

SUPPLIER LOGISTICS MANUAL Version 6.0



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Preamble

Competition in national and international markets has intensified significantly in recent years. Growing customer expectations in terms of quality, sustainability and resilience mean that our company and the entire supply chain face increasingly demanding challenges.

Traditional logistics operations have transformed into an integrated, customer-focused management function, that constitutes a strategic success factor in our company's competitiveness. The companies in the Bosch Group depend on cooperation with reliable, expert, and customer-focused suppliers.

Scope of this Supplier Logistics Manual

This supplier manual sets out the conditions for delivery of products by Supplier (hereinafter referred to as "**SUPPLIER**"). The rules it contains shall apply in supplement to the agreements made with SUPPLIER relating to the delivery of products (e.g. a corporate agreement on products and raw materials (EZRS), an A-supplier agreement, multi-year contract, (price) agreements, orders; hereinafter referred to as "**Supply Contract**").

Deviations from or additions to this supplier manual shall be agreed in writing between SUPPLIER and BOSCH.

All companies of the Bosch Group (Robert Bosch GmbH and all companies directly or indirectly controlled by Robert Bosch GmbH (hereinafter referred to as "**BOSCH**") are authorized to apply the regulations set out in this supplier manual in the execution of supplier logistics with the SUPPLIER, or whichever of its group companies are responsible (affiliated enterprises pursuant to section 15 of the German Stock Corporation Act (AktG)), from whom they purchase products.

The term "controlled", as used above, means that the Bosch Group holds, directly or indirectly, over 50 percent of the voting rights in a business enterprise, and can determine its management.

The rules set out in this supplier manual do not apply for Bosch Siemens Hausgeräte (BSH).

SUPPLIER is responsible for the quality of its products and for ensuring compliance with the requirements and rules set out in this supplier manual.

This version of the supplier manual replaces former versions.

1 Information management in logistics

Constructive cooperation between SUPPLIER and BOSCH requires targeted, accurate communication of information. The key elements of this are:

- > Prompt and unsolicited notification of any changes relating to the supply relationships
- Compliance with and monitoring of agreements made
- Use of state-of-the-art communication

1.1 Communication between SUPPLIER and BOSCH

1.1.1 Points of contact

SUPPLIER and BOSCH shall appoint specific persons to be responsible for acting as points of contact. SUPPLIER shall appoint its contact by name, including position, e-mail address, landline office telephone number, and mobile phone number, along with a telephone number to use in emergencies (hereinafter referred to as "**Emergency Hotline**").

The language of communication is English. SUPPLIER and BOSCH may also agree on using the language of the BOSCH plant supplied.

1.1.2 Availability

Outside of its standard local working hours, SUPPLIER shall remain available via the Emergency Hotline during the production hours of the BOSCH plant supplied. The emergency contact reached by way of the Emergency Hotline shall have access to decision makers who can authorize immediate emergency response actions.

1.2 Information transmission via EDI

As a general rule, prerequisite for a supply relationship with BOSCH is the transmission of information via *electronic data interchange* (EDI). SUPPLIER shall use EDI to receive information from BOSCH and to send information to BOSCH. If SUPPLIER has no existing EDI link, upon request by BOSCH, EDI shall be agreed and implemented within 3 months after signature of this document by SUPPLIER.

The technical requirements and approved message formats are agreed in the EDI contract. Further information can be found in the BOSCH EDI brochure, which can be downloaded from <u>www.edi-service.bosch.com</u>.

When using WebEDI, the data is transmitted via the internet platform SupplyOn (available at http://www.supplyon.com). SUPPLIER shall bear the cost of using SupplyOn.

The following business processes, in particular where they are used, shall be performed with EDI support:

- Transmission of scheduling agreement call-offs or single purchase orders from BOSCH to SUPPLIER.
- Transmission of single purchase order acknowledgements (confirmations) from SUPPLIER to BOSCH
- Transmission of the delivery, packaging, and transport data via an advanced shipping notice (ASN) from SUPPLIER to BOSCH.
- Transmission of the KANBAN call-offs (JIT-Call).
- ► Transmission of vendor-managed inventory (VMI) information.
- Self-billing invoicing (SBI) (if legally permitted, on a country-specific basis)
- If delivery is destined for consignment stock: Withdrawal reports and stock movement list (unless otherwise regulated)
- Empties management (if empties management system applicable)
- Transmission of e-invoices (electronic invoicing)

1.3 Advanced Shipping Notice (ASN)

For each shipment dispatched or picked-up, SUPPLIER shall send an advance shipping notice (ASN) to BOSCH using EDI. The information in the ASN must match the information in the delivery note.

ASNs shall be sent directly after dispatch / pick-up of the goods from SUPPLIER to BOSCH.

SUPPLIER shall use the message format ODETTE GLOBAL EDIFACT. Deviating message formats might be used after alignment with BOSCH.

For any new EDI connections, the transfer protocol OFTP2 (Odette file transfer protocol) or AS2 (Applicability Statement 2) shall be used, as well as message format GLOBAL EDIFACT based on the ODETTE recommendations. Detailed information on what data-entry fields in the ASN are specified individually as mandatory or optional fields and to be communicated accordingly by SUPPLIER can be noted from the document "Message Implementation Guideline: GLOBAL DESADV D.07A" and the associated appendix, which can be downloaded from the EDI Bosch Portal at https://www.edi-service.bosch.com/ and will be agreed in the EDI-contract.

If a classic EDI connection is not possible, WebEDI via SupplyOn is mandatory.

In case of Global Transport Label (GTL)-application (see section 4.3.2) SUPPLIER shall provide the Unique ID from the GTL included in the accompanying ASN.

SUPPLIER shall provide BOSCH packaging material number and packaging structure in the ASN according to Message Implementation Guideline GLOBAL DESADV D.07A.

2 Delivery concept variants and order processing

BOSCH shall notify SUPPLIER of its needs and requirements by the way of the delivery concept variant used by BOSCH.

Based on this, SUPPLIER will ensure that:

- Its sub-suppliers deliver the appropriate primary materials
- Its production capacity and that of its sub-suppliers are adequate to cover the previewed material requirements forecasts, and the previewed quantities and time frames are forwarded to the sub-suppliers without undue delay, and
- Supply shipments are delivered to BOSCH on schedule

2.1 Delivery concept variants

- KANBAN (ship to line (STL) or ship to supermarket (STS))
 → preferred concept
- 2. Consignment with VMI (Vendor Managed Inventory) or without VMI based on Call-Offs | ROP Pull (*reorder point pull*).

→ If not otherwise agreed or legal restrictions apply, mandatory for Automotive-Business / preferred for other divisions

- 3. Call-offs | single purchase orders (*PO*) | *reorder point pull* (ROP Pull):
 - → Call-offs are communicated on a rolling basis. The most recent call-off is relevant and supersedes previous call-offs.
 - → For the division DC the "Statistical delivery date" according to section 10 applies

Upon request by BOSCH, separate dedicated contractual agreements shall be concluded to implement KANBAN, VMI and Consignment.

Order processing and tracking

Arrival and pick-up dates are usually specified for call-offs or single purchase orders. For Incoterm Free Carrier (named place of delivery) (FCA), SUPPLIER delivers the goods by the pick-up date either at the SUPPLIER premises loaded onto the collecting vehicle or at the named place of delivery. If in call-offs or single purchase orders only the arrival or delivery date is indicated, SUPPLIER shall take into account the time needed for shipment.

For shipments delivered to Incoterms Delivered At Place (DAP) or Delivered Duty Paid (DDP), the arrival date at the Bosch plant supplied is decisive.

SUPPLIER checks the incoming order for accuracy, and plausibility (e.g. SUPPLIER name, part number, quantity, date) and notifies BOSCH immediately of any discrepancies. SUPPLIER operates a continuous internal order tracking system. SUPPLIER is able to provide information about production progress at any time. SUPPLIER ensures that sub-suppliers operate a transparent end-to-end order tracking system as well.

2.2 Flexibility and release periods

2.2.1 Production and material releases

Generally, 4 weeks for the production release and 8 weeks for the material release based on the specified quantity and pickup-date (for Incoterm FCA) are given.

