Verbindungselemente | Fasteners
Zeichnungs- und Sonderteile | Special parts by drawing
C-Teile-Management | C-parts management

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Supplier's Manuel

Version 1.1

Lederer GmbH

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Definition and Explanation

8D

8D is a structured problem-solving tool. It focusses on 8 disciplines, which help to solve a problem. The 8D problem-solving process consists of the following stages: Establishing a team, describing the problem, defining immediate measures, analysing causes, planning corrective actions, introducing corrective actions, defining preventive measures, finishing problem solution.

AEO

Stands for *Authorized Economic Operator.* Companies meeting certain criteria can become AEO-certified in order to achieve different customs benefits.

APQP

Advanced Product Quality Planning describes a very complex procedure for advanced quality planning.

Dual-Use

This term describes the general usability of economic goods (e.g. machines, software or general technologies) for civilian as well as for military purposes.

EAR

The *Export Administration Regulations* are a set of rules and regulations related to United States export control law. The EAR regulate the export and re-export of so-called dual-use items as well as goods designed for purely commercial purposes with no military applications.

EDI

Electronic Data Interchange describes the structured transfer of data between organizations by electronic means. Electronic documents or business data are automatically transferred from one system to another without any human interference.

IEC

The *International Electrotechnical Commission* is an international standard-setting organization for all electrical, electronic and related technologies based in Geneva.

IRIS – ISO/TS 22163

The *International Railway Industry Standard* is a system of rules consisting of the internationally effective requirements to a quality management system of the railway supply industry and their sub-suppliers. Companies can achieve the corresponding certification.

ISO

The *International Organization for Standardization* is an independent, non-governmental international organization with 161 national standard-setting organizations as members.

PPAP

The *Production Part Approval Process* is used as a procedure for releasing production processes and production and includes the basic requirements for the part submission warrant of all production and spare parts in the automotive industry according to ISO 16949.

REACH

Registration, Evaluation, Authorisation and Restriction of Chemicals – is a European Union regulation for improving the protection of human health and the environment against the risks of chemical substances.

RoHS

Stands for *Restriction of Hazardous Substances* and short for EU Directive 2011/65/EU. It is used for the restriction of the use of certain hazardous substances in electrical and electronic equipment.

VDA

The *Verband der Automobilindustrie* is the common association of the German automotive industry. The VDA sets standards and gives recommendations particularly for the application of electronic data interchange.

VDI

The *Verein Deutscher Ingenieure* is the association of German engineers which sets up guidelines by giving recommendations and rules on engineering topics and on the state of the art. At present there are more than 2050 valid VDI guidelines.

1. Introduction

In an age of rapid changes and changing markets, only those companies that adapt to changing needs optimize sequences and processes and make sensible use of unused capacity can survive. In order to meet our customer requirements regarding quality and flexibility, we need committed suppliers who face these challenges together with us. Reliability and the will to continuous improvement are the way to a long-term and successful cooperation. Furthermore competitive purchase prices, conditions and process costs along the supply chain are absolutely necessary for a sustainable partnership. For Lederer quality, efficiency and compliance are important values in a business relationship.

Based on this background this Supplier's Manual is to contribute to smooth processes between the supplier and Lederer, in order to optimize their mutual benefit. The Manual is a comprehensive source of information for all interfaces appearing in daily business between the suppliers and Lederer.

1.1. Lederer GmbH

The name Lederer stands for more than 50 years of high-quality fasteners, such as screws, bolts and nuts, DIN and standard parts as well as trade-specific items made of special steel. As Lederer mainly supplies C- parts, the service of C-parts management is in the focus of attention. Based on our core product range we offer our customers the regular supply of all C-parts required for their production.

1.2. Purpose, validity and aims of the Manual

This Supplier's Manual describes and explains the requirements of Lederer to its suppliers in particular as far as quality management, the ordering process and logistic aspects are concerned.

The Supplier's Manual is a binding document and is thus part of the contractual agreements between the supplier and Lederer. It is used as a guideline for a long-lasting and successful cooperation.

This Manual and its implementation contribute to the flawless delivery of the parts purchased from Lederer with a high adherence to delivery dates. Furthermore it helps to improve the relationship between Lederer and the corresponding supplier, to minimize frictional losses and to avoid additional efforts and costs. In total its main focus is on achieving the following common goals:

- Building up a long-term partnership and safeguarding a good cooperation
- Reducing unnecessary processes along the entire supply chain
- Integrity of the documents
- Minimising the storage and transport expenses for the benefit of both parties
- Assurance of the common competitiveness
- Optimum communication
- Safeguarding of the product quality
- Simplification of the acceptance process

2. General requirements to suppliers

Different general requirements are the basic prerequisite for a long-term partnership in the sense of the paragraph above. Reliable delivery and contract fulfilment as well as fair and competitive market prices are important points in this connection. Further additional aspects are specified in the following.

