THERMIA
Supplier Manual

Revision 2025-08

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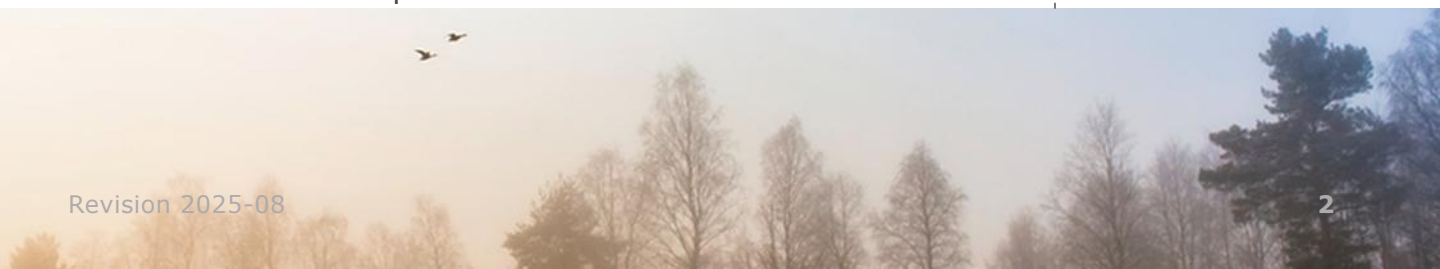


1. Introduction

Thermia places great emphasis on maintaining high product quality and reliability to ensure sustainable development.

Our suppliers play an important role in our quality assurance work. We firmly believe that it is in the mutual interest of both Thermia and our suppliers to meet the present and future requirements of customer expectations and product durability.

This Supplier Manual describes Thermia’s requirements in terms of supplier qualification, quality assurance and legal compliance, purchase processes, delivery and handling of supplier claims. These conditions need to be met in advance of receiving approval for a new or changed product or manufacturing process.

2. Supplier Qualification & Onboarding

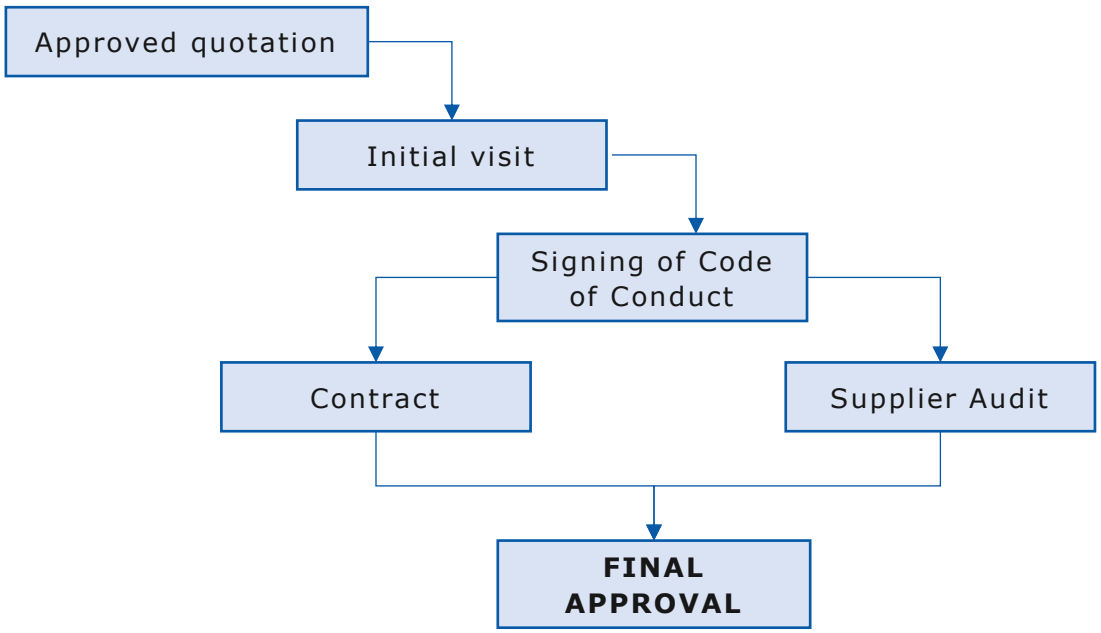
Thermia follows a standardized process for supplier onboarding, including initial assessment, approval, registration, and potential audits.

CODE OF CONDUCT (CoC)

The Code of Conduct is a behavioral declaration that sets expectations for suppliers based on UN Global Compact principles and ILO conventions. It ensures Thermia's commitment to sustainable development.

SUPPLIER AUDIT

A supplier audit is a thorough assessment of a potential supplier's processes, practices, and performance. Thermia conducts two variants of on-site audits – 'Thermia Process Control Plan Audit' (PCPA) for new parts at existing suppliers and the more comprehensive 'Thermia Supplier Assessment' for new suppliers.
Corrective actions may be needed for approval. Ratings and improvement suggestions are provided. Audits may also occur during collaboration, especially for significant quality issues.



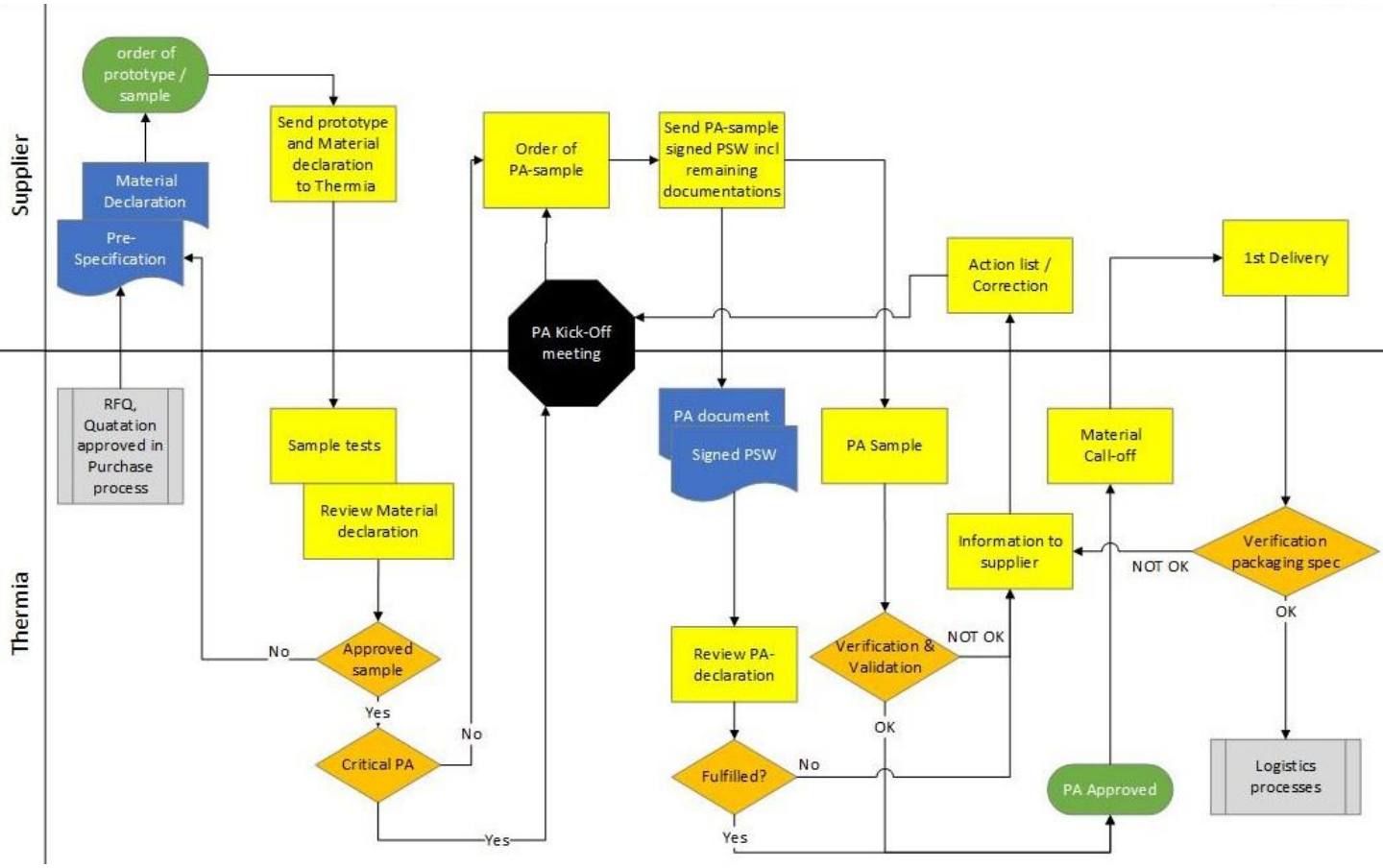
3. Part Approval (PA) Process

REQUIREMENT

Thermia requires all suppliers to ensure the quality of new or changed parts, as well as production processes, before delivery of parts intended for Thermia's serial production.