For shipments dispatched based on Incoterms DAP or DDP, the aforementioned release time frames are based on the actual ex-works shipping date at SUPPLIER.

Any deviations from these time frames are subject to an agreement between SUPPLIER and BOSCH. Any and all changes regarding production and material release must be made in writing.

For goods already in transit, the arrival date usually isn't changed. Any exceptions to this rule are subject to clarification and agreement between BOSCH Logistics and SUPPLIER.

Required quantities that go beyond the production and material release periods are non-binding planned figures (forecasted previews) which SUPPLIER may use as a basis for adjusting its production capacity.

The production and material releases for goods controlled by VMI are oriented analogously with to the aforementioned time frames based on the most recent production planning transmitted via SupplyOn.

The corresponding quantities of an average stock between the minimum and maximum levels based on the consumption quantities of the most recent transmission shall be applied retrospectively for the releases.

For supply deliveries within the Drive and Control Technology (DC) division, deviating dates, time frames, and regulations may be agreed to, for example in "part-specific agreements" (TLV: "Teilespezifische Vereinbarungen").

2.2.2 Minimum order quantities

Minimum order quantities are not permitted unless BOSCH agrees to a minimum order quantity in exceptional situations.

2.2.3 Flexibility and capacity management

The regulations defined in the Supply Contract shall apply.

If requested by BOSCH, SUPPLIER enters its production capacities in a capacity-management-tool provided by BOSCH. In case of a short fall under the requested quantities, SUPPLIER ensures a deviation-management to comply with short-, mid- and long-term delivery capacity.

2.2.4 Ramp-up and phase-out control

BOSCH expects increased flexibility from SUPPLIER in the ramp-up and phase-out phases. The ramp-up and phase-out quantities and dates must be agreed between BOSCH and SUPPLIER in good time. The delivery concept variant shall be discussed and, if necessary, adapted based on the requirements of the given situation.

3 Packaging

3.1 Packaging specifications

3.1.1 Packaging design criteria

In general, the packaging for shipments between BOSCH and SUPPLIER shall be designed on the basis of economic, quality, and environmental criteria. The packaging concept proposed by SUPPLIER is subject to approval by the BOSCH-contact prior to the first serial delivery.

SUPPLIER – in case SUPPLIER is responsible for the packaging design – shall design the packaging concept and quality such as to ensure product integrity during transport, transshipment, and storage. The packaging itself shall not pose any hazard to people or the environment.

Requirements on packaging design and design acc. to the **HAR³ID** (optimize Handling, Avoid, Reduce, Reuse, Recycle, Increase efficiency, Data) principles. The fulfillment of the following requirements and HAR³ID principles is mandatory.

Optimized Handling

- Easy handling of Packaging during opening and closing, and for repacking operations.
- Loading units may not have any protruding or jutting labels or strips; cardboard boxes must be dimensionally stable and have correctly folded cover flaps.
- Mixed pallets are permitted but require prior agreement with BOSCH and must be clearly labeled as mixed pallets. Posting and non-mixed storage must be possible.
- International symbols shall be used to label goods that are subject to special handling.
- Gross weight limit per loading unit (as defined in section 10) maximum 1,050 kg (2,315 lbs) for worldwide deliveries excluded North America. For deliveries to North American locations, the gross weight limit per

• The gross weight limit for the manual handled packaging is 15 kg maximum (33 lbs). Regional legal requirements need to be considered.

Avoid

- Avoid strapping and stretching whenever possible (proper packaging design can prevent additional strapping).
- Avoid (multi-)colored and printed packaging (unless legal or customer requirements available).
- Avoid single use packaging whenever possible and not beneficial for the environment over its entire lifecycle.
- Avoid composites and prefer mono materials.
- Avoid empty space in packaging and use of excessive filling material.
- Avoid third-party labels (e.g. forwarder labels, SUPPLIER internal labels).
- Avoid loose or overhanging/ protruding labels/ straps.
- Avoid covering of labels by straps or edge protection.

R³ Reduce, Reuse, Recycle

- Reduce the variety of packaging materials to pack one product.
- Reduce the weight of packaging and make use of recycled materials without affecting the functional packaging requirements. Consider lightweight alternatives.
- Reuse Packaging and Packaging materials whenever possible and reasonable.
- To Contribute a Circular Economy a Packaging must:
 - be suitable for recycling in the country it's being shipped to.
 - be designed in a way that it can be separated easily (without any tools and significant time effort) in its respective individual material at the End of Life (e.g. avoid glued packaging, reinforcement of corrugated boxes with wood).
 - follow the waste management legal requirements (marking/recycling codes, sorting possibilities, effective recycling).

Increase efficiency

- in principle, all packaging shall be designed as stackable (on top load minimum as weight of bottom load carrier).
- Increasing packaging density in all packaging units, reduce empty space and maximize volume utilization according to all means of transportation.

Data

- All required data to fulfill legal or efficiency requirements need to be provided by supplier.
- The given format from Bosch needs to be considered.

3.1.2 Responsibility for packaging design

The packaging concept (for outer, inner and alternative packaging) shall be defined at an early stage during the development phase - in coordination and agreement between BOSCH and SUPPLIER. BOSCH decides in accordance with the awarded business about the responsibility for packaging design and the ownership of returnables.

In case of one-way packaging SUPPLIER shall procure the approved packaging (containing also all packaging aids needed) at its own costs. Generally, Bosch covers the cost of the packaging by way of the product price. The packaging costs shall be itemized separately in the quotation. The design of the packaging cannot be changed without written agreement from packaging engineering of all the plants affected by this change.

Prior to BOSCH approval, the packaging must be adequately tested (see section 3.2.1).

Alternative packaging solutions (as defined in section 10) may be used in exceptional cases, but only in coordination and agreement with BOSCH.

3.1.3 Packaging data sheet and packaging approval process

The BOSCH Packaging Data Sheet (PDS) (see attachment 11.1) is the agreement about packaging concept between BOSCH and SUPPLIER. Upon request by BOSCH, PDS is mandatory for all packed goods that are delivered to BOSCH.

A (SUPPLIER is responsible for packaging design): SUPPLIER needs to provide the packaging data sheet according to Attachment 1. Additionally, the material composition (virgin material/ recycled material/ plastic content) per packaging material needs to be provided in the PDS until further notice (SupplyOn-tool for data collection is planned as of 2025).

B (BOSCH responsible for packaging design): BOSCH will provide the prefilled packaging data sheet to SUPPLIER.

Each delivery which is not according to the PDS or causing any quality defects, shall be recorded as logistics failure (nonconformity) (see section 6.1) and can result in a claim. BOSCH can charge SUPPLIER for any additional costs arising within this context, including any additional BOSCH-internal costs.

3.1.4 Permitted and non-permitted materials

The table below represents an overview of the possibilities for using various packaging materials. These materials shall be used in accordance with BOSCH-Standard N 2580-1 "Prohibition and declaration of substances" and REACH; see link https://www.bosch.com/company/supply-chain/information-for-business-partners

✓ preferred

0 only with approval from the BOSCH contact

🗴 forbidden

Labeling according to DIN Standard 6120 (of the German Institute for Standardization (DIN)) or similar standards in the regions, such as ASTM D7611 for North America.

