique identifiers that reflect what has been approved as part of the process. Suppliers shall identify those operations linked to the manufacturing of features identified by special characteristics.

Process Potential Failure Modes & Effects Analysis (PFMEA)

Unless otherwise specified, suppliers shall:
• Use the latest AIAG +VDA Potential Failure Mode & Effects Analysis (PFMEA) manual as the basis for creating this document.
• Shall follow the flow established in Process Flow Diagram.
• Failure modes shall include designated characteristics from the ITW PRONOVIA s.r.o. drawing in addition to the process and tooling based items.
• Suppliers shall have a process in place to report on their highest RPN numbers. This report may be in the form of a Pareto chart, displaying the RPNs from highest to lowest. This system shall include documentation of recommended actions and verification of their implementation.
• The PFMEA shall be used as a continuous improvement tool. Suppliers shall be able to document continuous improvement efforts derived from RPN rankings below their target value for improvement actions. Suppliers can prioritize their activities based on Number of RPNs vs. current performance.
• The PFMEA should show a direct linkage from the DFMEA. DFMEA severity ratings should carry over to the PFMEA as well as the marking of Critical and Significant Characteristics.

Control Plan

• The Control Plan shall appropriately reflect the same steps and flow established by the Process Flow diagram and PFMEA.
• The Control Plan shall include all features, characteristics and notes with special consideration to those designated as special characteristics. Each product line and/or region uses a unique set of special characteristics. Please see your SDE or SQAfor those that affect your components. If a supplier ships to multiple regions or product lines, contact your SDE or SQA for each product line/region to get all of the special characteristics affecting the components/materials your company supplies.
• Annual revalidation must be included as an item on the Control Plan and suppliers will specify features, characteristics and notes that are to be included in the annual revalidation package.
• The control plan shall include the Safe Launch Plan (SLP) controls when used based upon the Product Characteristic Matrix (PCM).
• Refer to the PPAP/VDA2 Checklist as reference for other requirements relating to the Control Plan (i.e., sampling to be quantity based, not time based).

5.3 Packaging and Labeling

ITW PRONOVIA s.r.o. and suppliers shall agree upon the packaging plan as part of the APQP process. Suppliers providing product to multiple ITW PRONOVIA s.r.o. operating units on a global scale shall work with each location to assure the packaging is sufficiently robust to withstand shipment by land, air, sea, etc. and arrive on time without damage, to include all elements of the packaging such as external containers, racks, supports, internal separators, dunnage, pallets, wrapping, returnable's, etc. Please note: APQP/PPAP/VDA2 approval does not absolve the supplier of responsibility to improve packaging if it is not fit for its intended purpose.

ITW PRONOVIA s.r.o. expects suppliers to conduct periodic dock audits on packaged materials. Evidence of these audits shall be retained with other lot inspection documentation.

• Suppliers, regardless of the manufacturing location, shipping to a ITW PRONOVIA s.r.o. facility shall meet All ITW PRONOVIA s.r.o. requirements.

5.4 Material Certification Requirements and Control in Production

Material certification must represent the lot of material that is shipped. Material Certifications must flow through and be available throughout the entire supply chain.

For product containing chemicals and resins that include UV, heat resistant or other additives effecting performance of final product, an elemental analysis is required as part of the material certification (example, FTIR, EDX, etc). This is required to ensure each batch matches the required formulation.

The content of material certification is defined and approved as part of PPAP/VDA2 submission. This content must be carried forward for all subsequent material certifications required during serial production.

Suppliers shall maintain a copy of all procured raw material certifications, which must be readily retrievable and shall include material specification, description, alloy or resin and condition. The supplier shall maintain the mill certification for procured metallic material that shall include physical properties, chemical analysis and lot numbers. At a minimum, certification must be less than one year old. Material certification must be aviale pre every batch and must be submitted to customer after request.

Beyond material certification requirements, it is important that error proofing and visual aids are employed to ensure the correct material is used during serial production. PRONOVIA s.r.o. ITW guidelines are to be applied during the APQP process to establish proper controls in the process. It is the supplier's responsibility to ensure ongoing adherence and control during production.

5.5 Lot Traceability

All suppliers to ITW PRONOVIA s.r.o. shall have an effective lot of definition and traceability procedure. The shipper number will be linked to the lot traceability procedure in such a way that the delivered product, unless otherwise approved in writing by the ITW PRONOVIA s.r.o. Supplier Development Engineer, can be traced back to the raw material. The maximum size of a lot shall consist of one shift or eight hours of production, whichever is smaller. For Bulk Processes, lot size may be defined by quantity and vary based on process/production equipment. ITW PRONOVIA s.r.o. reserves the right to specify a maximum batch size. The lot definition shall reflect all significant processes influencing the component/material with the shipping lot number reflecting the last value-added operation. Suppliers shall ensure that their lot traceability system maintains its integrity throughout the entire extended supply chain, including raw material and purchased components/products.

The lifeline of many components begins and ends within the facility of the supplier. There are those components, however, that require processing by outside companies to finish the process stream. These may include heat treat, coining, grinding, coating and other various processes.

If the original lot was batch processed through the different secondary processes, there would be no need to change the original lot number. However, if the batch is split at a secondary processor, then the lot number for each of the batches should be unique.

Once manufacturing/assembly begins, a lot number is changed if:
• One shift of production or eight hours is reached.
• A new lot of raw material is being used.
• The components undergo another value-added process and the original lot is divided during processing.
• The lot number changes on any one of the components being used.
When required, the supplier may need to implement:
• Serialized (maintains a one-to-one relationship between the finished goods' serial number and the components' serial number) lot traceability; or
• Specific Lot (maintains a one-to-one relationship between the finished good serial number and the components' lot numbers) traceability for certain programs. - To clarify the difference between this and general traceability, consider a supplier who stamps a given component. After stamping, two fasteners are then pressed into the stamping. General traceability is where there is no lot traceability between the stamped component and the assembled parts. Specific traceability would be where the lot numbers of the assembled components are traceable through the lot number of the stamped component.