METHOD

Thermia expects all suppliers to follow Thermia's Part Approval (PA) process, which is a simplified version of the established PPAP (Production Part Approval Process) within AIAG.



3.1. PA Sample Order

PART APPROVAL ORDER

Thermia will send a purchase order (PA) with identification ”PA ORDER” and specification noted or attached.

If the PA samples are ordered together with first serial order, this will be specified within the purchase order.

PA SAMPLE

The PA samples for approval shall be in accordance with agreed drawings and specifications and manufactured using the specified parts in series production tools and process.

PA DOCUMENTATION

Necessary documentation for Part Approval is decided based on the component type and is specified on first page in Part Approval Document.

PROTOTYPES

Prototype parts may be ordered for tests before drawings, specifications or other design parameters are finalized.

PA DOCUMENT

Thermia will send the Part Approval Document together with the PA purchase order.

Please see the next page for more information about the PA Document.

DELIVERY

Thermia expects all suppliers to deliver PA samples and submit the required documentation without delay.

The material declaration must be completed and submitted together with the sample parts. See chapter 3.4.1. for more information about the material declaration.

The goods shall be clearly marked with label stating “**PA SAMPLE**”

3.2 PA Document

GENERAL DATA

Thermia completes general data about the specific part.

Part Approval Warrant

Part Name			
Thermia Part No		Revision Supplier Part No	
Supplier Name		Supplier ID	
Purchaser		Date	
Quality Engineer		CR/Project ID	
Reason for PA :	Choose an alternative	PA Level	

PA documentation

Basic		*X= Demands for this PA*		Additionals
ProductDataSheet / Tech.Spec./Norm	X			Production Process flow chart
Customs Declaration	X			Risk analyzis/FMEA
Packaging specification	X			Dimensional Results
Manufacturing tests/Control Plan				CE-certification / Manufacture´s Declaration
Master Sample/Initial sample				Material Recycling Report
Material Declaration	X	Mark the correct alternative :		

Does the Part contain any SVHC substances	No, I Confirm that the Part does not contain SVHC Yes, SVHC is specified in the Material declaration
Are the chemical substance covered by any of: REACH annex XIV/XVII,RoHS, Biocidal or PoP´s, legal requirements?	No, it is not covered by these legal requirements Yes, it is specified in the Material declaration

Declaration

I hereby affirm that the samples and the PA documentation, represented by this certification are representative of our parts, have been made to the applicable customer drawings and specifications and are made from the specified materials on serial production tooling in the serial production process. I also understand and agree to that any changes will require a change process including a new Approval Documentation.

Supplier Authorized Signature		
Digital Signature	Title	Date
Print Name:		

Thermia Approval Signature		
Digital Signature	Title	Date
	Supplier Quality Engineer	
Print Name:		

PA DOCUMENTATION

Documentation marked with an ”x” must be included together with the signed Part Approval Warrant.

Templates are available in the PA Document Excel file.

Detailed information in following pages explains the contents of each documentation form.

DECLARATION

Thermia accepts both digital and written signatures on the PA Document.

3.2. Long Term Supplier’s Declaration

GENERAL REQUIREMENTS

Since you supply parts for our products, we require your information regarding the country of origin and customs tariff number for the goods we import.

If you are located within the European Union, we request a Supplier's Declaration to confirm that the products originate from the EU. This declaration can cover a specific consignment or multiple consignments over a maximum period of 24 months.

If the parts you provide do not originate from the EU, Thermia still require you to fill out the ‘*Long term supplier’s declaration*’ form

Request for long term supplier's declaration for goods with preferential origin status

Dear supplier,

By custom regulations we are required to collect proof of origin for all goods that you deliver to us. We therefore request you to provide a suppliers declaration.

Please add information required according to numbered fields in below declaration.

If you require further information please contact your local trade and industry office or local customs.

Kind regards

Mathias Axelsson Löfvenholm
Purchasing director

3.2.2. Declaration Sheet

GENERAL REQUIREMENTS

The document to be signed is shown below.

If you have questions or concerns about the *Long-Term Supplier's Declaration*, please contact your local trade- or customs office.

Long-term supplier's declaration for products having preferential origin status

The undersigned declare that the goods described below:

(1) 0 (2) 0 (3) supplier part no

which are regularly supplied to *Thermia AB* , originate in (4) country of origin (CoO)

and satisfy the rules of origin governing preferential trade with: (5) EUR-MED (the EU, the EFTA states, *The Republic of Moldova & the Faroe Islands)* United Kingdom

I declare that: (6)
Cumulation applied with: name of country/countries
No cumulation applied

Customs tarif no: (7) Preferential origin (Yes or No): (8)

This declaration is valid for all shipments of these products dispatched from 20XX-XX-XX to 20XX-XX-XX

I undertake to inform *Thermia AB* immediately if this declaration is no longer valid.
I undertake to make available to the customs authorities any further supporting documents they require.

Place and date of issue

Name and position of signee, name and address of company

Signature (filled out in Excel is sufficient)

1) Part/product description
2) Thermia part number (Commercial designation as used on the invoices)
3) Supplier part number
4) The European union, country, group or countries or territory, from which the goods originate.
5) Country, group or countries or territory concerned.
6) To be completed, where necessary, only for goods having preferential origin status in the context of preferential trade relations with one of the countries, with which pan-Euro-Mediterranean cumulation of origin is applicable.
7) Valid customs tarif no
8) Preferential origin (Yes or No)

Cumulation in international trade refers to the practice of combining materials or processing from multiple countries to determine the origin of a product, ensuring compliance with rules of origin and potential eligibility for preferential treatment.

Preferential trade refers to special trade agreements that provide advantages such as reduced tariffs or trade barriers between participating countries or regions.

3.3. PA documentation

GENERAL

PA documentation is used to confirm the approval of the part/product, including the production process.

Required documentation may vary depending on type of part/product and is defined on first page in PA Document Excel file.

PA documentation				
Basic			**Additionals**	
ProductDataSheet / Tech.Spec./Norm	X	*X= Demands for this PA*		Production Process flow chart
Customs Declaration	X			Risk analyzis /FMEA
Packaging specification	X			Dimensional Results
Manufacturing tests/Control Plan				CE-certification / Manufacture´s Declaration
Master Sample/Initial sample				Material Recycling Report
Material Declaration	X	Mark the correct alternative :		
Does the Part contain any SVHC substances				No, I Confirm that the Part does not contain SVHC
				Yes, SVHC is specified in the Material declaration
Are the chemical substance covered by any of: REACH annex XIV/XVII,RoHS, Biocidal or PoP´s, legal requirements?				No, it is not covered by these legal requirements
				Yes, it is specified in the Material declaration

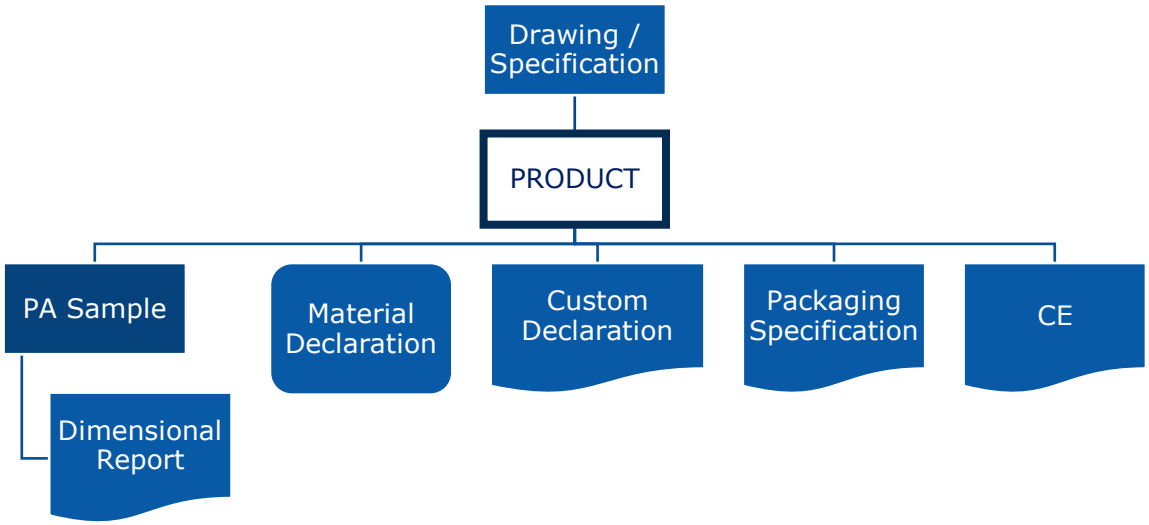
DOCUMENTATION

The PA documentation is in two parts: “Basic” and “Additional” information.