Composite material	s (as d	defined in section 10)			
	\checkmark	✓ -			
General	0	Only with approval from the BOSCH contact			
	×	-			
Plastics					
	\checkmark	PE, PP, PS, ABS, PET			
One-way	0	EPS, EPP, EPE, cross-linked foams, ABS-TPU			
	×	PUR, EPS chips and spacers, PVC			
	✓	ABS, PE, PP, PS, PET, EPP, EPE			
Returnable	0	ABS-TPU, PVC, foamed EPS			
	×	-			
	\checkmark	PE, sticker/label and adhesive tape out of the same material,			
Films, bags and		Intercept-/Volatile Corrosion Inhibitor (VCI) – films and bags as corrosion protection			
sacks	0	-			
	×	Sticker/label and adhesive tape made out of different materials			
Paper and cardboar	d				
	\checkmark				
General	0	Use of non water-soluble coatings or adhesives, e.g. wax, paraffin, bitumen, and oil paper or impregnated papers and cardboards, fabric adhesive tapes, fiberglass-reinforced paper adhesive tapes shall be reduced to a necessary minimum.			
	×				
Corrosion	~	VCI papers with demonstrated recycling capability with paper/cardboard. The VCI materials used shall comply with the German Technical Rules for Hazardous Substances (TRGS) 615, and be nitrite-free to prevent formation of nitrosamine			
protective paper	0	· ·			
	×	-			
Tapes and strapping	3				
	 ✓ 	Tape and strapping bands out of PP, PET and paper			
General		Steel strapping and metal clamps <u>for heavy loads</u> only with special approval from the BOSCH contact, stretch wrap			

	0			
	×	Steel strapping and metal clamps for non-heavy loads For North America: Staples for closure are not allowed		
Wood				
General	✓ 0 ×	International Plant Protection Convention (IPPC) standard (only heat treatment permitted). Pallets shall be heat treated as whole Country-specific requirements must be met, see Internet: <u>https://www.IPPC.int</u> , <i>International</i> <i>Standards</i> for Phytosanitary Measures (abbr.: ISPM15) : <u>http://pflanzengesundheit.jki.bund.de/index.php?menuid=48&reporeid=40</u> Corrugated pallets Chemical pressure impregnation Press board pallets (INKA pallets), coated and painted wood and wood wool		
Padding and shoc	k-absor	bing materials		
	\checkmark	Usage is to be minimized as effectively as possible by adjusting the quantities of parts in packaging		
General	0	Packaging materials containing foodstuff with ISCC PLUS certification replacing EPS		
	×	Chips and filling materials containing foodstuffs (e.g. corn starch, straw, bark) Empties space incl. filling material in packaging must not exceed 40%		
Glue and Ink				
✓ Water-soluble glues and inks				
General	0			
	×	Content of toxic chemicals such as PFAS, ethanol, xylene, N-hexane, toluene, etc.		

Figure 1: Permitted and non-permitted materials

3.1.5 Requirements for electrostatic discharge (ESD) protection

Components that are sensitive to electrostatic discharge (electrostatic discharge sensitive devices, or ESDS for short) must be protected against charging and rapid discharge according to the classification of their damage risk. If no external protection has been fitted, the electrostatic sensitive device/component shall be prevented from coming into contact with any electrostatically chargeable materials.

It shall be ensured at all times that ESDS components are not exposed to any risk in terms of ESD during transportation and storage. SUPPLIER shall strictly comply with the relevant requirements for ESD-proof packaging set out in DIN EN 61340-5-1.

All ESD packaging materials shall be labeled with the ESD symbol.

The requirements for ESD packaging are determined by the relevant ESDS components to be packaged. The use and scope of ESD packaging are specified by BOSCH in coordination and agreement with the responsible ESD coordinator and SUPPLIER.

3.1.6 Corrosion prevention and moisture control

Materials or products susceptible to corrosion must be protected during transportation and storage according to the prevailing external conditions (e.g. high relative humidity or for sea transportation). Corrosion protection medium has to be agreed between BOSCH and SUPPLIER and documented in the PDS.

3.1.7 Packaging for dangerous goods or hazardous substance goods

For each location and material number, the packaging for dangerous and hazardous goods is subject to approval by the BOSCH hazardous goods officer before the first shipment of products. This also applies for pilot series and sample deliveries. SUPPLIER shall always affix the appropriate warning symbols to the packaging at clearly visible locations. The SUPPLIER shall always comply with the laws and regulations applicable for dangerous and hazardous goods in the respective countries. For reference see: <u>part3.pdf (unece.org)</u> https://unece.org/DAM/trans/danger/publi/unrec/English/part3.pdf

3.1.8 Delivery specifications

SUPPLIER shall pack the packages unmixed, meaning that part numbers of different production batches, revision level, shelf life, or countries of origin must be packaged separately. Products of differing modification or revision levels may not be combined in a single package.

SUPPLIER shall combine the individual packages to form a transportable loading unit on the pallet. Loading unit shall be secured against slipping during transport and protected against damage (e.g. adequate strapping, paper corner boards or plastic strap guards).

For deliveries on pallets, the top layer shall be flat (pyramid loads are not allowed). For serial deliveries it is not allowed to fill up the transportable loading unit with empty boxes or KLTs. Exceptions need to be approved by BOSCH. Overall product dimension must not exceed the packaging pallet dimension. Packaging unit should not oversize the pallets. The transportable loading unit shall be closed with a cover/ lid on the top layer. Appropriate measures shall be taken to prevent damage.

Pallets shall be designed as 4-way pallets with three runners. For lower quantity volumes, any variances shall be agreed in advance with the BOSCH contact.

Pallets must be designed as stringer or block construction.

Bosch Division Building Technologies (BT) makes also use of ISO pallets.

3.2 One-way packaging

3.2.1 Verifying evidence of packaging quality if SUPPLIER is responsible for packaging design

To rule out quality risks during transportation, transhipment operations, and storage, SUPPLIER, upon request by BOSCH, shall provide verifying proof of the packaging quality (e.g. material specifications, transport testing, washing characteristics.) including test certificates.

Transport handling unit on top load and the box stack compressive strength shall be conducted acc. to DIN 55440-1or similar standards in the regions by an accredited testing institution.

3.2.2 Marking of handling units (HU) by SUPPLIER

The marking (e.g. labeling) of handling units (HU) shall comply with DIN EN ISO 780. The pictograms e.g. stackability on top load, shown below shall be placed in easily visible locations on all four sides of the HU with a minimum height of 160 mm.



Figure 2: Marking-pictograms

All used packaging materials have to be marked in accordance with recipient countries laws, e.g. EU-Directive 2018/852 and amending directive 94/62/EC, ASTM D 5445-05.

3.2.3 Specific requirements depending on transportation type

Specific requirements may differ depending on the type of transportation.

Land / Road

- Preferred external dimensions: L1200 x W800 x H1000 mm
- ► In North America special dimension are:

- o preferred L1219 x W1143 x H864
- o preferred L812.8 x W762 x H864
- o maximum L1219 x W1143 x H1067

Air freight

As standard transport type: Light version of packaging to be considered in PDS.

As exceptional transport type: light version of packaging to be agreed case by case with BOSCH.

For air freight, the use of sea freight pallets is also permitted.

Rail

- ▶ Requirements about a vibration test shall be agreed between SUPPLIER and BOSCH.
- ► The preferred external dimensions for optimum utilization of shipping container loading volume are:
 - o L1175 x W750 x H460/750/1045mm
 - L1140 x W790 x H460/750/1045 mm
 - o L1140 x W980 x H525/700/1050 mm
 - L1140 x W980 x H630/840 mm

Sea freight

Due to long transportation distances and times, and changing requirements (climatic zones, mechanical stress, moisture, etc.), particular attention must be given to ensuring sea freight is suitably packaged. Sea freight packaging shall comply with VDA recommendation 4525.

- ► The preferred external dimensions for optimum utilization of shipping container loading volume are:
 - o L1175 x W750 x H460/750/1045mm
 - L1140 x W790 x H460/750/1045 mm
 - o L1140 x W980 x H525/700/1050 mm
 - L1140 x W980 x H630/840 mm
 - In order to ensure an optimum utilization of shipping containers, a loading unit should not have any external dimensions longer than 5.7m, provided the packaged product allows such a limit.

Deviating dimensions need to be agreed with BOSCH.

3.3 Returnable packaging

3.3.1 Specification depending on type of returnable packaging

Euro pallet or Euro pallet cage

The preferred process is for exchanging full containers for empties and conducting empties accounting directly between BOSCH and SUPPLIER. If the supply of Euro pallets / Euro pallet cages involves an exchange process with a logistics service provider (European Pallet Association e.V.; quality criteria: Internet: www.epal-pallets.org), SUPPLIER is responsible for the exchange process.

SUPPLIER-owned returnable empties

For SUPPLIER owned returnable packaging, SUPPLIER and BOSCH will agree upon loop sizing and determine the quantity of required empties.