Post-delivery activities
ITW PRONOVIA s.r.o. has specific requirements
As ITW PRONOVIA s.r.o. plant is not required to perform any incoming tests nor inspection, Supplier is obligated to furnish following specific documents to declare conformity of the delivered products:

1. Material attest Supplier shall attach material attest to each batch. This attest must demonstrate that the material used for parts production is according to the specification.
2. Surface treatment protocol - In case that parts are submitted to the surface treatment supplier must add the surface treatment quality test protocol to the documentation.
3. Measurement protocol - Measurement protocol shall be attached to the documentation. It must contain following:
    - Measured drawing dimensions (based on control plan)
    - Visual control (for example: deburring, corrosion, surface treatment)
    - Other measured dimensions (can be requested based on the claims and problems caused by related supplied part).
    - Declaration of completeness and quality of delivery

Supplier shall declare that the delivery is complete and all parts in delivery are according to the specifications. Any deviation from above mentioned documentation, must be agreed by ITW PRONOVIA s.r.o. plant

If ITW PRONOVIA s.r.o.agrees, these documents may also be sent to the ITW PRONOVIA s.r.o. responsible representative in e-form / E-form of above mentioned documents is applicable.

For safety/critical parts, the required retention time for Lot Traceability records are during the whole life cycle + 15 years if it is not clearly specified by customer differently.

5.6 Production Part Approval Process (PPAP/VDA2)

Suppliers shall ensure that PPAP/VDA2 documentation and sample submissions are in accordance with the requirements of the latest edition of the Automotive Industry Action Group (AIAG) PPAP/VDA2 Manual. Suppliers shall only submit PPAP/VDA2 packages for production-released drawings and a copy of this drawing shall be included in the submission package. Each supplier is responsible for meeting all these requirements before submission to ITW PRONOVIA s.r.o., including obtaining ITW PRONOVIA s.r.o. approvals for any change requests.

ITW PRONOVIA s.r.o. has established a global PPAP/VDA2 validation requirement that further defines submission levels, including what the supplier submits and/or retains (see Figure 4). Suppliers should use the forms identified in the AIAG PPAP/VDA2 manual. Suppliers may use their forms only if they are equivalent to the AIAG forms and if they have the written approval of the ITW PRONOVIA s.r.o. SDEor SQA. ITW PRONOVIA s.r.o. may require suppliers to submit a validation package that contains additional documents and forms beyond those required by AIAG. In addition, the supplier is responsible for all sub-tier PPAP/VDA2 submissions and approvals, including those suppliers ITW PRONOVIA s.r.o. has directed for use.

For all new components and materials, suppliers shall submit with the validation package a copy of the ELV/IMDS Reporting verification and screenshot from the IMDS system showing acceptance. This form verifies the submission of End-of-Life Vehicle component content. If this document is not submitted, ITW PRONOVIA s.r.o. will not approve the PPAP/VDA2 submission.

Suppliers of plastic components to ITW PRONOVIA s.r.o. are required to comply with regrind levels specified on the component's drawing. Components produced throughout the APQP process, including DV, PV, and PPAP/VDA2, shall be representative of the maximum allowable regrind and confirmed by certified laboratory analysis. Additionally, suppliers are responsible to assure that the component's PFMEA and Control Plan specifically address and control this requirement.

ITW PRONOVIA s.r.o. will determine the Level of PPAP/VDA2 submission and any special requirements if applicable. Supplier must submit PPAPs/VDA2 latest till 4 weeks period after request if not than must request from SDEor SQA new extension plan approval for PPAP/VDA2 submission. SDE or SQA has next 4 weeks for reweaving and comments of PPAP/VDA2 documentations. Than supplier must dune all necessary correction actions till 2 weeks and again submit for approval. End PPAP/VDA2 process are after signed PSWs from both sides.

When applicable, suppliers shall include in the PPAP/VDA2 submission the Engineering Specification (ES) test plan and the ES test results. An approved/accredited laboratory shall conduct the ES tests.

Standard catalog purchased components that do not go through the PPAP/VDA2 process based on a product line decision, are to be considered as approved components

Figure 4 – Requirements for PPAP submission

PPAP Submission Requirements

ITW Automotive
Air Flow Management

AIAG PPAP Manual								
TRW Requirement		Production Part Approval Process		PPAP Submission Level				
No.	TRW Form No.	No.	Document	1	2	3	4	5
0	IMDS	0	IMDS	Mandatory for every level				
1	Ref AIAG PPAP Manual	13	Part Submission Warrant	S	S	S	S	R
2	--	1	Design Records (Drawings, Specifications)	R	S	S	*	R
3	Product Line Specific, GSQM Section 2.C.2	2	Change Documents, if any	R	S	S	*	R
4	--	3	Customer Engineering Approval Documents, if any	R	R	S	*	R
5	Ref AIAG FMEA Manual	4	Design FMEA	R	R	S	*	R
6	--	5	Process Flow Diagram	R	R	S	*	R
7	Ref AIAG FMEA Manual	6	Process FMEA	R	R	S	*	R
8	Ref AIAG PPAP Manual	7	Dimensional Results	R	S	S	*	R
9	Ref AIAG PPAP Manual	8	Material & Performance Test Results	R	S	S	*	R
10	submit on Product Characteristics Matrix	9	Initial Process Study	R	R	S	*	R
11	Ref AIAG MSA Manual	10	Measurement Systems Analysis (Gage R&R)	R	R	S	*	R
12	--	11	Qualified Laboratory Documentation	R	S	S	*	R
13	Ref AIAG APQP Manual	12	Control Plan	R	R	S	*	R
14	Ref AIAG PPAP Manual	14	Appearance Approval Report, if applicable	S	S	S	*	R
15	Ref AIAG PPAP Manual	15	Bulk Materials Requirement Checklist (bulk matl PPAP only)	R	R	R	*	R
16	--	16	Sample Product	R	S	S	*	R
17	--	17	Master Sample	R	R	R	*	R
18	--	18	Checking Aids	R	R	R	*	R
19	--	19	Records of Compliance with Customer Specific Requirements	R	R	S	*	R
	Additional TRW PPAP Requirements							
20	D_020_4_03	--	Safe Launch Plan	*	*	*	*	*
21	--	--	Packaging Plan and Sample Label	R	R	S	*	R
22	D_020_4_16	--	Manufacturing Feasibility Sign-off	*	*	*	*	*
23	D_020_4_14	--	Capacity Verification	*	*	*	*	*
24	Ref AIAG PPAP Manual	--	Sub – contractor PPAP status (Supplier Part Warrant Letter(s))	S	S	S	S	R
25	Copy of certification	--	Certification of Review	*	*	S	S	R

R= Retain at supplier
S= Submit to customer

*	The supplier shall retain at appropriate location and after submit to customer upon request

Shaded boxes are required in the submitted with the PPAP package.