The PA documentation covers both product and production quality assurance.

Templates are available in the PA Document Excel file. It is acceptable to use supplier in-house templates as long as they provide all the requested information.

3.4. Product Quality Assurance



PRODUCT TECHNICAL SPEC/DRAWING/DATA

For Thermia-designed parts, drawings and technical specifications are included together with the PA order.

For supplier-designed parts, all available product specifications must be forwarded to Thermia.

For supplier-designed parts with Thermia customizations (i.e. controller settings, part numbers, etc.), both parties will provide the necessary specifications.

DIMENSIONAL REPORT

When applicable, PA samples must be measured, and the protocol sent to Thermia.

All results must be traceable to the specific samples and should include appropriate references to the equipment and procedures used for the measurements taken.

Critical specific characteristics must be highlighted on the drawings. Their inclusion in the protocol is mandatory.

DECLARATION OF CONFORMITY

When applicable, the supplier is responsible for assuring that the parts fulfill the CE requirements. A declaration of conformity must be submitted to Thermia if requested.

CE requirements applies to; energy-related, electrical and electronic appliances and similar (products covered by the Machinery Directive).

MATERIAL RECYCLING REPORT

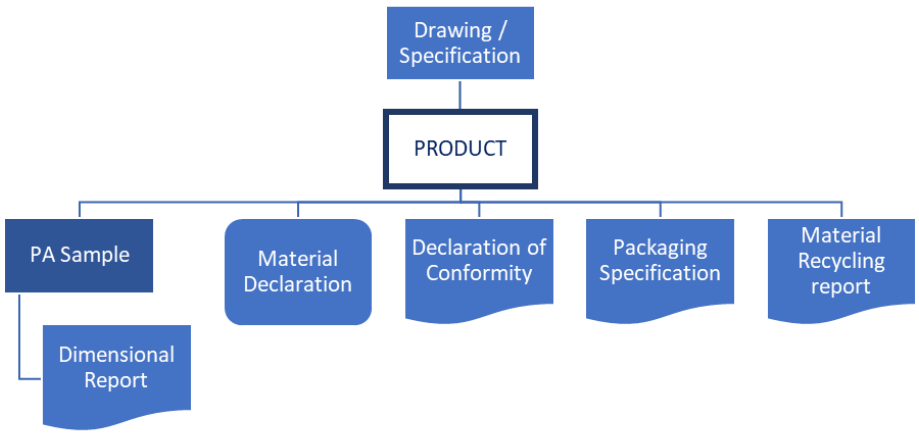
A material recycling report related to the part/product must be available and submitted to Thermia if required.

The report is preferably made according to EN45555:2020.

If other analyze method is used, please describe this in the report

MATERIAL DECLARATION

A material declaration is mandatory for all parts/products. See following pages.



3.4.1. Material Declaration

MATERIAL DECLARATION

A material declaration is mandatory for all parts.

The declaration form is enclosed as an Excel file and must be fully completed.

Parts containing substances that fall under Article 33 of REACH *(see right)* need to be declared as in Example 1. Products must also be registered in SCIP database by the supplier.

Products not containing substances affected by Article 33 of REACH must be declared as in Example 2.

DUTY TO COMMUNICATE

According to Article 33 of REACH, the manufacturer of a part is required to provide information about any Substances of Very High Concern (SVHC) on the candidate list when the concentration exceeds 0.1% weight by weight (w/w). See chapter 3.4.3. for further explanation.

LEGAL REGULATIONS: FURTHER INFO

For more detailed information about SCIP, Reach, RoHS, WEEE, Biocidal and POPs regulations, see the following pages.

Component / part	Chemical substance / Material	CAS No.	Total Weight[g]	Weight %	REACH	SCIP	SCIP number	ROHS	RoHS exemption	WEEE	Biocidal Regulation	POPs Regulation
Example 1: Brass nut	*Lead*	*7439-92-1*	*1500*	>1,0 viktprocent och< 10,0 viktprocent	Yes, included in the Candidate List	Yes, registered in ECHA SCIP-database	xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxx	Product meet the requirements by application of described exemption(s)	6(c)	Yes, an Electrical or electronic product	Not applicable for this part	Not applicable for this part
Example 2: Hose				No, it contains no SVHC substances	Yes, but not included in any of the lists	No, it contains no SVHC substances		Product meets the requirements without any exemptions		Not applicable for this part	Not applicable for this part	Not applicable for this part

3.4.2. Legal Regulations

SCIP (Substances of concern in Products)

Every manufacturer, importer or distributor of a product placed on the market in the EU / EEA and containing more than 0.1% by weight of a particularly dangerous substance (SVHC) included in the candidate list in REACH, must provide information to the SCIP database at ECHA.

The regulation has applied since 1 January 2021 and is based on the Waste Frame directive for reducing waste containing hazardous chemicals and promoting the use of safer alternatives. The purpose is to support waste operators in ensuring that substances of concern are not used in recycled materials

The SCIP requirements can be viewed here: https://echa.europa.eu/documents/10162/6205986/scip_leaflet_en.pdf/d1180cae-aeeb-ac9e-55e5-49a4324def40

REACH (Registration, Evaluation, Authorisation and restriction of Chemicals)

REACH (No 1907/2006) is a regulation of the European Union that governs the use of chemical substances and has an impact on most companies across the EU.

Particularly hazardous substances are called SVHC (Substances of Very High Concern).

More than 200 substances are listed in the candidate list. Particularly dangerous substances requiring permission for use are listed in Appendix XIV of REACH. The rules apply throughout the EU.

Chemicals that pose unacceptable risks to humans or the environment are listed in Appendix XVII in REACH.

The REACH regulation can be viewed here: https://eurlex.europa.eu/legal-content/en/TXT/HTML/?uri=CELEX:02006R1907-20210215_

WFD (WASTE FRAMEWORK DIRECTIVE)

The Waste Framework Directive is a European Union directive concerned with "measures to protect the environment and human health by preventing or reducing adverse impacts".

It sets out measures and requirements for the prevention, re-use and recovery of packaging wastes in Member States.

Member States must ensure that packaging placed on the market complies with the underlying requirements. The directive implies the "producer responsibility" principle.

The Waste Framework Directive can be viewed here: https://eurlex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32008L0098&qid=1652206816484

WEEE (Waste of Electrical and Electronic Equipment)

Manufacturers and distributers are required to:

- Register with the responsible national authorities in all countries distributing or selling equipment.
- Regularly submit reports of the amount of electrical and electronic equipment sold.
- Organize and finance the collection, treatment and recycling of the products they produce.
- Distributors must offer their customers the opportunity to return electrical and electronic waste free of charge.
- Products must be visibly marked crossed-out wheeled bin label.
- All manufacturers must comply with the RoHS Directive.

The WEEE directive can be viewed here: https://eurlex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32012L0019&qid=1652207360012

ROHS

The RoHS (Restriction of Hazardous Substances) Directive (2011/65/EU) aims to reduce risks to human health and the environment by replacing and limiting hazardous chemical substances in electrical and electronic equipment.

The substances regulated by the RoHS directive are mercury, cadmium, lead, hexavalent chrome, flame retardants PBB and PBDE and plasticizers DEHP, BBP, DBP and DIBP.

The RoHS directive can be viewed here:

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02011L0065-20250101

BPR

The BPR (Biocidal Products Regulation) governs the supply and use of biocides on the market to ensure a high level of protection for both human and animal health, and the environment. Biocides are chemical or biological pesticides used to control and eliminate harmful organisms.

The BPR can be viewed here:

https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02012R0528-20210329

POPS

The POPs (Persistent Organic Pollutants) Regulation prohibits or restricts the use of persistent organic pollutants in both chemical products and goods. POPs have particularly serious health and environmental properties and can be found in, for example, flame retardants, high-flouring substances (PFASs) and short-chain chlorine paraffins.