BOSCH-owned returnable empties

BOSCH covers the demand for empties for the transportation time in both directions. Unless agreed otherwise, SUPPLIER will receive BOSCH-returnable empties to cover the local BOSCH production demand of three (3) days without BOSCH charging SUPPLIER an usage fee for this. For use of BOSCH-returnable empties exceeding the agreed inventory, BOSCH may charge the SUPPLIER a usage fee. The usage fee is calculated based on the inventory data of the empties accounts in the empties management system (see section 3.3.2).

Returnable empties located in the BOSCH consignment warehouse are excluded from the usage fee.

If SUPPLIER uses less BOSCH-returnable empties than described/ agreed above, there is no reimbursement by BOSCH.

Unless otherwise agreed, SUPPLIER subject to prior approval by BOSCH, may provide BOSCH-owned returnable empties to its sub-suppliers for their BOSCH-specific production processes. The BOSCH-returnable empties used by the sub-suppliers for their BOSCH-specific production processes shall be added to the empties account of SUPPLIER and, if necessary, also debited to SUPPLIER in accordance with the regulations described above. SUPPLIER is liable to BOSCH for damage caused to the BOSCH-returnable empties by SUPPLIER or its sub-suppliers. SUPPLIER shall be responsible for any fault or culpability of its sub-suppliers to the same extent as it is for any fault or culpability of its own.

SUPPLIER should concentrate the delivery or collection of empties to one delivery/ pick up location.

3.3.2 Empties management

For the purpose of empties management, SUPPLIER will indicate the ten-digit BOSCH packing material number and corresponding quantity on the delivery note for every delivery for BOSCH-owned returnable packaging.

If exchange pallets are used, these must also be listed on the delivery note.

SUPPLIER and BOSCH - or an LSP contracted by BOSCH – shall maintain empties accounts and reconcile the account balances with their direct exchange partners. SUPPLIER will use the empties management system stipulated for this purpose by BOSCH.

The account balances shall be provided to SUPPLIER monthly. Any complaints must be submitted to the BOSCH contact within 14 calendar days, including provision of a document copy (of the delivery note). Otherwise, the stated inventory is considered as correct and confirmed by SUPPLIER. Quantity differences must be clarified by SUPPLIER with support from the BOSCH contact or the LSP. Any outstanding quantity differences are to be reconciled with the replacement value based on the principle of causation.

SUPPLIER shall perform inventory counts of all BOSCH-returnable packaging every year on a date specified by BOSCH. Within the scope of the quantity differences established during such inventory, the SUPPLIER shall reconcile any shortcomings with the replacement value.

3.3.3 Provision and storage of BOSCH-owned returnable empties

Where a 1:1 (without time delay) exchange of full containers for empties between BOSCH and SUPPLIER is agreed, SUPPLIER shall request BOSCH-returnable empties in good time (taking into account the lead times agreed with the exchange partner) using the designated empties management system.

Within one country or within EU:

BOSCH returnable empties are supplied free of charge to the agreed unloading point.

For EU-customs purpose: Permanent, indelible marking (e.g. waterproof sticker, print, branding) of returnable empties with complete name of the legal entity of one involved party after alignment with BOSCH.

Deliveries crossing customs borders

• Returnable empties without goods direct to SUPPLIER: Either Incoterm FCA or DAP has to be agreed. The export customs clearance in the sending country is done by BOSCH, import customs clearance in the receiving country to be done in the name and on behalf of SUPPLIER.

• Returnable empties with or without goods from SUPPLIER to BOSCH:

• For deliveries of returnable empties including goods the agreed Incoterm of goods supply applies.

- For deliveries of returnable empties without goods either Incoterm FCA or DAP must be agreed. The export customs clearance in the sending country is done by SUPPLIER, import customs clearance in the receiving country to be done in the name and on behalf of BOSCH.
- Upon request of BOSCH, SUPPLIER has to create a pro-forma invoice for the returnable empties with Ship-toparty (BOSCH-receiving plant) and Sold-to-party (BOSCH-receiving plant), see section 4.2.2 "Customs documents".

In case SUPPLIER exports returnable empties out of the EU, upon request the Export Declaration and accompanying documents have to be provided to BOSCH.

The following deviating regulation shall apply for the DC division: Returnable empties are supplied free of charge only within Germany.

SUPPLIER shall check the returnable empties upon receipt and report any deficiencies or defects identified (e.g. quantity differences, damage, etc.) immediately to the BOSCH contact, indicating the delivery note concerned and providing photographic evidence, and a short description of the complaint. Subsequent corrective action shall be agreed with the BOSCH contact on a case-specific basis.

In case of returns crossing customs borders due to deficiencies or defects of the returnable empties, the process "Returnable empties with or without goods from SUPPLIER to BOSCH" has to be considered.

SUPPLIER shall store and handle returnable empties in a safe, clean and dry environment to avoid any contamination.

3.3.4 Repairs and scrapping

SUPPLIER may only scrap or repair Bosch-specific load carriers given prior consent thereto by BOSCH. The account balance has to be adjusted accordingly.

3.3.5 Cleaning

Responsibility for cleaning differs by region due to the defined standards:

Deliveries BOSCH – SUPPLIER	Cleaning responsibility	Deviations
Within Europe	BOSCH	
Within North America	SUPPLIER	
Within South America	By agreement	Deviations from these miles are exhibited to any end
Within Asia Pacific (including India, China, Japan, Association of Southeast Asian Nations (abbr.: ASEAN)	By agreement	Deviations from these rules are subject to agreement between BOSCH and SUPPLIER
Within Africa	By agreement	
Across regions / others	By agreement	

Figure 3: Cleaning responsibility by region

In line with its responsibility for quality, SUPPLIER shall pack its products only in packaging that meets the cleanliness requirements for its products as well as BOSCH's specifications.

If any follow-up cleaning of empties is necessary once BOSCH has assumed responsibility for cleaning, any possible assumption of costs thereof by BOSCH is subject to prior agreement with BOSCH. SUPPLIER must provide evidence of any fouling or contamination caused by BOSCH.

3.3.6 Marking of BOSCH-returnable packaging by SUPPLIER

No labels, tags, stickers, internal marking or similar items may be affixed to BOSCH returnable load carriers. The standard label holders attached are to be used for marking the load carriers. The product tag is inserted in the label holder or placards and, if necessary, secured with a maximum of two easy to detach adhesive points (complying with VDA recommendation 4500/4504).

4 Transport logistics

The aim is to ensure punctual, complete, top-quality, and tamper-proof delivery of products to BOSCH by SUPPLIER.

4.1 Transports

4.1.1 General requirements

If BOSCH is paying for the freight (standard Incoterm Free Carrier (FCA) - named place of delivery for pick-up), SUPPLIER shall use only the forwarders / freight carriers, and courier companies (LSP) specified by BOSCH. Furthermore, the kind of transport (sea, air, road, rail) given by BOSCH must be kept.

SUPPLIER shall combine multiple deliveries to the same BOSCH unloading point on a single day into a logistically optimized loading/shipping unit and execute delivery using the specified LSP.

SUPPLIER is responsible for ensuring that its products are safely loaded and the packages secured for transport, particularly if a LSP is to assume charge of a fully packed container (swap body).

Load securing shall comply with current worldwide regulations and country-specific legislation and must follow state of the art technology.

If requested, load securing may be removed by the driver.

Third-party goods must not be placed/ loaded in front of the advised BOSCH-goods.

For shipments delivered with Incoterm Delivered At Place (DAP) – named place of destination, the LSP contracted by SUPPLIER shall ensure that customs clearance is performed by the BOSCH defined customs agent respectively according to the country-specific BOSCH-requests.

4.1.2 Incoterm DDP - special requirements to SUPPLIER

The Incoterm DDP must only be used in exceptional cases and shall be mutually agreed.

For deliveries within one country or within the EU, the Incoterm DDP is not applicable and must not be agreed. In exceptional cases of deliveries crossing custom borders under Incoterm DDP, SUPPLIER shall ensure the correct import customs clearance. This means, import customs clearance is done in the name and on behalf of SUPPLIER. Doing so, prerequisites for SUPPLIER in the import country are:

- being registered for tax purposes and
- located, or
- using an indirect customs representative.