2.1. Code of Conduct

This Code of Conduct defines the principles of Lederer GmbH and its employees, who observe it every day of their working lives. At the same time, the Code of Conduct also constitutes the foundation for our suppliers with regard to their responsibility for their fellow man and the environment as well as compliance with legal requirements.

Suppliers who do not adhere to these principles can lose their status as authorised suppliers of Lederer GmbH.

Lederer reserves the right to change the specifications and principles of the Code of Conduct to an appropriate extent on grounds of alterations to the compliance management system. Such alterations must be accepted by Lederer suppliers.

With the adoption of the Supply Chain Due Diligence Act (LkSG) on 25 June 2021 by the Federal Council, the German legislator has revised the rules on human rights due diligence. As of 1 January 2023, certain companies are obliged to have implemented the legal requirements with regard to human rights due diligence. Although Lederer GmbH itself does not meet the criteria defined in the law, the management has decided to apply the legal rules voluntarily due to its own involvement in supply chains.

2.1.1 Adherence to laws, specifications and regulations

Suppliers of Lederer undertake to comply with all legally valid regulations and specifications that prevail in the countries in which their commercial activities are carried out.

2.1.2 Data protection

Adherence to the legally valid data protection provisions must be upheld by all suppliers. Confidential business data connected with Lederer GmbH must be stored safely and may be used or forwarded only with a declaration of consent.

2.1.3 Confidential data and intellectual property

Suppliers make sure that confidential data and information that are exchanged within the scope of commercial activities with Lederer GmbH are treated as strictly confidential. No such material is forwarded to unreliable or third-party individuals. These basic principles also apply after an employment and/or business relationship has come to an end.

Suppliers undertake to uphold a respectful and conscientious method of handling Lederer GmbH's intellectual property. Such intellectual property may be used solely within the scope of commercial cooperation.

2.1.4 Culture and social conduct

Lederer requires that suppliers treat all people with dignity and respect regardless of their age, gender, national origin, race, political and religious beliefs, sexual orientation and/or other statutorily protected characteristics. Any form of discrimination in the workplace with regard to employment, contract termination, remuneration, overtime, promotion and further training is excluded. Likewise, corporal punishment, threats of violence or other forms of harassment are prohibited.

Suppliers must respect, and comply with, the internationally acknowledged human rights. These likewise include the rejection of forced labour and/or slavery.

Suppliers shall confirm with this Code of Conduct that they employ only persons who are able to prove that they have reached the minimum age of 15 years. In countries which are subject to the exception for developing countries in accordance with the ILO Convention 138, the minimum working age may be set at 14 years.

2.1.5 Safety at work and health protection

In due consideration of the statutory requirements and provisions, suppliers are responsible for the health and safety of their employees at the workplace. Possible risks with regard to accidents at work or occupational illnesses must be minimised by way of suitable prevention measures or, ideally, prevented.

Causing harmful soil degradation, water pollution, air pollution, harmful noise emission or excessive water consumption, which significantly affects the natural basis for the preservation and production of food, denying a person access to safe drinking water, impeding or destroying a person's access to sanitary facilities or harming a person's health is prohibited. Likewise, unlawful eviction and the unlawful taking of land, forests and waters in the course of the acquisition, construction or other use of land, forests and waters, the use of which secures a person's livelihood, are prohibited.

2.1.6 Environmental protection and resources

Suppliers undertake to comply with environmental-law requirements and international standards for the protection of our environment. The production of products containing mercury, the production and use of certain chemicals (persistent organic pollutants that degrade or transform very slowly in the environment (persistence), accumulate in organisms and produce harmful effects there), the non-environmentally sound handling, storage and disposal of waste, and the export and import of hazardous waste are prohibited.

Our concern is to search for alternatives in order to preserve natural resources and energy sources and to counteract the use of environmentally hazardous substances and waste in order to minimise long-term negative effects on the environment.

2.1.7 Prohibition of corruption and bribery

Suppliers undertake not to participate in corruption, bribery or methods in the course of which business activities are conducted using impermissible means. Giving and receiving benefits to or from business partners is not permitted because these can lead to the impairment of a fair and objective commercial decision. Occasion-

specific and advertising gifts, as well as presents that correspond to the custom and politeness of other cultures, are subject to the generally valid exemption clause.