The POP regulation can be viewed here:

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R1021&qid=1652206184230

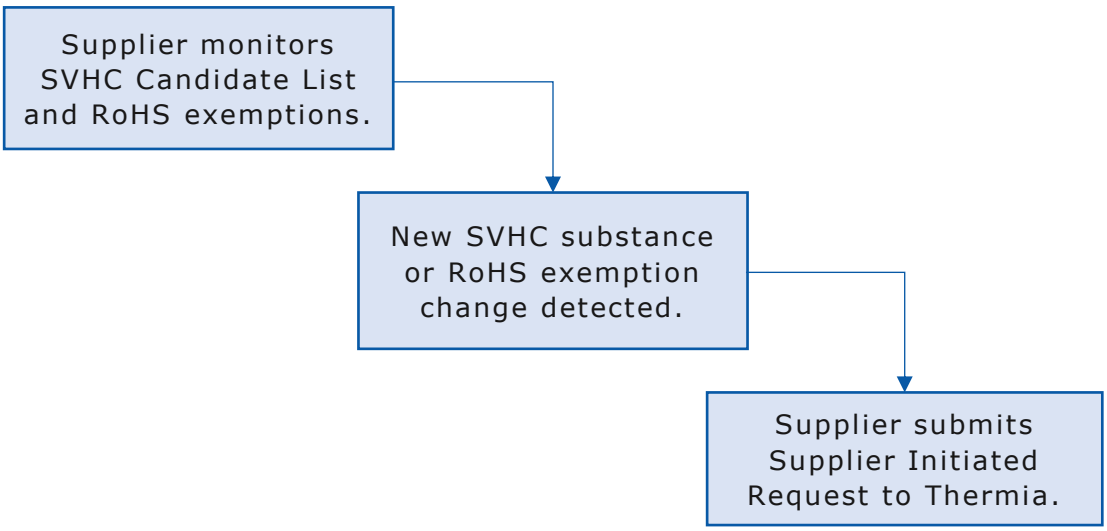
3.4.3. REACH & RoHS Monitoring

GENERAL REQUIREMENTS

The supplier is responsible for continuously monitoring the REACH Candidate List of Substances of Very High Concern (SVHC) as well as any applicable RoHS exemptions.

If a new substance is added to the Candidate List, or if a RoHS exemption relevant to the product is changed or no longer applies, the supplier must submit a *Supplier Initiated Request* to Thermia.

Chapter 3.4.4 provides a more detailed description of the essential components of a Supplier Initiated Request.



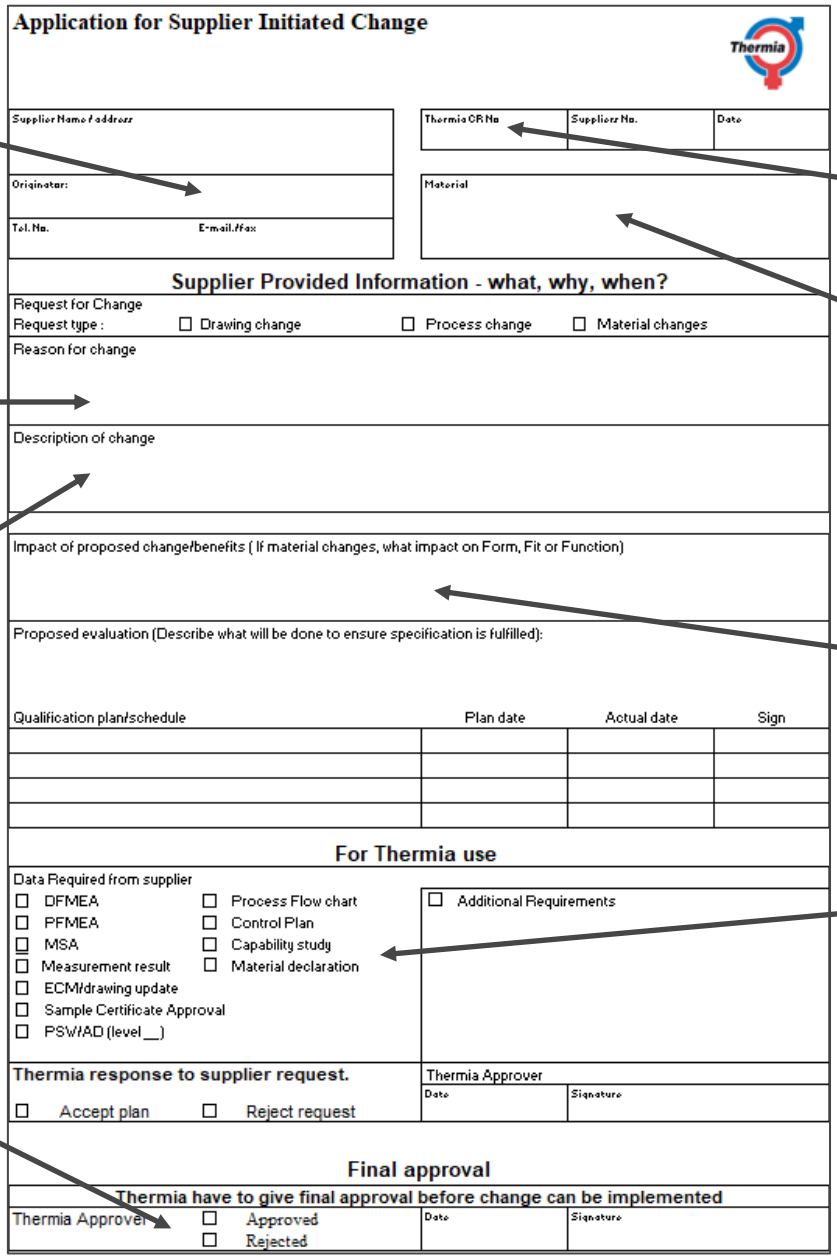
3.4.4. Supplier Initiated Request

GENERAL REQUIREMENTS

When proposing a change to a product, specification or process delivered to Thermia, the supplier must submit a request to Thermia via a *Supplier Initiated Request.* Thermia will then decide whether the change is approved or rejected.

The change may only be implemented if Thermia has given its approval.

Below are the components of a *Supplier Initiated Request*.



Application for Supplier Initiated Change

Supplier Name / address

Thermia CR No | Supplier's No. | Date

Originator:

Material

Tel. No. | E-mail./fax

Supplier Provided Information - what, why, when?

Request for Change

Request type : ☐ Drawing change ☐ Process change ☐ Material changes

Reason for change

Description of change

Impact of proposed change/benefits (If material changes, what impact on Form, Fit or Function)

Proposed evaluation (Describe what will be done to ensure specification is fulfilled):

Qualification plan/schedule	Plan date	Actual date	Sign

For Thermia use

Data Required from supplier

☐ DFMEA ☐ Process Flow chart ☐ Additional Requirements

☐ PFMEA ☐ Control Plan

☐ MSA ☐ Capability study

☐ Measurement result ☐ Material declaration

☐ ECM/drawing update

☐ Sample Certificate Approval

☐ PSW/AD (level __)

Thermia response to supplier request. | Thermia Approver | Date | Signature

☐ Accept plan ☐ Reject request

Final approval

Thermia have to give final approval before change can be implemented

Thermia Approver ☐ Approved ☐ Rejected | Date | Signature

Supplier-specific information.

Reason for change.
What is the reason for the change in the product? (e.g. a new substance added ´to the SVHC Candidate List)

Description of the change.
What will be changed? (e.g. a substance not previously on the SVHC Candidate List has now been added to the list)

Thermia's final decision.
Before the supplier can implement the change in the product. Thermia must give its approval. If rejected, the change must not be implemented.

Thermia's Change Request number.
A unique reference number used to identify and track changes in products, specifications or processes within Thermia's system.

Material.
Thermia's internal material number for the product and the product name.

Impact on the product.
How does the change affect the product in terms of form, fit and function?

Thermia requests additional data.
Thermia may require additional data (e.g. control plan) in order to perform an assessment.

3.4.5. Dimensional Report

GENERAL REQUIREMENTS

The report must provide a record of the dimensional data taken from PA samples.

It is acceptable to use your own supplier template. An example is included in the Excel file “Approval Document”.

Part name										
Thermia Part Number						Revision				
Performed by						Date				
Measuring point	Nom. value	Tolerance limit	Result Part 1	Result Part 2	Result Part 3	Result Part 4	Result Part 5	Result Part 6	OK	NOT OK
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

DESCRIPTION

- Critical measures should be noted on drawing/s. If there is any doubt about which measures need to be included, please contact Thermia SQE.
- Measuring points must be marked on the drawing/s.
- Measurements must be noted for each part.
- Mark with “X” whether OK or NOT OK in relation to tolerance limits.

3.4.6. Material Recycling Report

GENERAL REQUIREMENTS

All suppliers must be able to provide a report from a recycling audit of the part/product.

A template is available in the Excel file. Other templates are acceptable as long as they include all the information below and describe the analysis method used.