If the Incoterm DDP was agreed, the import custom clearance must not be done in the name and on behalf of BOSCH.

4.1.3 Transports processed by a Transport Management System (TMS)

If shipment transportation is processed by way of a Transport Management System (TMS), TMS shall be used and any direct notification to the LSP is no longer permitted. TMS only applies, if Incoterm FCA is agreed. The applicable way of transport can be found under https://www.bosch.com/company/supply-chain/information-for-business-partners/ If not otherwise agreed, SUPPLIER need to use SupplyOn-WebEDI-module to request pick-up. SUPPLIER shall bear the cost for usage, if applicable.

Request of transport-notification via BOSCH TMS:

- 1. SUPPLIER shall issue the notification for each transport via TMS in time according to the agreed cut-off times and check the successful data transmission.
- 2. The transport-notification must contain complete and correct data and documents, especially:
- Complete sender and recipient data (in case of usage of BOSCH TMS via SupplyOn, data is automatically available but has to be corrected in case of a deviating pick-up or deliver-address compared to the call-off).

- Description of the transported material including BOSCH part number and quantity per line-item (in case of usage of BOSCH TMS via SupplyOn data is automatically available, if entry to the transport-notification is done with reference to the order line-item).
- Quantity of packages/handling units, including correct packaging data per package with gross weight, outside dimensions (length, width, height), and stacking factor. In case of usage of BOSCH TMS via SupplyOn with maintained "Packaging Instructions" the data transmission of packaging specifications is usually automated based on the material information.
- Correct dispatch date. For regional TMS upon request, also the delivery date has to be entered.
- In case of a hazardous goods, classification indication according to country-specific regulation.
- In case of crossing customs borders, indication of Harmonized System (HS) Code.
- In case of a special transport ordered by BOSCH, the indication of BOSCH-reference (special transport/ iSTARnumber (see section 5.1)).
- 3. Latest at the day of the pick-up:
- All relevant shipping documents shall be uploaded to the BOSCH TMS. This includes delivery note/ packing list, commercial or proforma invoice, customs documents (Export Accompanying Document (EAD), corresponding to the Master Reference Number (MRN), Shipper's Declaration for Dangerous Goods, etc.).
- The delivery note number shall be added in the transport-notification (not applicable if SUPPLIER sends the ASN to BOSCH via SupplyOn).
- Possible changes of the current delivery compared to the originally planned transport-notification shall be transmitted to BOSCH in the defined form (not applicable if SUPPLIER sends the ASN to BOSCH via SupplyOn as the ASN counts as corrective-message).

Important: Changes of the transport-notification are systemwise only possible within defined time-limits (before the cut-off time) when BOSCH has not ordered the pick-up at LSP yet. For changes afterwards, the defined BOSCH-contact and LSP must be informed thereof immediately. This also applies for changes at the day of pick-up.

In case of (additional) costs arising due to any above-mentioned changes, BOSCH reserves the right to charge them to SUPPLIER in form of a Logistics complaint. The same applies for wrong or uncomplete transport-notifications or the refusal of SUPPLIER to use BOSCH TMS.

Additional request if transports are executed via TMS:

BOSCH provides SUPPLIER with the TMS-contacts to clarify operational questions issues related to BOSCH TMS. This could contain topics regarding transport-planning or operational deviations. In case of a delay, the defined contacts have to be informed by SUPPLIER without undue delay.

For less-than-full-truckload (LCL / LTL) freight shipments, unloading and pick-up times between 8:00 am and 4:00 pm shall be ensured. For full-truck-load or milk-run (FTL/ FCL/ MR) unloading and pick-up times freight can be aligned with the defined contact person.

If there are changes in pick-up/ unloading areas, SUPPLIER shall inform at least 6 weeks in advance of any potential changes or new destinations serving as pick-up and unloading points.

SUPPLIER shall inform the defined contacts about the opening hours before public holidays, if they differ from the regular business opening hours.

In case BOSCH is charged by LSP for any deviation caused by SUPPLIER, BOSCH reserves the right to charge those costs to SUPPLIER after previous notification (see section 6.1). This includes -but is not limited to- dead freight, additional waiting time or demurrage at loading/unloading.

4.1.4 Transports not processed by TMS

If the shipment is not (yet) processed via BOSCH TMS, although BOSCH bears the transport cost, SUPPLIER shall issue a notification to the LSP specified by BOSCH. SUPPLIER shall do so under its own responsibility, so that the on-time delivery to BOSCH is ensured. Exceptions are only permitted subject to prior written consent by the BOSCH contact.

In case of air freight, only standard modes (e.g. B-Service, Economy) to be used. For exceptions the regulations according to section 5.1 shall apply.

The LSP shall collect the shipment within a defined time window or at the time individually agreed between SUPPLIER and the LSP.

The transport documents (CMR, packing list and delivery note) shall be handed over by SUPPLIER or LSP physically or electronically at the receiving location.

This way of transportation mode is not permitted anymore, if BOSCH TMS has been introduced for the respective lane.

4.1.5 Couriers services and package shipments

Packages with weight less than 30kg, which cannot be combined on one pallet, shall be processed using courier companies specified by BOSCH, if the defined packaging specification is kept (combined length and girth as defined in section 10). The regulations governing the choice of packaging must be observed (see section 3.1.2).

SUPPLIER shall observe any differing regional guidelines governing packages and package shipments.

If the implemented TMS allows the notification of package shipments, those are as well to be announced to BOSCH via TMS. BOSCH will deal with the courier to pick-up the package shipment.

Depending on the courier, the corresponding package label is provided for printing. SUPPLIER must mount this label to the shipment.

4.2 Delivery note and transport documents

4.2.1 Delivery note

SUPPLIER shall create the delivery note in the format dictated by DIN 4994/4991. The delivery note number must be unique. The delivery note shall contain, at minimum, the following information:

- SUPPLIER name and sender address
- ► SUPPLIER number as assigned at the relevant BOSCH plant supplied
- ▶ Recipient address (recipient plant supplied, unloading point as per call-off, for example)
- BOSCH part number (PN)
- Total quantity of PN
- ► Number and type of packaging with ten-digit BOSCH packing material number (e.g. packing units, Euro pallets) for returnable packaging
- ▶ Number of exchange pallets used per order (see section 3.3.3)
- Delivery note number also printed as a barcode on the delivery note, format in Code 39 as specified by the International Standards Organization (ISO) and International Electrotechnical Commission (IEC) 16388.
- ▶ BOSCH order number or call-off number including item line
- Package number
- ▶ Batch number and, where applicable, shelf life expiration date (SLED)
- ▶ Revision status of bill of material/parts list, or if the revision identifier is not used: Bill of material/parts list change number
- Mixed HUs
- Clear description of the goods and HS Code, if the shipment crosses customs borders (third countries)
- Specification of kind (e.g. boxes, pallets) and material composition of the packaging material (e.g. wooden pallet, plastic pallet), if shipment crosses customs borders (third countries), that in case of usage of wooden packaging material

national laws for *Phytosanitary Measures* will be met. In case of wooden pallets, the fulfillment of the IPPC requirements must be clearly stated.

- In case of drop shipments and deliveries from preferential origin countries, the declaration of origin (UE/EzU) with reference to the commercial invoice must be linked.
- ► The delivery note number which appears in the transport-notification electronically or in paper must match with the delivery note number on the commercial invoice.

In alignment with the BOSCH plant supplied a deviation process can be agreed. BOSCH aims to switch to paperless delivery notes in the future. The implementation will be agreed between SUPPLIER and BOSCH.

4.2.2 Transport documents

In addition to the delivery note, SUPPLIER normally provides LSP with the following information to record the shipments: transport (shipping) documents and customs documents.

Transport (shipping) documents

Waybill/ CMR according to applicable standards and possible agreements with the BOSCH plant supplied.

For shipments processed through BOSCH TMS, SUPPLIER creates the waybill directly from the TMS. As a result, the Transport Order (TO) number is taken over automatically into the waybill.