2.1.8 Fair competition

We are interested in fair and genuine competition accompanied by strict adherence to competition law and antitrust law. We therefore do not participate in activities that damage our business partner or benefit ourselves in some impermissible manner. We conduct no talks with competitors in which prices, performances or other arrangements that influence market behaviour are agreed on. Likewise impermissible is the splitting-up of customers or business areas, as well as collusion among business partners or third parties with regard to non-competition.

2.1.9 Supply chain

Suppliers commit to make reasonable efforts to ensure that their suppliers adhere to the principles of this Code of Conduct.

2.2. Continuous improvement

Today the continuous improvement of the own processes and sequences (CIP) is inevitable and should be parts of the philosophy of each supplier. Regarding the cooperation with Lederer an improvement of the entire system should be the super-ordinated aim. Here the main focus is on the continuous verification and optimization of the communication quality and the logistic cooperation. A common approach of both parties to reach this aim is desirable.

2.3. Management system/Certification

The management system of any supplier should at least be certified according to ISO 9001 and ISO 14001. This ensures that the supplier meets the basic requirements to quality and environmental management. A further development in the direction of IATF 16949, ISO/TS 22163 (IRIS) or other comparable regulations is aimed at. Furthermore the management system is to be improved continuously in the field of occupational health and safety (DIN ISO 45001, BS OHSAS 18001).

The supplier shall submit any corresponding valid certificates (also re-certifications) as well as all changes of the certification status to Lederer (Purchasing Department).

Both contractual parties undertake to further develop and continuously improve their management systems to the state of the art, to comply with the regulations of the Suppliers' Manual and all other common contractual documents.

2.4. Requirements according to customs law and specification of origin

Generally the supplier is obliged to comply with the applicable regulations of the national and international export, customs and foreign trade legislation. The supplier has to obtain the necessary community transfer or export licenses, unless the applicable foreign trade legislation obliges Lederer or a third party to apply for the license and not the supplier.

Furthermore the supplier has to submit any information and data to Lederer in writing and in due time before the delivery date, which Lederer needs to comply with for the export, community transfer, import and re-export of the goods according to the applicable foreign trade legislation (for a list of customs documents, if necessary, see section 4.4.2). In any case the country of origin must be stated on the delivery note (cf. section 4.4.1).

Suppliers seated within the EU: Lederer needs a long-term supplier's declaration for goods of preferential origin from all suppliers seated within the EU.

Suppliers seated in a most favoured nation: If the supplier is seated in a country having concluded a most favoured nation agreement with the EU (e.g. Switzerland) and the goods are considered to be of preferential origin, a declaration of origin according to the corresponding most favoured nation agreement must be included in the invoice.

Suppliers seated in all other countries: If the supplier is neither seated within the EU nor in a most favoured nation, Lederer requires the declaration of the country of origin in any case. Upon request a certificate of origin issued by the responsible authority must be made available by the supplier.

If no preferential origin status can be granted, the declaration of origin is the minimum requirement. Also in this case a certificate of origin issued by the responsible authority must be made available by the supplier upon request.

2.4.1. US origin / US (re-) export control laws

The US (re-) export control laws control exports, re-exports and in individual cases also the goods transfer within a country of goods to be classified as US goods from the US point of view. Thus exports from Germany may be subject to approval, if the goods are considered to be "US American" in the sense of the US (re-) export control laws and the concrete delivery is subject to approval according to US law. Therefore the supplier must inform Lederer if the purchased goods are US goods and/or the company is run by a person with US American citizenship.

According to the US (re-) export control laws, US goods are goods for civilian and dual use which are subject to the US Export Administration Regulations – EAR. To put it simple, the following goods are normally subject to the US Export Administration Regulations:

- Goods in the USA
- Goods moving in transit through the USA
- All US origin goods wherever located
- Foreign-made goods (e.g. in Germany) that incorporate US origin commodities, if their controlled share exceeds a minimum level (the so-called de minimis level, which is normally 25% or 10% for deliveries into sensitive countries e.g. Iran).
- Foreign-made goods (e.g. in Germany) that are bundled with US origin software, if their bundled controlled share exceeds the de minimis level.
- Foreign-made goods (e.g. in Germany) which have been manufactured using sensitive US origin technology or software for delivery into certain countries according to § 736.2(b) (3) EAR, as well as certain goods produced by any plant or major component of a plant located outside the USA that is a direct product of US origin technology or software as described in § 736.2(b) (3) EAR.