Audit and report should ideally be carried out according to the EN 45555:2020 standard.

Product:		
Completion date of the recycling analsis:		
Name of responsible for the report		

	Weight	% of total	Comments
Material recycling			
Energy recovering			
Landfill			
Hazardous waste			
	0		

Description of the Analysis method

Additional Information

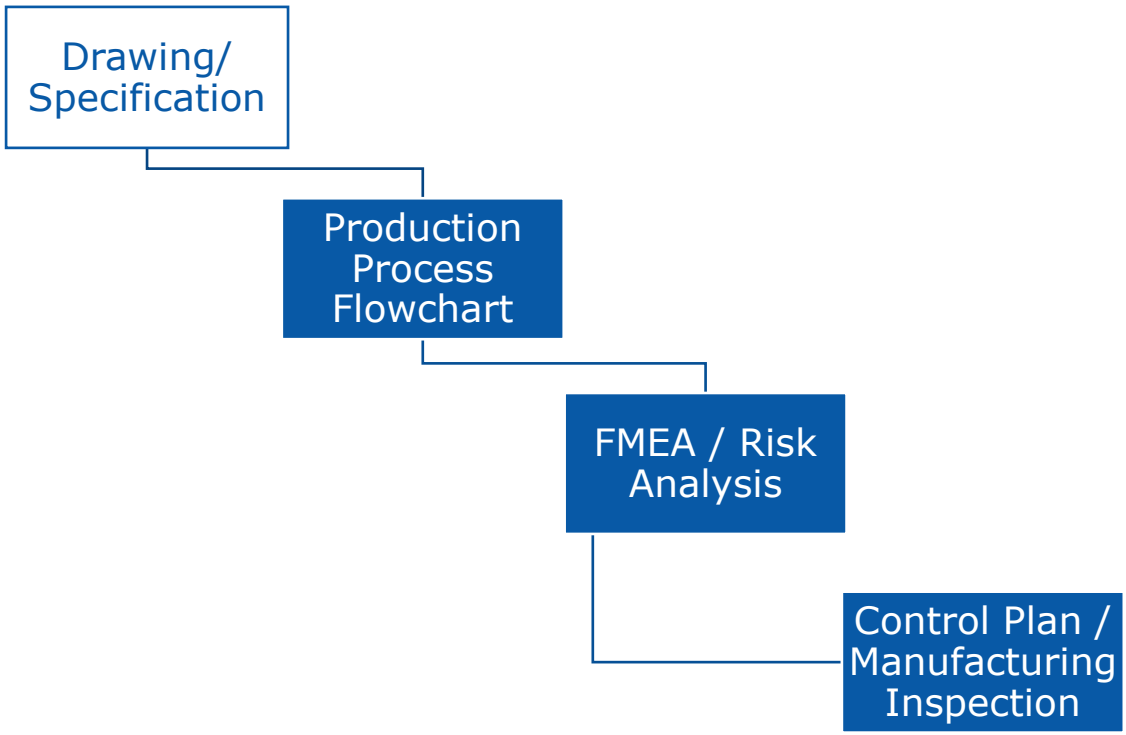
3.5. Production Quality Assurance

GENERAL REQUIREMENTS

All suppliers must be able to provide documentation to verify the safety and quality of the production process.

Technical specifications and/or drawing provide the basis for manufacturing.

1. A comprehensive flowchart should outline the part's production process.
2. FMEA or risk analysis is performed to identify, highlight and evaluate potential risks that could hinder meeting the requirements.
3. Risks must then be minimized to avoid delivering defective parts. These preventive actions should be described in a control plan, manufacturing inspection chart or similar.



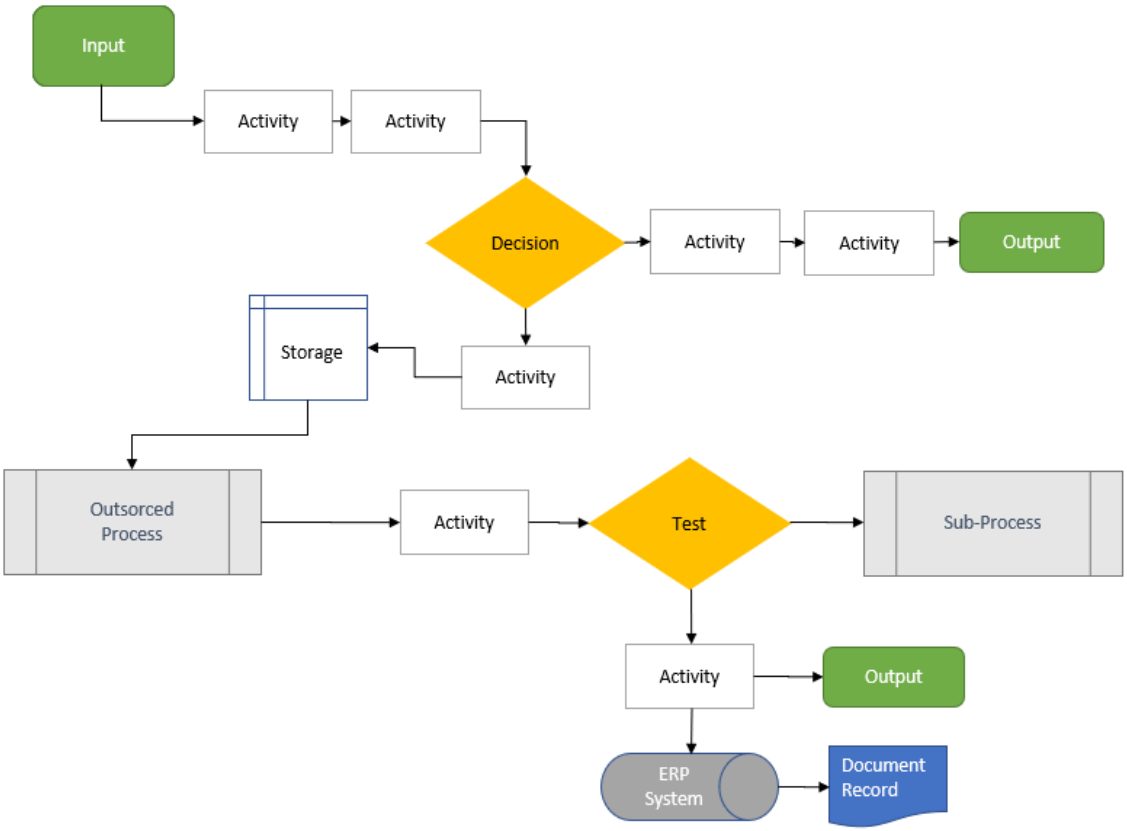
3.5.1. Process Flow Chart

GENERAL REQUIREMENTS

All suppliers must maintain a production process flowchart that clearly describes the production process steps and sequences, from material reception through production to packaging and shipping.

A template is available in the Excel file. Other templates are on the condition that all required information still is provided.

Process steps must also include operations performed by third parties (such as sub-suppliers). These steps need to be identified within the diagram and are subject to approval.



3.5.2. FMEA / Risk Analysis

GENERAL REQUIREMENTS

All suppliers are required to complete a Process FMEA (Failure Mode and Effects Analysis), if applicable. The FMEA is a living document and must be revised as and when changes are made to the product and/or process, and if quality issues are identified.

The PFMEA (Process Failure Mode and Effects Analysis) must include all characteristics. It is acceptable to use other templates, provided that all requested information is included.