Should the waybill not be created via TMS, additionally to the standard reference number the TO must be printed on the waybill.

Customs documents

SUPPLIER shall provide LSP with all documents necessary for customs clearance, i.e. for export in the country of origin, for transit if applicable, and for import in the destination country, in a permitted form (electronic or in paper form, copies or originals, signed or not signed) and at the correct time.

SUPPLIER shall provide all documents in TMS necessary for shipments (third country deliveries) handled via the BOSCH TMS.

Required customs clearance documents include in particular:

- Export declaration
- Transit declaration
- Commercial invoice: The commercial invoice must match the value of the transport documents. Additionally in the invoice must be separately listed all costs, which are not included in the part price (e.g expenses for R&D, licenses, tools, freeof-charge provisions from BOSCH)
- Proforma Invoice: In case of free-of-charge deliveries (e.g. non-chargeable samples), the proforma invoice must match the value of the transport documents. SUPPLIER is obliged to give an usual market price as well as the hint "For Customs Purpose only" (respectively the value of returnable empties as provided by BOSCH. Furthermore, the reason for the fee-of-charge delivery has to be explained (e.g. non-chargeable samples, consignment-deliveries). Proforma invoices for returnable packages must additionally contain the hint "Returnable packaging", kind of packaging and material as well as the BOSCH packing material number.
- Packing list
- Packing declaration
- Certificate of non-preferential origin or proof of preferential origin (included in the applicable free trade agreement). SUPPLIER shall send the original preference proofs (e.g. EUR.1, supplier's declaration, declaration on invoice) by postal service to the LSP customs agent named by BOSCH/ responsible contact.
- ► HS-Code
- ► Any use of a standard invoice format provided by a LSP (e.g. UPS, FedEx etc.) is only permitted, if the above mentioned requirements are met.

In case of container transports via sea freight the documents shall be sent in advance.

Document forms and resulting details required regionally shall be coordinated and agreed with the BOSCH plant supplied.

4.3 Marking (labeling)

4.3.1 General requirements

SUPPLIER shall mark the smallest packing units / packages with a single label (secondary product tag). These secondary product tags must be provided with a barcode label.

Unless otherwise agreed in accordance with GTL-implementation (see section 4.3.2), all barcodes shall be created and presented to Code 39 requirements in accordance with ISO/IEC 16388.

In case of a KANBAN processing between BOSCH and SUPPLIER, SUPPLIER shall affix KANBAN cards in a clearly visible location on the defined packing unit, in line with the agreement with the BOSCH plant supplied. BOSCH shall provide the KANBAN cards to be used, either in physical or electronic format.

All labels, tags, or other markings on returnable packaging must be easily detachable leaving no residue, requiring no additional cleaning work upon removal.

If the packing units are protected by a protective foil, the labeling, tags, or other markings shall additionally be affixed outside the foil.

4.3.2 Global Transport Label (GTL)

Representatives from Europe (ODETTE), Japan (JAMA / JAPIA) and North America (AIAG) have developed a common "Global Transport Label" standard that can be used worldwide for supplier and customer relations. BOSCH has been guided by this standard in the design of its goods tag, which must be used by the suppliers for product labeling worldwide. The marking of all containers with this GTL label is essential for optimizing BOSCH incoming goods.

All details on the related requirements and specifications can be found in the appendix "GTL Guideline"; see https://www.bosch.com/company/supply-chain/information-for-business-partners/#further-information

SUPPLIER shall transmit the Unique-ID from GTL in the accompanying ASN.

Changeover to GTL labeling and replacing the previous VDA / Odette goods tags (or others) shall be agreed separately with the BOSCH plant supplied.

Upon request by BOSCH, SUPPLIER needs to implement GTL and accompanying ASN-format.

4.3.3 MAT-Label for specific divisions

Unless otherwise agreed in writing with the responsible BOSCH contact, the following deviating requirement shall apply for deliveries of electronic goods (semiconductors, PCBs etc.) destined for the Mobility Electronics (ME) division: A MAT Label shall be used in addition to the other required markings. When using the MAT label, the specific requirements specified in the Purchasing & Logistics download area must be complied with. Internet: https://www.bosch.com/company/supply-chain/information-for-business-partners/#further-information

Other BOSCH plants may require use of the MAT label in coordination and agreement with SUPPLIER.

4.4 Special arrangements for transportation of critical goods

SUPPLIER shall issue separate notifications of critical shipment transports if transportation is being organized by BOSCH.

For **hazardous goods**, SUPPLIER is responsible for ensuring that the collecting LSP is provided with all the required hazardous goods documents in advance, and that these documents are complete and correct.

Critical material property

LSP shall be notified of prior to shipment of products which, due to their very nature, cannot be packaged, and of extremely bulky products, and informed as well as of the required temperature control for heat- or frost-sensitive materials.

4.5 Marking labels for sample parts

Sample parts shall be sent exclusively to the delivery address specified in the order. In addition, sample parts must be clearly marked as such on the outer packaging. How sample parts are to be labeled shall be agreed with the BOSCH contact in advance. Sample shipments shall never be delivered together with a series delivery (on pallets, pallet cages, etc.), but must be delivered in separate packing units.

4.6 Safety and security in the movement of goods

In order to ensure the security of the supply chain (especially regarding certification as "Authorized Economic Operator" (AEO)) SUPPLIER has to meet following requirements for goods which are not unpacked or used on BOSCH-sites, but forwarded in the same packaging (e.g. Trade goods (HAWA), packed spare parts):

- The goods have to be packed in safe places, loaded and protected against unauthorized access
- The packing personnel must be reliable
- Business partners of SUPPLIER which act in the name and on behalf of SUPPLIER are to be informed, that they must also take appropriate measures

SUPPLIER shall take action commensurate with its business model to facilitate and ensure the security of its supply chain as defined in the WCO SAFE Framework of Standards and, when necessary, provide adequate documented evidence of compliance in the form of licenses, authorizations, or declarations (e.g. security declarations, declarations under the U.S. Customs Trade Partnership Against Terrorism (C-TPAT) or similar programs).

SUPPLIER shall provide the products securely for loading as air freight in line with the applicable legal requirements and regulations (such as the EU Aviation Security Regulation 300/2008), e.g. in such a way that they can be transported as air freight without any additional work for BOSCH (radiographic inspection, sniffer dogs, or other checks) and with no delays. For example, in Europe this can be done by achieving certification as a "known consignor" or by having the products secured by an authorized agent.

If SUPPLIER is unable to fulfill this requirement, BOSCH shall be notified thereof immediately.

For shipment deliveries into the United States, the C-TPAT regulations defined in the "C-TPAT Minimum Security Criteria and Guideline" issued by the U.S. Customs and Border Protection shall be observed and can be downloaded from www.cbp.gov.

If so requested, any information relevant for C-TPAT shall be provided to the BOSCH contact.

5 Special transports and process failures

5.1 Special transports

Special transports shall be implemented, if there is a need to deviate from the defined standard form of transport method and shipment processing due to process disruptions or failures, in order to reduce transport times. Special transports shall be organized and paid either by SUPPLIER or by BOSCH in accordance with the principle of causation.

In case the special transports are organized by SUPPLIER, SUPPLIER shall inform the responsible BOSCH contact of the transport details. In case the organization is within BOSCH, this applies vice versa.

Prior written agreement from the BOSCH contact is required if BOSCH is to assume the related costs. BOSCH shall record every special transport caused by SUPPLIER and incorporate this information into the SUPPLIER assessment.

5.2 Disruption of delivery (process failures), risk- and crisis management

If disruptions (process failures) occur at SUPPLIER that impact shipment deliveries to BOSCH (in particular the delivery date or shipment quantity or quality), SUPPLIER shall undertake whatever measures are required to resolve the failure, taking into account the BOSCH quality requirements.

If it is discernable that, despite the countermeasures undertaken, agreements or assurances cannot be met, SUPPLIER shall proactively notify the BOSCH contact immediately of the situation, without being requested to do so. SUPPLIER shall coordinate and agree with BOSCH on how to further proceed, e.g. regarding a new delivery date or delivery quantity.