5.7 Special Characteristics

At a minimum, suppliers shall implement process controls for Special Characteristics as designated on ITW PRONOVIA s.r.o. drawings. Additional characteristics deemed germane to be 'predictors of process stability and feedback' should also be identified in the supplier's Control Plan. These relate to product safety, government regulation, product performance and the ability to assemble product and/or customer satisfaction features. These are identified by various symbols requiring specific levels of special controls and process capability.

Unless otherwise specified by a product line and/or region for characteristics/features designated as significant or critical during launch, the supplier must calculate and report the process capability as Ppk. For those characteristics/features showing a Ppk of less than 1.67, the supplier must create an action plan that defines the containment and process improvements. Process capability can be conducted with both variable and attribute data. The minimum acceptable sample size for variable data is 100 pieces and for attribute, 300 pieces. Containment must effectively separate non-conforming material from the population. Containment, generally either 100% sorting or some form of mistake proofing, must continue until such time that the process Cpk demonstrates capability greater than or equal to 1.33 unless otherwise specified by a product line designation.

Special focus will be given by ITW PRONOVIA s.r.o. to evaluate the capability of all Significant & Critical characteristics and the validity of studies. In order to ensure this, capability reports must include a

histogram, control charts and a normality test. Please refer to the latest edition AIAG Manual on Statistical Process Control (SPC) as part of PPAP/VDA2 documentations for ITW PRONOVIA s.r.o. approval.

5.8 Sub-Tier Contractor PPAP/VDA2 Status and Evidence

Evidence of sub-tier PPAP/VDA2 completion and acceptance is required for all sub-tier components and at a minimum, must include the PSW. In addition to the PSW, any sub-tier PPAP/VDA2 that influences a designated characteristic must also include at minimum, Material Certification (includes bulk material where applicable), PFMEA, MSA Study, Control Plan, Capability Study and Safe Launch Plan (SLP).

In addition, this information may be requested for components without designated characteristics at the ITW PRONOVIA s.r.o. SDE's or SQA discretion. PPAP/VDA2 elements will be rejected where this information is missing or incorrect.

5.9 Prototype Fabrication, Quality Evaluation, Pre-Production Process Changes

For the fabrication of prototype or pre-production parts, suppliers shall imitate the planned production process as closely as possible. For these prototypes, ITW PRONOVIA s.r.o. may require that suppliers provide material, dimensional, performance or process data. If the prototype and production suppliers are different, the prototype supplier shall share with the production supplier the process knowledge gathered in prototype fabrication. Proprietary information may be withheld by prior agreement with ITW PRONOVIA s.r.o..

The process established to produce parts for validation must not change without prior, written agreement and acceptance from ITW PRONOVIA s.r.o.. These changes may include but are not limited to:

- Changes to outside or sub-tier suppliers
- Addition /deletion of capital equipment
- Addition / deletion of tooling and/or gages
- Changes to manufacturing methodology
- Changes to internal secondary processing

Suppliers of prototype parts, when required, shall respond to material concerns.

5.10 Supplier Request for Change

Suppliers shall submit a written request via email to the appropriate Purchase Manager or SDE or SQA with copies to all ITW PRONOVIA s.r.o. facilities affected by the proposed product or process change. Where applicable, suppliers are also expected to submit these change requests via any product line specific online change management system or change management email account. In addition, suppliers shall ensure they receive written acknowledgement of receipt from ITW PRONOVIA s.r.o. and obtain written approval from ITW PRONOVIA s.r.o. prior to implementing the change. This includes changes at sub-suppliers and throughout the supply chain. Additionally, suppliers shall submit a written request for all items acc. to AIAG PPAP/VDA2 Manual. Suppliers are also required to submit all supporting validation data including necessary dimensional reports, capability studies, performance testing, before/after process parameters, updated APQP documentation (PFMEA/Control Plan) and a detailed timeline demonstrating proper change control that identifies necessary safety stock/bank requirements including timing for ITW/Customer validation timing and designated resources to manage the change. Supplier shall not submit change requests within 90 days of SOP.

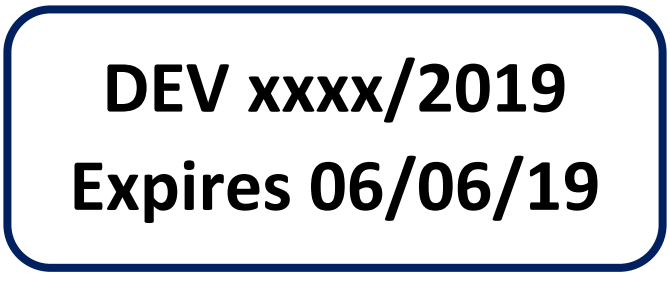
In the case of a "Tool Move" (defined as ITW PRONOVIA s.r.o. product changing its manufacturing footprint to a different facility; new or existing) which includes a tool or equipment move and/or new tooling or equipment, ITW reserves the right to chargeback the Supplier for any internal and external costs associated with the "Tool Move" such as but not limited to Product Validation, New Supplier

Assessment, Run at Rate, Launch Readiness Audit, PPAP /VDA2 Approval, ITW PRONOVIA s.r.o. SDE or SQA travel and support costs, etc. ITW PRONOVIA s.r.o. reserves the right to assign these extraordinary activities to a 3rd party for project coordination, on-site visits and PPAP/VDA2 approvals and to chargeback the Supplier having initiated the tool move change for these costs.

ITW PRONOVIA s.r.o. must act in accordance with ALL customer requirements for change notification and as such, ITW PRONOVIA s.r.o. expects the supply base to comply also. Change approval may take an extended period when ITW PRONOVIA s.r.o. customer approval is required. The testing and/or customer qualification process begins when the supplier provides sample parts to meet the ITW PRONOVIA s.r.o. validation plan. Changes shall not be implemented prior to the receipt of written approval from ITW PRONOVIA s.r.o.. VERBAL REQUESTS WILL NOT BE ACCEPTED. Notification requirements can be, similar to Table 3.1 of AIAG PPAP/VDA2 Manual, 4th edition.