Further info: https://www.aiag.org/quality/automotive-core-tools/fmea

	Process:		FMEA Owner:			Creation Date:				Revision Date:	Team:	
						Current Process						Act
Op No	Process	Potential Failure Mode	Potential Effect(s) of Failure	Severity	Potential Cause(s) of Failure	Controls, Prevention	Occurrence	Controls, Detection	Detection	RPN / Recommended Actions (>100 Action, <100 Ok)	Responsibility & Target Date	Actions Taken & Completion Date

Severity			Occurrence			Detection		
Assessment	Effects exampel	score	Assessment		score	Assessment	score	Definition of detection level
Falure to meet Safety and/or Regulatory Rtequirements	May endanger operator (machine or assembly) without warning	10	Very high	>100 per thousand >1 in 10	10	Almost impossible	10	No detection opportunety
	May endanger operator (machine or assembly) with warning	9	High	500 per thousand 1 in 20	9	Very remote	9	Not likely to detect at any stage
Major Disruption	100% of product may have to be scrapped. Line shut down or stop delivery.	8		20 per thousand 1 in 50	8	Remote	8	Failure Mode by operator visual. Post Processing
	A portion of the production run may have to be scrapped. Deviation from primary process including decreased line speed or added manpower	7		10 per thousand 1 in 100	7	Very low	7	Failure Mode detected in-station by operator trough gauging (go/no go, torque check etc)
Moderate Disruption	100% of production run may have to be reworked off line and accepted	6	Moderate	2 per thousand 1 in 500	6	Low	6	Failure Mode detected post-proccesing by operator trough gauging (go/no go, torque check etc)
	A portion of the production run may have to be reworked offline and accepted	5		0,5 per thousand 1 in 2000	5	Moderate	5	Failure Mode detected by automated controls in-station that will detect dicrepant part and notify operator. Gauging performed on set-up and first-piece check
Moderate Disruption	100% of production run may have to be reworked in-station before it processed.	4		0,1per thousand 1 in 10 000	4	Moderately high	4	Failure Mode detected by automated controls post-processing and lock part to prevent futher processing
	A portion of the production run may have to be reworked in-station before it processed.	3	Low	0,01 per thousand 1 in 100 00	3	High	3	Failure Mode detected by automated controls post-processing and lock part to prevent futher processing
Minor Disruption	Slight inconvenience to process, operation or operator	2		<0,001 per thousand 1 in 1 000 000	2	Very High	2	Error detection in-station by automated controls and prevent discrepant part from being made
	No discernible effect	1	very Low	Failure is eliminated through preventive control	1	Almost impossible	1	edrror prevention as a result of fixture design, machine design or part design. Discrepant parts can not be made because of error proofing

3.5.3. Control Plan

GENERAL REQUIREMENTS

The control plan describes how the production process is controlled in detailed implemented activities to ensure conformity with approved drawings and specifications, taking into account identified risks.

Manufacturing inspections may be described in the production process flowchart.

DESCRIPTION

List all operational risks identified throughout the production process, together with the assessment result > 100 for RPN.

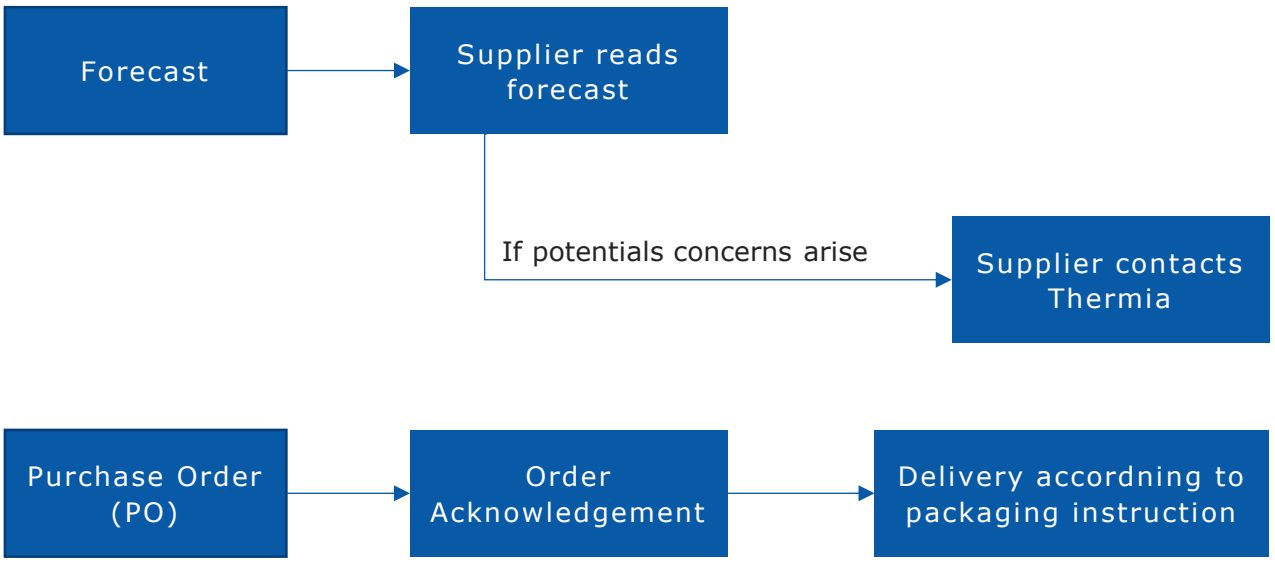
Complete the chart in full. Particularly important are measuring frequency and the number of samples.

Include an ID in the reaction plan, enabling operators to easily identify and follow appropriate measures in case any parameters exceed the defined limits.

Control Plan Number			Key Contact/Phone						Date (Orig.)		Date (Rev.)	
Part Number/Latest Change Level			Core Team						Customer Engineering Appro			
Part Name/Description			Supplier/Plant Approval/Date						Customer Quality Approval/D			
Supplier/Plant		Supplier Code	Other Approval/Date (If Req'c						Other Approval/Date (If Req'c			
PART/ PROCESS NUMBER	PROCESS NAME OPERATION DESCRIPTION	MACHINE, DEVICE, JIG,TOOLS, FOR MFG.	CHARACTERISTICS			SPECIAL CHAR. CLASS	METHODS					REACTION PLAN
			NO.	PRODUCT	PROCESS		PRODUCT/PROCESS SPECIFICATION/ TOLERANCE	EVALUATION/ MEASUREMENT TECHNIQUE	SAMPLE SIZE	SAMPLE FREQ.	CONTROL METHOD	

4. Purchasing

This chapter provides a comprehensive overview of how purchasing at Thermia works, highlighting the four essential components: ‘Forecasts' as predictions of future orders, ‘Purchase Orders' as official buying requests, ‘Order Acknowledgements' as seller confirmations of these orders and ‘Delivery Specification’, outlining the conditions and terms of product delivery.



4.1. Forecast

Thermia regularly sends non-binding demand forecasts to suppliers, which are automatically updated. These forecasts together with POs provide a complete view of Thermia's demand.

The forecasts are automatically emailed as Excel files from THERMIA BATCH NoReply@thermia.com. The forecast is sent in the beginning of each month and the suppliers are responsible for internal distribution.

The forecast period usually extends up to a year and is divided into weekly intervals, with the option to adjust the breakdown and frequency upon request.

Example, forecast:

	Vendor:	xxxxxx			
	Vendor name:	Supplier X			
	Vendor contact person:				
	Forecast number:				
	Forecast date:	'20211104			
	Forecast start:	'20211101			
	Forecast end:	'20401224			
	Period type:	Weekly			
	Thermia contact person:	Ms. Jane Doe (operative purchaser)			
Purchasing Group	Material Number	Material Text	Vendor Material no.	Quantity	Forecasted arrival d
HP6	086Lxxxx	Article A	830-1020	132	2022.01
HP6	086Lxxxx	Article A	830-1020	120	2022.02
HP6	086Lxxxx	Article A	830-1020	120	2022.03

4.2. Purchase Order (PO)

GENEREAL REQUIREMENTS

Below are the essential components of a purchase order. Please note the boxes for accurate interpretation, as a purchase order is a crucial document that establishes the terms of Thermia's request to purchase goods or services from a supplier.

Be aware that a purchase order (PO) may consist of multiple pages.

Thermia's delivery contact information.