If requested by BOSCH, the SUPPLIER shall provide BOSCH with the following information, at minimum:

- ► The cause of the disturbance and corrective actions (see section 6.1)
- The maximum production capacity available, PLANNED and ACTUAL output quantities, personnel capacity, and the current shift model (number of hours, shifts, and working days per week). Tracking sheets specified by BOSCH shall be completed truthfully and on a rolling basis, providing current figures and forecasts to BOSCH
- Reviewed alternative production options
- ▶ Possible options for reducing the transportation times by implementing special transports
- Backlog reduction plan

BOSCH may file and enforce complaints or claims arising from or in connection with special transports needed for reasons SUPPLIER is responsible for, process nonconformities, failure to comply with delivery dates or quantities, and any other nonconformities and disruptions.

SUPPLIER shall provide verifying evidence that it has a defined process in place for early warning and decision-escalation management to address process nonconformities and will appoint contact persons authorized to make decisions should a task force be established.

6 Logistics quality

6.1 Complaint and Claims Management

A logistics complaint may be triggered by a process disruption or failure at BOSCH that was caused by SUPPLIER. SUPPLIER shall be liable for costs arising from logistics errors and/or damages.

Logistics complaints are recorded and evaluated internally by BOSCH in terms of the costs caused in the given context.

Potential logistics complaints are summarized in a catalogue of failures that contains the additional efforts that BOSCH incurs (see https://www.bosch.com/company/supply-chain/information-for-business-partners/#further-information) These efforts shall be multiplied on the basis of minute factors by the average plant-specific hourly rates and BOSCH reserves the right to charge to SUPPLIER.

In the event of failure to comply with the specifications set out in this Supplier Logistics Manual, and any additional requirements defined for a specific BOSCH location, BOSCH reserves the right to refuse to accept the shipment concerned.

In the event of a logistics complaint (in form of a quality-notification), SUPPLIER is notified thereof and requested to analyze the failure and initiates appropriate containment and corrective actions. In case there is no contradiction to the quality-notification within three (3) calendar days, it is considered as accepted.

SUPPLIER shall address the logistics complaint from BOSCH at the request of BOSCH with containment and corrective actions in accordance with the 8Ds method. Depending on the criticality of the failure, BOSCH reserves the right to define the extent and can request the associated documentation.

BOSCH reserves the right to assess the supply chain maturity and conduct process audits on site at SUPPLIER's premises, or to have a third party contracted by BOSCH conduct such reviews, or to request a logistics self-assessment by SUPPLIER including action plans (for example based on the Global Materials Management Operations Guidelines / Logistic Evaluations (MMOG/LE) (as defined in section 10)).

The regulations governing warranty claims, product liability, and recalls as well as cancellation and termination rights in Sections 9 through 11 of the Robert Bosch GmbH terms and conditions of purchase shall apply in the event of logistics-related failures. Other claims by BOSCH in connection with logistics complaints remain unaffected.

6.2 Dynamic Supplier Classification (DSC - section "Supplier Logistics Capability" (SLC))

The aim of such dynamic supplier evaluation is to provide comprehensive systematic assessment of SUPPLIERS based on standardized criteria. The results of the Dynamic Supplier Classification (DSC) shall be duly considered when awarding new projects and orders.

The Supplier Logistics Capability (SLC) is the logistical assessment part of the DSC, in which factors relevant to the assessment are adapted to the defined logistics strategy.

6.3 On-Time-Delivery (OTD)

On-Time-Delivery (OTD) measurement at BOSCH is based on the applicable Incoterms in relation to the respective sphere of influence of SUPPLIER:

For Free Carrier (FCA): Dispatch date and quantity according to the call-off compared to the dispatch date and quantity according to the ASN.

For Delivered At Place (DAP) and Delivery Duty Paid (DDP): Arrival date and quantity according to the call-off compared to the actual date and quantity of the goods received posting.

Deviating regulations may apply for BOSCH Trade, Industry and Service (non-automotive) organizational units.

7 Further development of logistics

For the purpose of continuous further development, SUPPLIER commits to proactively participate in future innovations, review such developments taking into consideration their technical feasibility and cost effectiveness, and implement them subsequent to mutual coordination and agreement with BOSCH.

8 Related applicable documents

See documents provided under https://www.bosch.com/company/supply-chain/information-for-business-partners/#global-supplementary-terms-and-conditions

9 List of abbreviations

ABS	Acrylonitrile Butadiene Styrene				
AIAG Automotive Industry Action Group					
AS2	Applicability Statement 2				
ASN	Advanced Shipping Notice				
BT	Building Technologies (a division of Bosch)				
CMR	Convention relative au contrat de transport international de marchandises par route				
C-TPAT	Customs-Trade Partnership Against Terrorism				
DC	Drive and Control (division of Bosch Rexroth)				
DIN	Deutsches Institut für Normung e.V. (German Institute for Standardization)				
DSC	Dynamic Supplier Classification				
EDI	Electronic Data Interchange				
EDIFACT	Electronic Data Interchange For Administration, Commerce and Transport				
EPE	Expanded Polyethylene				
EPP	Expanded Polypropylene				
EPS	Expandable Polystyrene				
ESD	Electrostatic Discharge				
ESDS Electrostatic Discharge Sensitive Device					

Movement certificate form (used in international commodity traffic)Erzeugnisse und Rohstoffe (German for products and raw materials)Global Transport LabelGlobal Standard OneHandelsware (German for trade goods)Harmonized System Code (customs tariff number)Handling UnitIdentificr, identification code or markingInternational Electrotechnical CommissionInternational Plant Protection ConventionInternational Standards for Phytosanitary MeasuresE-KanbanKLT boxes (Euro containers)Lieferplanabruf (German for the English term "call-off")Logistics Service ProviderMaterialMobility Electronics (a division of BOSCH)Master Reference Number (formerly Movement Reference Number)Odette File Transfer Protocol 2
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Materials Management Operations Guidelines/Logistics EvaluationMaster Reference Number (formerly Movement Reference Number)Odette File Transfer Protocol 2
Master Reference Number (formerly Movement Reference Number) Odette File Transfer Protocol 2
Odette File Transfer Protocol 2
On Time Delivery
Printed Circuit Board (Leiterplatten)
Packaging Data Sheet (Verpackungsdatenblatt)
Polyethylene
Polyethylene Terephthalate
Part Number (equivalent to the German Sachnummer)
Purchase Order
Polypropylene
Polystyrene
Power Tools (a division of Bosch)
Polyurethane
Polyvinylchloride
Reorder Point
Self-billing Invoice (English equivalent of the German Gutschriftenanzeigeverfahren (GAV)
Shelf Life Expiration Date
Serial Shipping Container Code
Ship to line
Transport Management System
Transport Order
Technische Regel für Gefahrstoffe (615: Verwendungsbeschränkung für Korrosionsschutzmittel) / German Technical Rules for Hazardous Substances (615: Restrictions on the use of anticorrosion agents)
Volatile Corrosion Inhibitor
Verband der Automobilindustrie (German Association of the Automotive Industry)
Vendor Managed Inventory