Consequences of non-communicated or unauthorized process changes at the supplier's manufacturing facility or any sub-supplier facility could result in any or all of following actions:
1. Written notification from ITW PRONOVIA s.r.o. to the supplier's Registrar or from ITW PRONOVIA s.r.o. to the supplier requesting they notify their registrar of the non-conformance
2. Supplier Bid List status change to fix New Business Hold (NBH) for a period of 3 – 6 months depending on root cause of non-conformance
3. Issuance of Critical A concern and immediate third-party containment (controlled shipment) of affected component/product
4. Potential request for independent, third party audit of affected supply chain including ALL affected sub-tier suppliers involved
Reinstatement of supplier to 'Acceptable' status will depend on suppliers' ability to develop effective preventative actions and verification by ITW PRONOVIA s.r.o..
Authorization to ship production material shall be given after the change is communicated through a signed Part Submission Warrant (PSW) after ITW PRONOVIA s.r.o. has approved the PPAP/VDA2 for the requested change and that change is coordinated through the using ITW PRONOVIA s.r.o. facility or facilities.
Off-Line rework, not included in the original Control Plan, is considered a process change and suppliers shall obtain ITW PRONOVIA s.r.o. approval for it as specified above. Rework shall be supported by written operating and inspection instructions. The inspection instructions shall be consistent with an updated production process control plan. ITW PRONOVIA s.r.o. will require special identification and segregation of the reworked product.
Suppliers shall request, in writing, a deviation (or concession) before shipping non-conforming material to ITW PRONOVIA s.r.o. . A plan to return to normal production and the time required to do so shall be submitted at same time as the written request. Material shipped under an approved deviation shall be labeled with the Deviation Number and its expiration date. For an example, see Figure 5.

Figure 5. Example of a Deviation Label



6. Concern management

Upon receiving a ITW PRONOVIA s.r.o. concern for a quality, launch or delivery issue or non-conformance the supplier is obliged to conduct an analysis of the damage parts and provide the results as 4D- and/or 8D-Report. including quality tools Ishikawa, 3x5Why.

The response times may not exceed the following deadlines:
- 24 hours for setting up a team and understanding the problem.
- 2 working days for the introduction and execution of emergency procedures.
- 10 working days for analysis of the problem and for definition of permanent containment action.
- 30 working days for implementation of the measures as defined and for completion of the 8D report.

The quality and punctual submission of the 8D reports will be included in and thus influence the annual supplier assessment

Highest priority in case of a damage has the supply of the assembly lines with OK parts. To achieve this, possible containment actions shall be introduced:
-- sampling test;
-- rework (only if agreed by ITW PRONOVIA s.r.o. in advance)
-- sorting action;
-- replacement/ scrapping of components.
The test specification for the sorting measure shall be coordinated with the supplier.

When alert or claim is going to be critical in matter to risk ITW PRONOVIA s.r.o.or OEM production, ITW PRONOVIA s.r.o. Escalation procedure is mandatory to be applied.

In any case of harms originated and connected with an issue, ITW PRONOVIA s.r.o. reserves the right to reimburse all necessary costs according to the Compensation list in Terms and Conditions.

Concerns are raised at differing levels reflecting the severity of the issue.

Severity	Severity definitions
A	– Is raised by customer – Causes ITW line downtime in excess of (10) minits. – Affect a defined critical or significant characteristic
B	-Component defect does not conform to the drawing specification and cannot be used in production - defect was found out during production process in ITW
C	-Component defect does not conform to the drawing specification and requires rework or deviation to use in production.
D	– Is for informational purposes only.

Upon receiving an “A-Critical” concern from ITW PRONOVIA s.r.o., unless otherwise specified, suppliers shall complete a detailed systemic review of the root cause, such as 3x5 Why. This analysis shall consider the 3 root causes of the issue, the technical root cause, the detection system root cause and the root cause of the quality system.

Suppliers shall immediately notify all impacted ITW PRONOVIA s.r.o. locations upon discovery that they might have shipped nonconforming or suspect product to ITW PRONOVIA s.r.o.. Notification shall go to the Quality Manager or in their absence, the Purchase Manager of the ITW PRONOVIA s.r.o. facility. The suppliers shall notify all ITW PRONOVIA s.r.o. facilities receiving the same or similar affected product.

ITW PRONOVIA s.r.o. retains ownership rights of all material returned for analysis. If destructive testing is required to determine root cause, ITW PRONOVIA s.r.o. shall be notified prior to the testing process. The destruction of any part returned for analysis without written permission from ITW PRONOVIA s.r.o. is strictly forbidden. Material associated with a concern, wherein responsibility of failure is indeterminate or disputed, should be returned to ITW PRONOVIA s.r.o. for retention unless otherwise agreed in writing.

Suppliers are responsible for all costs and expenses created as a result of any defect on the material supplied and/or late delivery and ITW PRONOVIA s.r.o. will recover these costs from the responsible supplier.

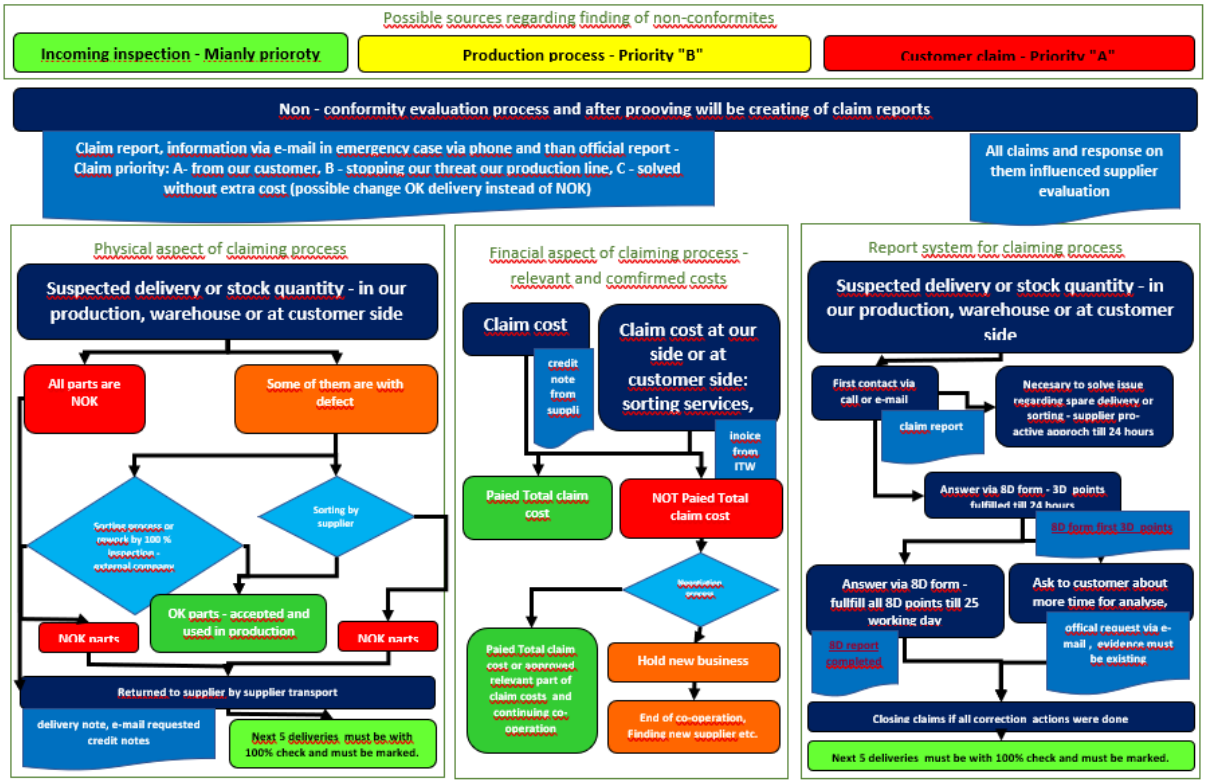
The Concern Management Process involves five key processes:

1. Identification and definition of problem (ITW PRONOVIA s.r.o.) 2. Reporting and notification process (ITW PRONOVIA s.r.o.) 3. Containment response and corrective action (Supplier) 4. PPM defects and rate of occurrence (ITW PRONOVIA s.r.o.) 5. Supplier Charge back for quality and/or delivery related expenses (ITW PRONOVIA s.r.o.)

Each step lists required and recommended elements for each procedure. Unless otherwise noted, the procedures that follow will be used by ITW PRONOVIA s.r.o.. Suppliers are obliged to use or develop their own systems that comply with ITW’s materials rejection and corrective actions procedures.

Each step lists required and recommended elements for each procedure. Unless otherwise noted, the procedures that follow will be used by ITW PRONOVIA s.r.o.. Suppliers are obliged to use or develop their own systems that comply with ITW’s materials rejection and corrective actions procedures.

Claiming escalation process – Figure 6



1. Identification and Definition of Problem - ITW PRONOVIA s.r.o.
   A. Shall contain sufficient information to ensure understanding by the supplier of the problem
   B. Shall contain sufficient information to ensure proper and quick containment by supplier and user plant (Information may include lot number, traceability or quantity)
   C. Shall have representative samples available for review and supplier evaluation
   D. Shall have defined severity and/or classification of problems
   E. Shall contain quantitative information to define the extent of the problem
   F. Shall have a method to distinguish “fit and function” (critical) issues from “nonfunctional” (nuisance) issues

2. Reporting and Notification Process – ITW PRONOVIA s.r.o.
   A. Shall include proper identification and definition of problem
   B. Shall use evidenc for reporting and status tracking
   C. Shall have established time frame for reporting and notification
   D. Shall include initiator or contact person at the issuing plant
   E. Shall ensure supplier acknowledgment of receipt of notice or report
   F. Shall identify status of material and current disposition
   G. Shall request a return material authorization (RMA), if applicable
   H. Should identify status of material and current disposition
   I. Should include the request for return material authorization (RMA), if applicable

3. Response and Corrective Action - Supplier
   A. Shall have well-defined procedure for corrective action and response
   B. Shall have well-defined time frame for corrective action and response
   C. Shall have formal approval, closure and tracking process

D. Shall utilize 8D Process or a similar problem resolution procedure for documenting and verifying corrective action

E. Shall utilize tracking and maintaining corrective actions and responses

F. Shall submit responses and corrective actions to the appropriate ITW PRONOVIA s.r.o. facility on or before the response required date

G. Shall define specific steps for disposition of material

H. Shall have a method or process for rescinding invalid or incorrect corrective action requests which are not needed, were generated in error by ITW PRONOVIA s.r.o. or where 8D or a similar problem resolution process is not needed

4. PPM Defect and Rate of Occurrence – ITW PRONOVIA s.r.o.

A. The supplier shall acknowledge receipt of returned parts within the time frame dictated by the using plant

B. The Supplier, within the time frame dictated by the using plant, as part of the 8D or a similar problem-resolution process must supply to using plant, at minimum, the following information:

- Segregation/containment actions
- Sort results
- Rework plan
- Interim actions
- Root causes

C. PPM will include the following:

- Quantity of VERIFIED nonconforming production parts
- Quantity reworked and used (on-site or off-site) without a prior authorized deviation
- Initial PPM will include total quantity of suspect parts returned to supplier. This amount will be adjusted later to reflect actual defect quantity if all adjustment policy criteria are met.

D. PPM will not include the following:

- Parts that have not been PPAP/VDA approved and/or prototypes
- Parts used under a prior authorized deviation

E. Bulk Rejections - Guidelines

- Rules for Bulk rejections refer to the following product groups: a. Raw materials (such as steel, aluminum, magnesium, plastic resin and brake fluid) and Consumables (such as oils and lubricants) b. In addition, the bulk rejection rules should be applied to components for the following reject categories; labeling (mis-labeling of a box/reel or a number of boxes in a lot) and contamination (contamination of a box or a number of boxes in a lot)

F. Bulk Rejection Rules

- First Occurrence – Bulk rejection shall be counted as one (1) quantity nonconformance accompanied by a well-documented concern report
- Second Occurrence – Bulk reject actual number of defects, not rejects, shall be included in the PPM calculation and supplier to be placed on Controlled Shipping Level I
- Third Occurrence – Bulk rejection; all parts shall be counted against the supplier, included in the PPM calculation and supplier is placed on Controlled Shipping Level II

5. Procedure for Supplier Charge Backs for Quality Related Expenses - ITW PRONOVIA s.r.o.

A. Shall include detailed explanation of components for the charges including hours, rework, cause and cost
B. Shall capture all associated costs

6.1 Finacial aspect of claiming process - relevant and comfirmed costs

ITW PRONOVIA s.r.o. has been committed to provide best in class products and services to our customers for a long time. ITW PRONOVIA s.r.o. counts on you as a partner which technical abilities, quality performance and efficiency allow us to meet our customer's expectations.

In case of issue impacting customer chain you shall bear liability for all direct and indirect financial consequences (including costs resulting from a claim detected by the end customer) as well as the consequences of the defective product delivered.

Below you can see the table of consequences connected to such issues.