2.4.2. Authorized Economic Operator (AEO certification)

As Authorized Economic Operator, Lederer is subject to different requirements. One of these requirements is to ensure supply chain security. This includes that production facilities and transfer places which are used to produce, store, machine or process, load and transport goods intended for delivery to Lederer are protected against third party access.

2.5. Mutual duty to supply information

A good communication and proactive information policy are vital for the relationship between the supplier and Lederer. In this regard Lederer expects written information particularly in the following situations:

- Proof of current management certificates
- Change of technical terms of delivery and works standards
- Foreseeable non-compliance with deliver criteria such as delivery date, quantity and quality including intended special release
- Product requirements or test procedures are incomplete, incorrect or could be implemented in a more efficient way, if the suppliers changes its procedures

- Changes of the origin, product properties or the applicable foreign trade law

In return the supplier receives information in the case of:

- Change of the technical terms of delivery (e.g. drawings and works standards of the purchaser or its customer).

2.5.1. Obsolescence management

Obsolescence describes the non-availability of material, components, products, processes and knowledge. Obsolescence occurs in particular if a certain item is no longer available in its original version due to technical changes or if it is discontinued at the end of its life cycle. In order to be able to counteract the risks of obsolescence, it is important in such a case that Lederer is informed in good time. The supplier therefore undertakes to inform Lederer by means of a so-called Product Change Notification (PCN) 12 months in advance in the following cases:

- In the case of planned or already completed changes of the product
- In the case of conversion of production processes
- In the case of a change of composition
- In the case of relocation of production between different production plants or production by a different company
- In the case of faults in the data sheet

If, however, the production of a certain item is completely discontinued, the supplier undertakes to inform Lederer by a so-called Product Discontinuance Notice (PDN). This notice shall define the date of production stop as well as the last possible date of ordering.

2.6. RoHS and REACH

The Supplier warrants that it complies with the requirements of Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 and 2015/863/EU of 31 March 2015 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) and Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), as amended.

In particular, it shall comply with the restrictions on the use of substances of very high concern, restricted or prohibited substances listed therein. If listed substances are used, Lederer must be informed immediately.

In this context (RoHS), the supplier must comply with the maximum use of mercury (Hg), chromium (hexavalent, Cr(VI)), lead (Pb) and PBBs, PBDEs (polybrominated biphenyls and diphenyl ethers) DEHP, BBP, DBP, DIBP 0.1% and cadmium (Cd) 0.01% in relation to the homogeneous individual material. If these substances are contained, this must be reported at REACH@lederer-online.com, stating the Lederer order or enquiry number, the article number and the substance contained.

The following must be observed with regard to REACH:

- If the products contain substances on the REACH candidate list (SVHC substances) with more than 0.1% by mass, the supplier must inform Lederer of this. The SVHC substances (list is updated every six months) can be found here: https://www.echa.europa.eu/candidate-list-table.

  If substances from this list are contained in products with more than 0.1 m%, this must be reported at REACH@lederer-online.com, stating the Lederer order or enquiry number, the article number and the substance contained.

- The products must not contain any substances of REACH Annexes XIV and XVII above the respective limit values. The current lists, which are also updated regularly, are available here:

  o Annex XIV: https://reachonline.eu/reach/en/annex-xiv.html

  o Annex XVII: https://reachonline.eu/reach/en/annex-xvii.html

2.7. Confidentiality

Definition: "Confidential information" means all data, drawings, drafts, sketches, plans, descriptions, specifications, measurement results, calculations, experience, processes and samples in connection with the products and services to be provided exclusively for LEDERER, irrespective of whether they have been explicitly marked as confidential. This also includes knowledge about LEDERER customers or end customers and the contents of all conversations and all facts related to the cooperation with the company LEDERER.

The SUPPLIER undertakes to keep the confidential information secret and not to disclose it to third parties.

The SUPPLIER is only entitled to disclose confidential information to its employees, contractors or other vicarious agents to the extent necessary to verify the commercial viability of the product. The SUPPLIER shall make every effort to ensure that the confidentiality obligations are observed by its employees.

The disclosure of confidential information by the SUPPLIER to third parties, in particular (but not limited to) distributors, is only permitted with the prior written consent of LEDERER.