Figure 4: List of abbreviations

10 Definition of terms

Alternative packaging	An alternative to the packaging agreed for the series delivery (normally consisting of one-way materials). Alternative packaging is normally to be added to the packaging specification.
BOSCH contact	The contact named by BOSCH for SUPPLIER (usually the procurement planner of the BOSCH plant supplied).
Call-Off (LAB)	BOSCH prepares delivery schedules with quantities and delivery dates and transmits these to SUPPLIER using call-offs. A call-off contains (in addition to the non-binding preview) the order for the products to be delivered by SUPPLIER at the delivery date stated in the call-off and is adjusted to the current requirements situation at BOSCH.
Call-Off (LAB) usage at DC	Within the BOSCH Drive Control and Technology (DC) division, for scheduling agreement call-offs the statistical (i.e. originally scheduled) delivery date is relevant with regard to any costs arising from delay in delivery. The same applies for single purchase orders if delivery schedules are not used.
ROP Pull (reorder point pull)	BOSCH division Power Tools (PT) uses a control concept is used in which the binding call-off is transmitted using a PO and the rolling preview using call-offs (ROP pull).
Gross demands	Gross requirements constitute the total demand of BOSCH production requirements. Stock at the BOSCH plant or products that, subsequent to outgoing goods issue from BOSCH storage, are underway to production, do not count towards gross requirements
Cutoff time	The cutoff time in the TMS environment defines the time by which the shipment and all relevant data must be registered (for collection to take place on the subsequent day). The standard cutoff time for release of the Transport Order (TO) is 11:00 on the day before collection.
Global MMOG/LE	The Global Materials Management Operations Guidelines / Logistic Evaluations is a standardized assessment tool that contains around 200 logistics assessment criteria and measures an organization's processes against best practice in the industry. (Internet: https://www.odette.org/mmog)
GS1 standard (SSCC code)	Refers to a globally unique ID. The Serial Shipping Container Code (SSCC) is used to uniquely identify logistical units (shipments, packages, HUs) on a one-time-only basis.
Combined length and girth	Measurement (circumference [across the two shorter sides] + longest side)
Incoterm	The coding of an Incoterm comprises the following: XXX (e.g. FCA) followed by the named place of delivery/destination (e.g. FCA Feuerbach). The current Incoterms (e.g. currently the Incoterms 2020) shall apply.
Crisis	Triggered by a temporary event situation that endangers or adversely affects the regular business of BOSCH, usually with possible adverse effects on the BOSCH customers.
Loading unit / handling unit (HU)	Normally a pallet fully loaded with multiple packages.
SUPPLIER	The contracting party of the applicable supply agreement on the vendor side.
Package	Multiple products combined into a carton or small load carrier.
Written / written form	Within this document only and unless otherwise agreed, the requirement for written form is satisfied by a telecommunications transmission of a declaration in a written message or using another method suitable for permanent reproduction in writing (e.g. e-mail or other electronic telecommunications systems).
Stack factor (dynamic)	 Static: The stacking factor defines the number load carriers that can be stacked on top of one another. Dynamic: The dynamic stacking factor applies for moving quantities. The stack factor is defined as follows:

Working day	Working days in SUPPLIER's country.
BOSCH plant supplied	This term also includes (de)consolidation centers in the case of commodities, merchandise products or consignment goods.
Forecast requirements (preview quantity)	Non-binding planned figures outside of the production release once SUPPLIER has established its production capacity. It is intended merely to provide SUPPLIER with information on future demand from BOSCH and enable long-term capacity planning.
Unique ID	A unique, assigned number for identifying and tracking packing units
Statistical delivery date	Used primarily at GB DC, containing the original delivery deadline that is not moved in case of delays caused by SUPPLIER, and is used to measure on-time delivery compliance.
Composite material	Material made of two or more bonded materials (example: aluminum composite bag, climate protection bag).
	1 (SAP) = stack of 2 (1+1) = TMS 2 2 (SAP) = stack of 3 (2+1) = TMS 3 99 (SAP) = flexible stacking = TMS 999
	0 (SAP) = not stackable = TMS 1 → must be marked with warnings!

Figure 5: Definitions of terms

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11 Attachments

11.1 Attachment 1: Packaging Data Sheet

Packaging Data S	heet	Created on: dd	יררליחחו				B	OSCH
	Supplier Data		. —			Bosch Data		
uppler Name	Contact Perso	*	Bosch Pla	int Name			t Person*	
osch Supplier Code	Department		Bosch Pla	et Code		Depart	mard	
ddress.	Final		Address			Fimal		
	Phone	-	41			Phone		
	Fax		41			Fax		
sich Product	Product Product Weigh	e .	Dynamic	Stack factor	General	Remarks on Pac	e Date of	
umber			for identic Packspec	Stack factor al Load Unit ID		Expiry Usage		
oduct Description			Appropria Mode	te Freight				
				ation Device				
							Product	Picture
evel 1 Packaging - Packagin Type Ownership	Quantity Material C	Asscription	Length Wi	th Height	Weight	Total Level		
	Number					Material Oty in Ship.Unit	1	
ain ack							1	
			\vdash	_	+			
			\vdash	_			1	
tal Quantity of Parts in Level	Quantity of Parts per Layer	Number of Level 1 Ur		Gross V Level 1	Neight of		Inner Pa	ckaging Picture
pecial Length	Special Width	Special H	right					
								chaging Picture

		Data S	heet		Creat	and one didi	עככלוחייי					_	В	os	CI
	an bina		Suppl	Contact Pers				h Plant Na			Bosch D	Contact	(here)		
Supple	er Name			Contact Pers	son*		Bosc	h Plant Na	me			Contact	Person*	1	
Bosch	Supplier Cor	de .		Department			Besch	h Plant Co	de		-	Departe	sent	├ ──	
Addres	55	-		E-mail	-		Addre	155			_	E-mail		<u> </u>	
				Phone			41					Phone		<u> </u>	
							11								
				Fax								Fax			
			Pro	oduct				_	_	General	Remarks	on Pack	1040		_
Bosch	Product			Product Weig	ght		Dyna	mic Stack entical Loa spec ID	factor		Remarks	Relative	Date of		_
Numb	er						Pack	entical Los spec ID	d Unit		-	Usage		<u> </u>	
Produ	ct Description	n		_			Appro	opriate Fre	ight			Valid fro	m Date		
								portation							
															_
Level	2 Packagin												Product	Picture	_
	Туре	Ownership	Quantity	Material Number	Description		Length	Width	Height	Weight	Total Lav Material in Ship.U	City			
Main	_										in Ship.U	init			
Pack															
						_		<u> </u>	<u> </u>	<u> </u>	<u> </u>				
Total (Quantity of pa	ets in Ship.		Number of Lev Units packed in	n 1	Gross Wei Ship, Unit	ght of		Number of in Ship. U	of Layers. Init					
	er of Level 1	Linite		Units packed in Ship. Unit Special Length			dite in	<u> </u>			<u> </u>	-	<u> </u>		
per La	ar of Level 1	UTIES		Special Length Ship. Unit		Special Wi Ship, Unit	and an		Special H Ship. Uni	t	1		Inner Pa	ckaging Pic	ture
														sckaging Pic	
				The regulations											

29 | **30**

Packaging Data Sheet Created on: dd	BOSCH	Packaging Data Sheet Created on: ddfmm/yyyy	BOSCH
Supplier Data	Bosch Data	Suppler Data Bos	ch Data
Suppler Name Contact Person*	Bosch Plant Name Contact Person*	Suppler Name Contact Person* Bosch Plant Name	Contact Person*
Bosch Supplier Code Department	Bosch Plant Code Department		
		Bosch Supplier Code Department Bosch Plant Code	Department
Address E-mail	Address E-mail	Address E-mail Address	E-mail
Phone	Phone		
Phone Inc.		Phone	Phone
Pas	Fax	7 ax	Fax
Product	General Remarks on Packapec		
Bosch Product Product Weight Namber	Dynamic Stack factor for identical Load Unit Expiny	Product General Rena Bosch Product Weight Dynamic Stack factor	arks on Packspec
Namber		Number for identical Load Unit	Relative Date of Expiry
Product Description	Packspec ID Usage Appropriate Freight Node Valid from Date	Product Description Appropriate Preight	Usage Valid from Date
		Product Description Appropriate Freight Mode	Valid from Date
	Transportation Device	Transportation Device	
Additional Remarks	Product Picture		
Additional Remarks		Olevature Dana	
		Signature Page	
	Inter Packaging Picture Outer Packaging Picture		
	Shipping Unit Picture		
		Supplier Approval Bosch Name / Department Name / Department	Approval
		Partie / Department	
		Parts / Senature /	
		Date / Signature / Stamp Stamp	
The regulations of the BOSCH LOGISTICS	S SUPPLIER MANUAL are binding for supplies.	The regulations of the BOSCH LOGISTICS SUPPLIER MANUAL are binding for suppli	15.
Pa	uge 3/4	Page 4/4	
*Personal data used for business purposes only		*Personal data used for business purposes only	

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