Type of charge	Amount of the fee in €
Logistic or quality claim	300
Repeated logistic or quality claim	600
Warranty claim	600
Customer claim	600
Administrative charges from our customers	100% of customer charges related to the supplier

In case of sorting under ITW PRONOVIA s.r.o. organisation, please, see necessary rates:

Type of charge	Amount of the fee in €
Sorting costs (standard rate)	50 (per hour)
Weekend, night and overtime sorting costs	+25 % of standard rate
Quarantine area (Sperrlager, Blocking area, Red zone) *	50 (per day, per position)
Storage position in Warehouse	50 (per day, per position)

- *Quarantine area: ITW PRONOVIA s.r.o. can only provide 14 days without any charge, after this period Supplier needs to rent the area

A preliminary information will be sent to your team to inform you about the costs according to the claim number.

6.2 Escalation process

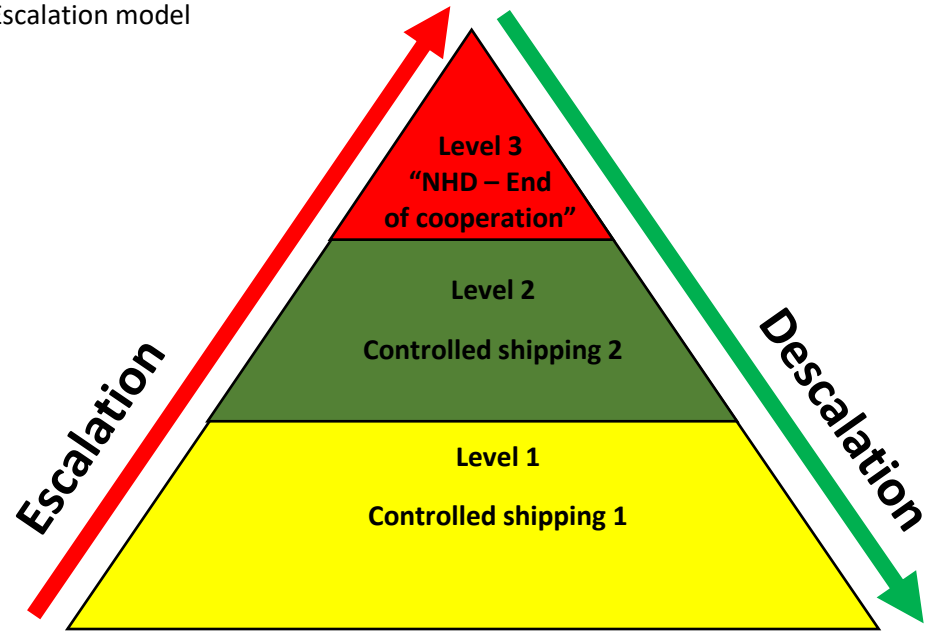
Escalation process takes in place whenever there is an issue which causes serious problems at ITW PRONOVIA s.r.o. production plant or OEM customer.

There are four levels of escalation

- Level 0 – Daily business level with no problems
    - Including quality alerts and claims solving immediately
    - Expectable cooperation level (reactivity on time, pro-active, pro-customer solving)
- Level 1 – Supplier has a problem
    - Stoppage of ITW PRONOVIA s.r.o. line for a time needed to change supplier batch.
    - Supplier is in delay with claim solving
    - Supplier is not communicating with ITW PRONOVIA s.r.o. Supplier Quality Assurance representative (SQA)
- Level 2 – There is a serious issue in supplier's production process
    - Repeated issue, countermeasures introduced by supplier were not effective
    - Countermeasures were not properly validated by the supplier
    - Supplier is not communicating with ITW PRONOVIA s.r.o. SQA
    - There is no feedback for production securisation
    - ITW PRONOVIA s.r.o. line stopped for more than hour, risk of special freights to OEM customer
- Level 3 – The issue is very critical, supplier is not able to protect ITW PRONOVIA s.r.o. as well as OEM customer
    - Supplier failed in problem solving
    - Problem is constantly repeating
    - OK deliveries are not ensured for a long-time period
    - ITW PRONOVIA s.r.o. line stopped, OEM customer line stop imminent

Supplier gradually drops from level 0 to level 3 if he is not able to fulfil quality requirements for supplied parts. To decrease the level of escalation supplier needs to perform necessary steps described on next page as well as to do not deliver any NOK part for a three-month period to ITW PRONOVIA s.r.o. plant.

Figure 7 - Escalation model



Level 1 "Controlled shipping 1"	**Activities at escalation level 1:** • **100% sorting activity of complete stock at supplier as well as at ITW** • **100% inspection (Q-gate 1) by the supplier of defect parts in addition to the normal EOL inspection as well as marking of defect parts until de-escalation and exit to the daily business** • **All non-standard cost connected with the issue are covered by the supplier (administrative expenses, re-audits, supplier support, etc…)**
Level 2 "Controlled shipping 2"	**Activities at escalation level 2:** • **100% inspection of shipment at site of supplier by a service provider (set up by ITW) in addition to the normal EOL and Q-Gate 1 inspection as well as marking of defect parts until de-escalation and exit to the daily business.** • **Daily reports to ITW quality department** • **Process audit/verification by ITW** • **Introduction of SQA development program** • **Supplier visits upon short notice** • **ITW Purchasing department is involved in this stage** • **All non-standard cost connected with the issue are covered by the supplier (administrative expenses, re-audits, supplier support, etc…)**
Level 3 "New Business Hold – End of cooperation"	**Activities at escalation level 3:** • **Supplier will temporarily NOT be considered for new projects** • **Implementation of two-stage Q-Gate strategy (analogy with level 2)** • **Visits at supplier upon short notice** • **Intensive supplier support (project)** • **Process audit/verification by ITW** • **SQA development program** • **Notification to the certification organization (IATF) by the supplier within 10 working days** • **Involvement of ITW POWERTRAIN EUROPE MANAGEMENT** • **All non-standard cost connected with the issue are covered by the supplier (administrative expenses, re-audits, supplier support, etc…)**

7. Audit systems, supplier facility access

7.1 Audit system

ITW PRONOVIA s.r.o employs a number of audit tools in its Supplier Development Process. This starts with the assessment of a potential new supplier (NSA) who would like to enter into a business relationship with ITW PRONOVIA s.r.o..