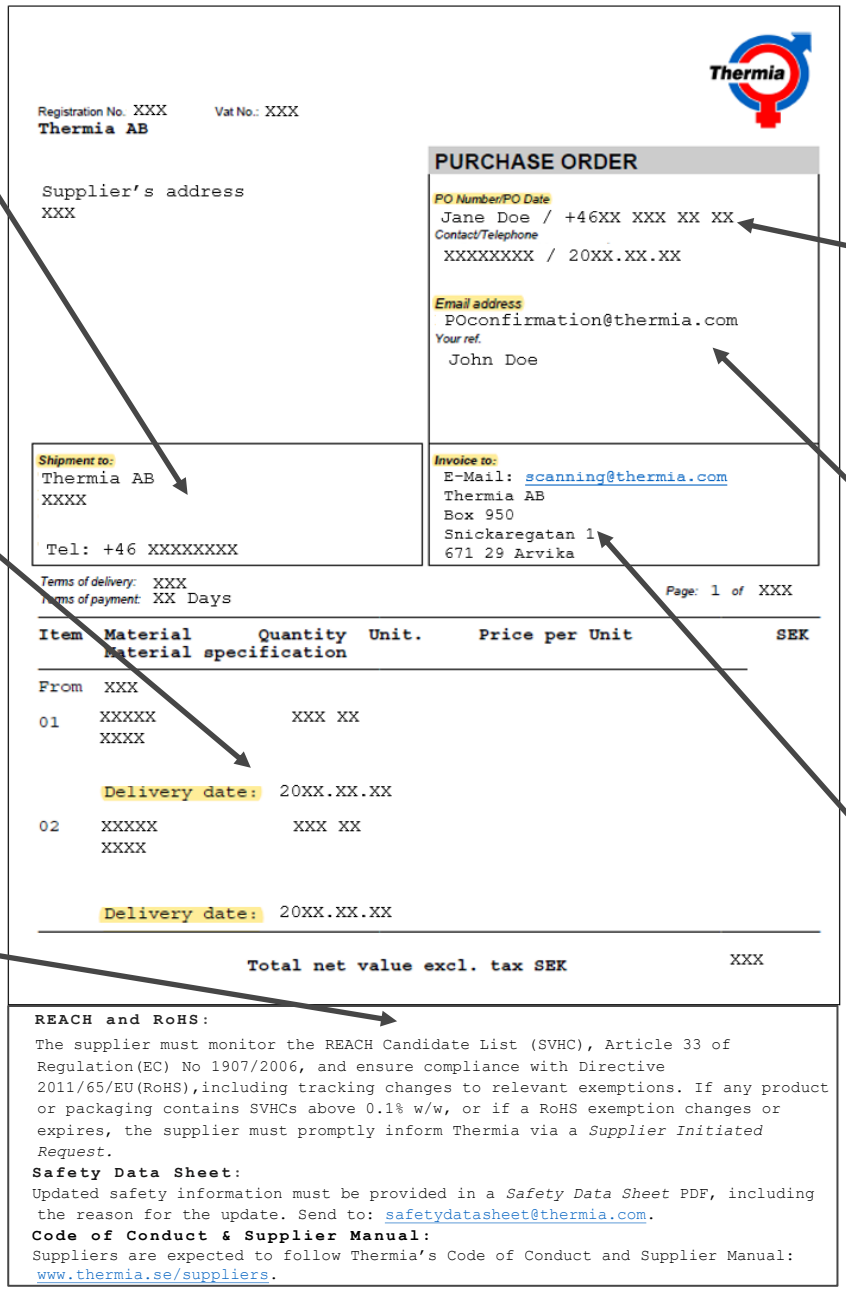
Please note that this address may vary across different purchase orders since Thermia has multiple delivery locations.

The delivery date is the date we expect the delivery to arrive at the specified delivery address mentioned in the "Shipment to" field.

Independently of Incoterms

Guidelines regarding SVHC substances and RoHS exemptions.

The supplier's obligation to monitor the Candidate List of SVHC substances and RoHS exemptions. See chapter 3.4.3. for more information.



Registration No. XXX Vat No.: XXX
Thermia AB

Supplier's address
XXX

PURCHASE ORDER

PO Number/PO Date
Jane Doe / +46XX XXX XX XX
Contact/Telephone
XXXXXXXX / 20XX.XX.XX

Email address
POconfirmation@thermia.com
Your ref.
John Doe

Shipment to:
Thermia AB
XXXX

Tel: +46 XXXXXXXX

Invoice to:
E-Mail: scanning@thermia.com
Thermia AB
Box 950
Snickaregatan 1
671 29 Arvika

Terms of delivery: XXX
Terms of payment: XX Days

Page: 1 *of* XXX

Item	Material / Material specification	Quantity	Unit.	Price per Unit	SEK
From	XXX				
01	XXXXX XXXX	XXX XX			
	Delivery date:	20XX.XX.XX			
02	XXXXX XXXX	XXX XX			
	Delivery date:	20XX.XX.XX			

Total net value excl. tax SEK XXX

REACH and RoHS:
The supplier must monitor the REACH Candidate List (SVHC), Article 33 of Regulation(EC) No 1907/2006, and ensure compliance with Directive 2011/65/EU(RoHS),including tracking changes to relevant exemptions. If any product or packaging contains SVHCs above 0.1% w/w, or if a RoHS exemption changes or expires, the supplier must promptly inform Thermia via a *Supplier Initiated Request*.
Safety Data Sheet:
Updated safety information must be provided in a *Safety Data Sheet* PDF, including the reason for the update. Send to: safetydatasheet@thermia.com.
Code of Conduct & Supplier Manual:
Suppliers are expected to follow Thermia's Code of Conduct and Supplier Manual: www.thermia.se/suppliers.

The number of the order and the date of issuance.

Email address for order confirmation.

The supplier shall confirm the delivery to Thermia within two (2) working days after receiving the order.

Thermia's invoice contact information.

Send the invoice attached as PDF in the email.

Only one invoice per file, but there can be multiple files in one email.

4.3. Order Acknowledgement

GENERAL REQUIREMENTS

The order confirmation should be sent via email to:
POconfirmation@thermia.com

The order confirmation need Thermia's order number clearly indicated in the subject line.

The supplier is required to confirm the delivery to Thermia within **two** (2) working days upon receiving the order.

In case Thermia does not receive the confirmation within the specified timeframe, a reminder will be sent, expecting a prompt reply.

When providing the order confirmation, it is crucial to include the following information:

- Thermia's purchase order (PO) number
- Supplier's sales order number
- Thermia's material number
- Supplier's article number/description
- All items/order lines listed on the PO
- Confirmed quantity
- Confirmed delivery date for arrival at Thermia independently of Incoterm
- Price details

4.4. Delivery accuracy

GENERAL REQUIREMENTS

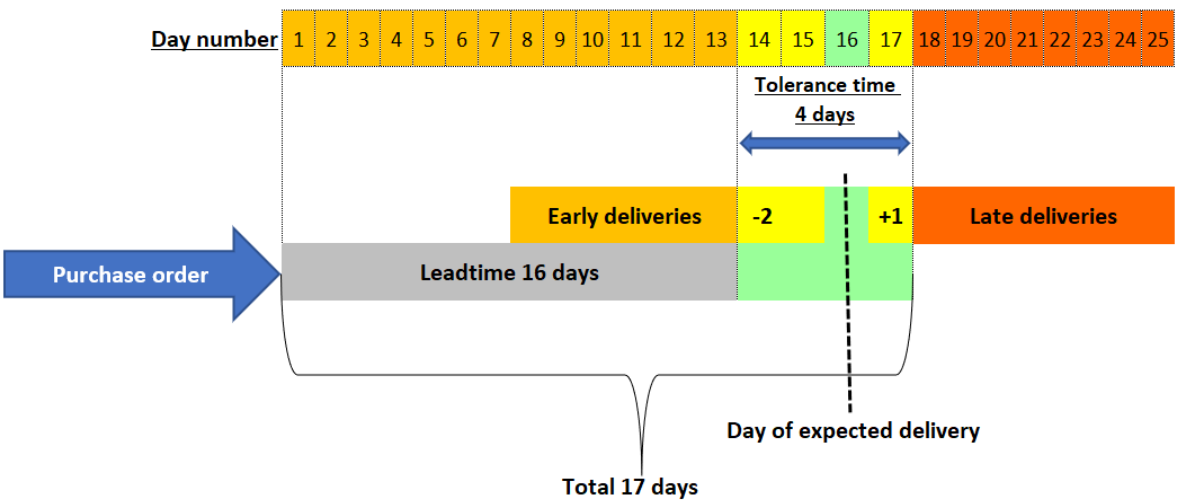
Delivery performance from the suppliers is a KPI at Thermia and the yearly target is currently 90%.

The KPI is measured considering the agreed lead time from the order date to the date of expected arrival (availability).

The arrival of the goods within the tolerance period falls within the OK range for delivery precision.

Early (orange) and late (red) falls outside the acceptance range for OK delivery precision.

In the example below, the supplier has a lead time of 16 days and a tolerance period of 4 days, but both lead time and tolerance period may vary depending on how far away geographically the supplier is from Thermia.



5. Delivery

This page outlines the specific packaging specifications required for the safe and secure delivery of components to Thermia.

Packaging specification for Serial Delivery of Goods to Thermia AB, Sweden

SPECIFIC REQUIREMENTS

Creator, location, date						
Supplier name						
Thermia article number						
Thermia Material Description						
Pallet Packaging	Pallet type	No of collars	Max Weight	Max height	Length	Width
Inside Packaging	Box type	No of packages	Units per package	Length	Width	Height

Packaging Sustainability

One-time packaging ☐ Returnable ☐ Recyclable ☐ Return Procedure agreed ☐

Other specific requirements:

CONFIRMATION FROM SUPPLIER

Date	Signature	Name

5.1. General Requirements

PACKAGING SPECIFICATION

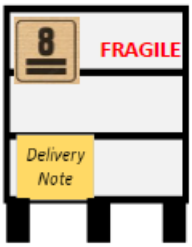
The general requirements stated apply to all deliveries unless otherwise specified in the specific requirements outlined on the previous page. It is important to carefully review and adhere to the specific requirements to ensure compliance with our delivery standards.