Any supplier of production material to ITW PRONOVIA s.r.o. will be requested to participate in one or more of the audit types defined in Figure 7. When notified of a scheduled audit, the supplier should conduct an internal audit prior to the arrival of the ITW PRONOVIA s.r.o. audit team. This audit score assesses the state of the supplier's manufacturing operation in many key areas, especially shop floor discipline. All nonconformances are to be documented in an open issues list and created an action plan for improvment with define time schedule and must be avilable for SDE or SQA engineer. Audits scheadule plan are influenced also by score of supplier evaluation (re-occure concerns, lot of concerns, late answer at concers and etc.).

ITW PRONOVIA s.r.o. may, at its discretion, utilize independent auditors. These ITW PRONOVIA s.r.o. individuals represent auditors will provide audit at the supplier's processes to establish conformance and to validated quality systems.

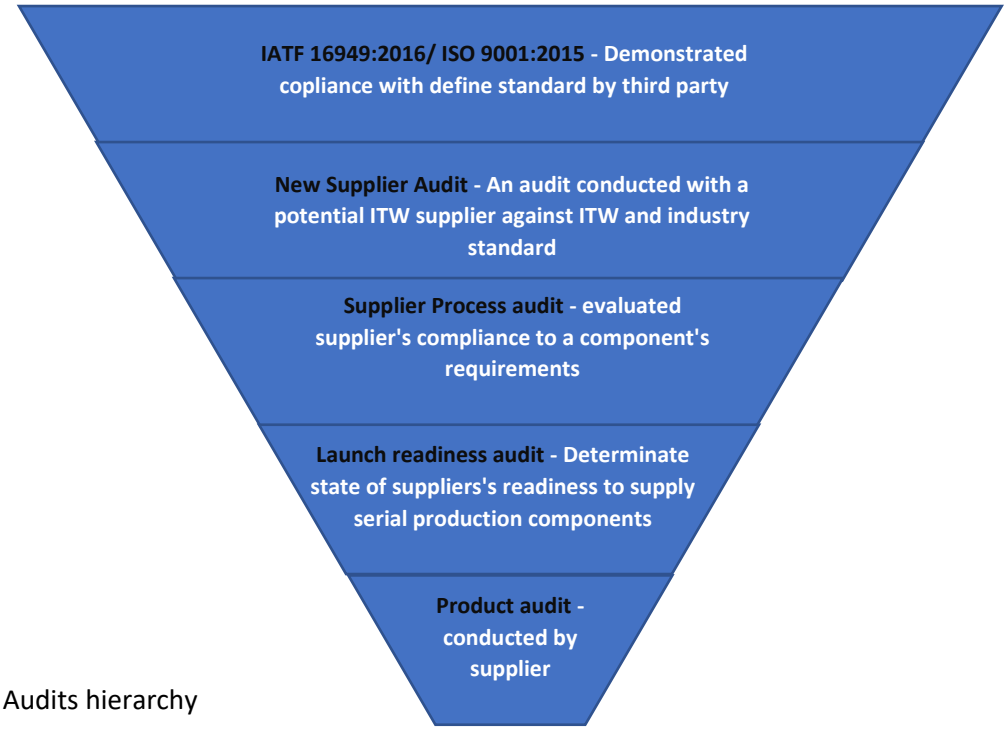


Figure 8 – Audits hierarchy

7.2 Supplier Facility Access

By prior notice, suppliers shall allow ITW PRONOVIA s.r.o. and ITW PRONOVIA s.r.o. customers' access to both their facilities and their supplier's facility for the purpose of evaluating parts, processes, documents (i.e., FMEA, Control Plan, Instructions, records....), methodologies and systems used in the manufacturing of ITW PRONOVIA s.r.o. products.
ITW PRONOVIA s.r.o. may, at its discretion, use 3rd Party independent auditors. These individuals represent ITW PRONOVIA s.r.o. and will audit the supplier's processes to establish conformance to validated quality systems.

8. Supplier evaluation

Evaluation of supplier are done 4 times per year it means every year quarter. SQA enginer this evaluation will send to supplier via e-mail. According the evaluation if is necessery supplier must prepare and also implemented corrections and send action plan to SQA. SQA according that can provide part and process audit.

Supplier criteria for evaluation are: 1. Level certification, 2. Number of non-comformites, 3. delivery on time, 4. Reaction time

Úroveň systému řízení / Level of certification		
KVALITA	QUALITY	body/points
Platný certifikát ISO IATF 16949	Valid certificate ISO IATF 16949	10
Platný certifikát ISO 9001	Valid certificate ISO 9001	0
Bez platného certifikátu	No valid certificate	-20
EMS	EMS	body/points
Platný certifikát ISO 14001	Valid certificate ISO 14001	10
Samohodnotící dotazník	Selfevaluation questionnaire	5
Bez platného certifikátu / dotazníku	No valid certificate / questionnaire	0
ISMS	ISMS	body/points
Platný certifikát TISAX nebo ISO /IEC 27001	Valid certificate TISAX or ISO /IEC 27001	10
Samohodnotící dotazník	Selfevaluation questionnaire	5
Bez platného certifikátu / dotazníku	No valid certificate / questionnaire	0

Kvalita dodávek / Quality of deliveries		
ukazatel / criterion	hodnota / value	body/points
PPM (parts per milion)	0	10
	0 < ppm ≤ 5	5
	ppm >5	0

Včasnost dodávek / Delivery on time		
ukazatel / criterion	%	body/points
% Včasnost dodávek % Delivery on time	% ≤ 95	10
	95 >% ≥ 90	5
	% <90	0

Reklamace / Non conformity tickets (claims)		
ukazatel / criterion	počet reklamací / amount of claims	body/points
Počet reklamací v daném období # of NCTs in time period	0	10
	0 < NCTs ≤ 3	5
	NCTs >3 nebo ≥1 od zákaznika /NCTs >3 or ≥1 from final customer	0

Reakce Reklamace / Non conformity tickets (claims) reaction		
ukazatel / criterion	termín / term	body/points
Reakční doba na reklamaci NCT Reaction time	3D ≤ 24h / 6D ≤ 10d / 8D ≤ 30d = A	10
	24h < 3D ≤ 48h / 6D < 11d / 8D < 31d = B	5
	3D > 48h / 6D > 11d / 8D > 31d = C	0

Vyhodnocení / Evaluation		
Počet bodů dosažených v daném období Total amount of points in time period	A	70 - 61
	B	60 - 41
	C	40 - 0

In case of "B,C" evaluation is supplier asked for action plan with corrective actions within 20 working days. In case that supplier is evaluated in group "C" three times in a row - is started new supplier selection.

All criterias are continuosly monitored. In case of unsatisfactory results - is started corrective action plan with supplier.

Supplier is informed about the result based on given frequency in electronic way.

9. Annual revalidation, Contingency plan

9.1 Annual revalidation

The intent of annual revalidation is to ensure conformance to print, dimensional and capability requirements and all applicable ITW PRONOVIA s.r.o. customer-specific requirements. Unless otherwise specified, a complete annual layout inspection including all sub-components is required for all components.

All suppliers shall have a plan to annually revalidate their respective production components. This includes all tools and cavities. Suppliers shall make this annual revalidation plan available to ITW PRONOVIA s.r.o. upon request.

At a minimum, on an annual basis, ITW PRONOVIA s.r.o. product lines will identify suppliers required to submit evidence of revalidation for selected components. Notification, schedule and submittal of Revalidations identified will be submitted through the e-mail to SQA or SDE.

Under special circumstances, Suppliers may be notified by telephone or email. In this case, the requested Annual Revalidation information must be made available to ITW PRONOVIA s.r.o. within 48 hours of the request. The data submitted must be less than 12 months old.

Revalidation evidence submission requirements are product line specific and criteria are based on component performance and categorization (i.e. A, B or C). Suppliers shall have a plan to re-validate omponents annually and document this requirement in the Product Control Plan for all components supplied regardless of the product line/region.

Unless an agreement is made at time of the original PPAP/VDA2, the supplier should have a process to confirm ALL characteristics. ITW PRONOVIA s.r.o. customer and engineering requirements are required for compliance.

Features/characteristics/notes measured routinely as defined in the control plan:
• are not required to be measured as a specific activity. However, in-process measurement results may need to be submitted, if required by product line according to customer specific requirements.

Features/characteristics/notes not measured routinely as defined in the control plan:
• must be measured and the results submitted.

If the annual revalidation reveals nonconformance to ITW PRONOVIA s.r.o. drawings, the supplier must immediately contact all ITW PRONOVIA s.r.o.SDE or SQA engineer and affected part and must supply the dimensional data and corrective action plans (deviation process agreement).

9.2 Contingency plan

Suppliers shall develop a contingency plan for potential catastrophes which may disrupt product flow to ITW PRONOVIA s.r.o. and advise ITW PRONOVIA s.r.o. immediately (Logistic contact with copy on SDE, SQA engineer) in the event of an actual disaster or any others disruption of production and deliveries. In an actual catastrophe, suppliers shall provide ITW PRONOVIA s.r.o. access to ITW's tools and/or their replacements.

10.Customer specific requirements

Supplier shall follow fundamental quality system (IATF 16:949, ISO 9001) requirements for organizations supplying production and customer specific requirements. Supplier shall folow and update CSR which are available on web page: https://www.iatfglobaloversight.org/oem-requirements/customer-specific-requirements/. In addition IATF norms

10.1 CSR – Sustainability reguirements

The topics listed are important aspects of supplier requirements and may be specified in the supplier policy. Our suppliers hereby undertake to comply with the requirements below:

• Child labor and young workers:
The company expects its suppliers not to exploit child labor and the rights of young people.

• Wages and benefits:
Suppliers should provide reasonable wages, benefits and social benefits for their employees.

• Working hours: The company expects its suppliers to observe legal working hours and respect the rights of employees. Respecting free time and rest time.

• Modern slavery: The company expects its suppliers not to use forms of modern slavery such as slavery, indentured servitude or forced labour.

• Ethical recruitment: Suppliers should practice ethical recruitment practices and no forms of human trafficking.

• Freedom of association and collective bargaining: Suppliers should respect and allow freedom of association and collective bargaining.

• Discrimination and harassment: Suppliers should not discriminate or harass on the basis of age, sex, race,
ethnicity, religion, sexual orientation.

• Women's rights: Suppliers should protect women's rights and provide non-discriminatory working conditions.

• Diversity, equality and inclusion: Suppliers should embrace diversity and promote inclusion and offer non-discriminatory working conditions.

• Rights of minorities and indigenous peoples: Suppliers should respect the rights of minorities and indigenous peoples.
• Land, forest and water rights and eviction: Suppliers should respect the rights of land owners, forest protection and water resources. Not support any forced evictions.

• Work safety: Contractors should set and comply with the working conditions of safety and health according to the law
requirements.
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• Anti-corruption and anti-money laundering: Suppliers should comply with applicable laws and regulations regarding
Fighting corruption and money laundering.

• Data protection and data security: Suppliers should ensure appropriate data protection and data security measures.

• Financial accountability (accurate records): Suppliers should maintain transparent and accurate financial records. Further
Comply with accounting laws and regulations
.
• Disclosure: Suppliers should provide relevant information and disclose their business practices and results.

• Fair Competition Law and Antitrust Law: Suppliers should comply with applicable laws and regulations regarding fair competition and antitrust law.
• Conflict of interest: Suppliers should take appropriate measures to avoid or manage conflicts of interest.

• Plagiarism and intellectual property: Suppliers should respect intellectual property rights. Respect the property of others and do not engage in plagiarism.

• Export controls and economic sanctions: Suppliers should comply with applicable laws and regulations regarding
export controls and economic sanctions.

• Whistleblowing and protection against retaliation: Suppliers should have options for whistleblowing and protection against retaliation.

• Reporting of greenhouse gas emissions: Suppliers should report, record and report greenhouse gas emissions.

• Energy efficiency, renewable energy, decarbonisation: Based on the results of energy used and emissions, suppliers should take measures to improve energy efficiency, renewable energy sources.

• Air Quality: Suppliers should take measures to improve air quality, protect and comply with applicable air pollution laws and regulations.

• Responsible use of chemicals: Suppliers should ensure compliance with applicable laws and regulations regarding the use of hazardous chemicals.

• Sustainable resource management: Suppliers should act and use sustainability resources and reduce waste.

• Waste reduction, reuse and recycling: Suppliers should take measures to prevent, reuse, reduce waste and recycle.

• Animal Welfare: Suppliers should comply with animal welfare laws and regulations and protect animal welfare.

• Biodiversity, land use and deforestation: Suppliers should act and take measures to protect biodiversity and natural ecosystems and adopt sustainable land use practices.

• Soil quality: Suppliers should take measures to ensure that soil quality is maintained and improved.

• Use of private and public security forces: Suppliers should take measures to ensure that private and public security forces are used only in accordance with national laws, industry standards and occupational safety.