DOCUMENTS

Delivery note must be present with all incoming goods.
Shall at least state:
* Thermia PO number
* Thermia article/part number
* Quantity of each item

Mark with "**Heavy**" or "**Fragile**" if so is the case.

Mark with max amount of stackable items/pallets, if stackable



Place delivery note in the lower left corner

PALLET

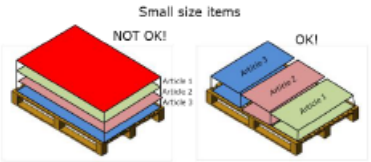
Standard size should be EUR-pallet, 80 x 120 cm.

The pallet must be complete & clean.

EPAL EUR

PACKAGING

Pack one article per pallet
If agreed upon, smaller items can be mixed on one pallet
If mixed, mark each box with Thermia article number



Packaging must be **steady and consistent**,
not vary from time to time!

Must be able to remove collars without goods falling apart.

Must be able to load by truck, without rearranging.

Constituents of packaging must **separate easily**. E.g. cardboard glued to wood is not allowed.

If packaging material of non-processed wood, mark in accordance of ISPM 15 regulations.

ISPM 15 CERTIFIED

5.2. Packaging Types and Specifications

This is an overview of the different packaging types utilized within Thermia.

The packaging types are categorized based on their specific designations. Please refer to the following descriptions to further understand the different packaging options available.

The dimensions provided below are listed in the order of Length (L), Width (W) and Height (H).

All measurements are in millimeters (mm).

Euro Pallets (E):

Name	Code	Length (mm)	Width (mm)	Height (mm)
EUR Pallet	E	1200	800	144
EUR Pallet 1 Collar	E1	1200	800	335
EUR Pallet 2 Collars	E2	1200	800	530
EUR Pallet 3 Collars	E3	1200	800	725
EUR Pallet 4 Collars	E4	1200	800	920
EUR Pallet 5 Collars	E5	1200	800	1120

Half Pallets (H):

EUR Half Pallet	H	600	800	144
EUR Half Pallet 1 Collar	H1	600	800	335
EUR Half Pallet 2 Collar	H2	600	800	530

Plastic Containers (P):

Plastic Container - Half	P1	1200	800	335
Plastic Container	P4	1200	800	800

Carton Pallets (C):

Carton Pallet Small	C2	1200	800	530
Carton Pallet Large	C5	1200	800	1120

Plate Stands (PL):

Plate Stand Small	PL1	1200	800	1900
Plate Stand Large	PL2	1200	1100	1900

6. Supplier Claims

GENERAL

Thermia will raise a complaint when there is a deviation from the agreed specification regarding the delivered product. The issue could have occurred either in production or at the end customer.

If only a few parts are faulty, we request a credit for those parts.

When dealing with a larger quantity of defective parts, we require that the supplier conducts an investigation accompanied by an 8D report.

Containment measures must have been implemented with a thorough examination of the to ensure that we do not receive any additional subpar articles.

8D REPORT

An 8D report is a problem-solving process with eight steps used to identify, analyze, and resolve issues in industries. It aims to improve product quality and drive continuous improvement. These are the different parts:

- **D1: Problem statement**. Clearly define the issue or problem encountered.
- **D2: Team formation**. Assemble a cross-functional team to address the problem.
- **D3: Immediate actions**. Identify and implement short-term measures to contain the issue.
- **D4: Root cause analysis**. Analyze the underlying causes of the problem.
- **D5**: **Corrective actions**. Develop and implement long-term solutions to address the root causes.
- **D6: Verification**. Confirm the effectiveness of the corrective actions taken.
- **D7: Preventive measures**. Identify and implement measures to prevent recurrence of similar issues.
- **D8: Closure and team recognition**. Close the 8D report and recognize the efforts of the team involved.

Chapter 6.1 provides a more detailed description of the essential components of an 8D Report.

DPPM (Defects Parts Per Million)

Every month Thermia examine the DPPM per supplier to measure the quality performance and precision. When a part exhibits significant deviations, we seek corrective actions for it.

6.1. 8D Report

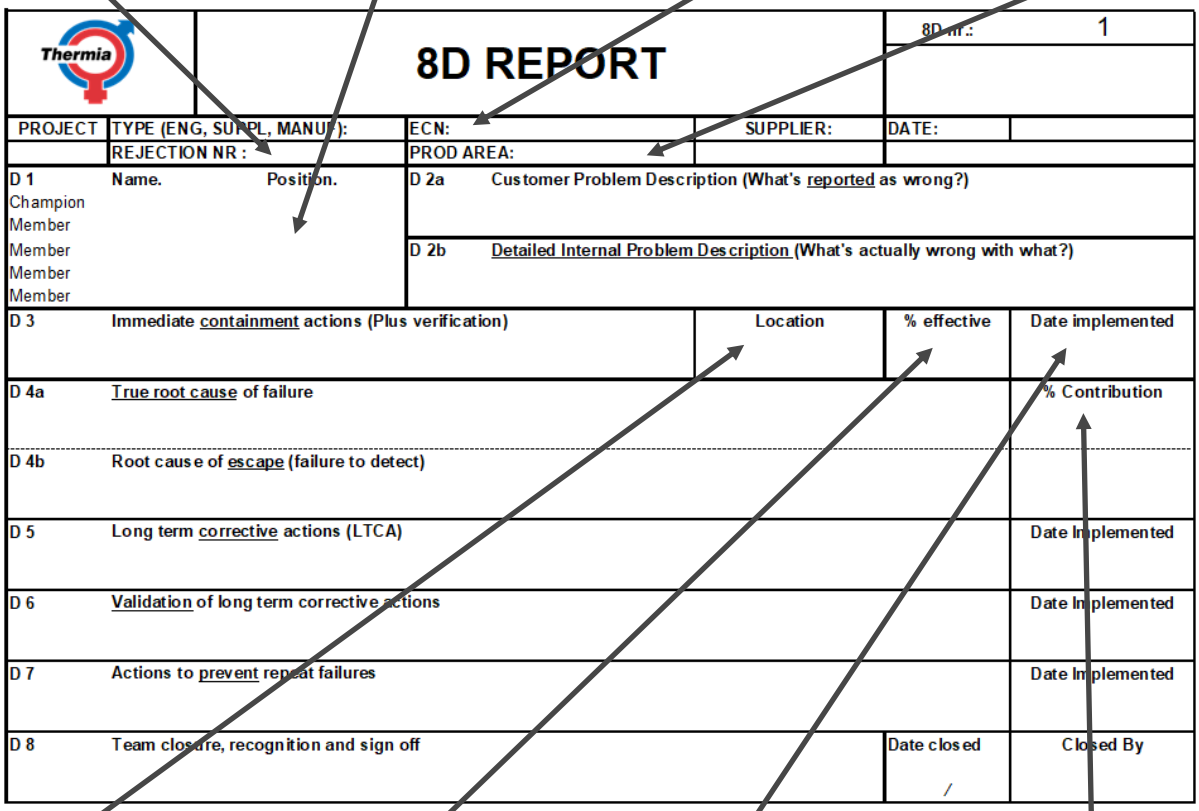
In the following, we outline some key components of an 8D report.

The identification number assigned to a rejected or non-conforming part.

The organizational roles or positions responsible for leading and participating in the process.

Engineering Change Number indicates the change order number, if applicable, for the specific part that is identified as faulty.

The specific production area or department where the problem was identified or originated.



Thermia	8D REPORT			8D-nr.: 1	
PROJECT	TYPE (ENG, SUPPL, MANUF):	ECN:	SUPPLIER:	DATE:	
	REJECTION NR :	PROD AREA:			
D 1 Champion Member Member Member Member	Name. Position.	D 2a Customer Problem Description (What's reported as wrong?) D 2b Detailed Internal Problem Description (What's actually wrong with what?)			
D 3	Immediate containment actions (Plus verification)		Location	% effective	Date implemented
D 4a	True root cause of failure				% Contribution
D 4b	Root cause of escape (failure to detect)				
D 5	Long term corrective actions (LTCA)				Date Implemented
D 6	Validation of long term corrective actions				Date Implemented
D 7	Actions to prevent repeat failures				Date Implemented
D 8	Team closure, recognition and sign off			Date closed /	Closed By

The section where the root cause analysis and correction are identified and implemented.

The measure of how successful the implemented correction were.

The specific date when the correction were implemented.

The percentage of a specific root cause or factor in contributing to the problem being investigated and resolved.