In the event of disclosure of confidential information, the SUPPLIER shall also impose the duty of confidentiality incumbent upon it under this Agreement on the recipient of the confidential information in the form of a written contract. This contract shall be structured as a genuine contract in favour of LEDERER with regard to the recipient's obligation of secrecy. The SUPPLIER shall be jointly and severally liable for the recipient's compliance with the obligation of confidentiality in this customer protection Agreement. The SUPPLIER is obliged to hand over this written agreement with third parties upon request to LEDERER.

The aforementioned confidentiality obligation is incumbent on the SUPPLIER for an indefinite period of time. In particular, it shall not be terminated either by the successful conclusion of the negotiations or by their ultimate failure.

The SUPPLIER is prohibited from,

- exploiting confidential information or parts thereof in any form, directly or indirectly, for commercial purposes without the prior written consent of LEDERER,
- making an application for an industrial property right, the subject matter of which is based in whole or in part on confidential information or is derived therefrom,
- manufacturing parts on the basis of confidential information and passing them on or selling them to third parties.

The above duty of confidentiality shall not apply to information, contents of conversations and facts which demonstrably:

- were already publicly known at the time of the communication to the receiving partner or thereafter
- become public knowledge without violation of the present obligation or
- were already known to the receiving partner before disclosure by the other partner, or
- are lawfully disclosed to the receiving partner by a third party; or
- are developed by the receiving partner independently of the information disclosed by the other partner; or
- are ordered by law to be disclosed

3. Quality assurance agreements

The quality assurance agreements dealt with in this section comprise all aspects that are necessary to ensure the required quality of the products in addition to the General Purchasing Conditions of Lederer. They should help to prevent quality problems and to reduce quality costs and thus to support the sustainable partnership between the supplier and Lederer.

3.1. Serial production preparation of the product

3.1.1. General

All existing product requirements are made available to the supplier in a comprehensible and meaningful way (e.g. drawing, functional description, special features).

The supplier will review the above-mentioned product requirements candidly for technical and economic feasibility with the departments involved and, where appropriate, suggest changes at an early stage. This also concerns suggestions resulting from its capacity as manufacturer on possibly missing requirements or any requirements incorrectly defined by Lederer. By submitting a quotation, the supplier confirms that an evaluation of producibility has been carried out. If the quotation does not include any restrictions, Lederer can proceed on the assumption that delivery is made according to its specifications. If it turns out afterwards that the product

requirements cannot be met although they have been checked thoroughly by the supplier, this is at the supplier's expense.

The supplier must carry out all necessary tasks for successful production process and product clearance (PPC) according to currently applicable VDA and APQP/PPAP guidelines, if requested so by Lederer in the enquiry/order. Lederer will in any specific instance determine which guidelines are to be applied.

The supplier must report scheduling risks and scheduling delays proactively and in good time.

Lederer must immediately inform the supplier in writing about changes with regard to product requirements. The supplier will check whether these changes are technically possible and what ramifications they entail for the order.

3.1.2. Quality assurance requirements to deliveries

The deliveries are based on the documents specified by Lederer in the order (e.g. drawings or standards) and other requirements or specifications stated in the order. The supplier has sole responsibility to supply according to the valid (or relevant) standards and to obtain these standards. Missing drawings or any other necessary documents or information are to be requested by the supplier. Otherwise the documents are deemed to be available to the supplier.

The delivery shall be based on the state-of-the-art of the science and technology.

Fasteners are generally subject to the regulations of ISO 8992 - General requirements for bolts, screws, studs and nuts (independent of whether this has been defined in the product standards, drawings, catalogues or any other specifications), unless the requirements therein are inconsistent with the other specifications (e.g. drawings). Furthermore the following regulations shall apply:

- ISO 3506-4 Mechanical properties of corrosion-resistant stainless steel fasteners - Part 4: Tapping screws
- Passivation of corrosion-resistant stainless-steel fasteners acc. to ISO 16048
- For screws, bolts and parts with external thread: ISO 6157-3 Fasteners; surface discontinuities; part 3: bolts, screws and studs for special requirements

The supplier must integrate these regulations in his quality and test planning.

Upon request the supplier shall provide a test certificate acc. to EN 10204 - 3.1. If required (e.g. in a case of complaint) the supplier can provide a test certificate acc. to EN 10204 - 3.1 at any time afterwards. If test certificates acc. to EN 10204 are provided, at least the contents of DIN 11204 and/or ISO 16228 must be included. The rated ranges and a confirmation that the customer requirements are met are to be included in the certificate. Unless the delivered goods meet the requirements, this must be submitted to the customer for clearance before delivery. Any non-compliant values must be marked clearly.

The supplier shall ensure that his deviation/error rate does not exceed **800 ppm**, related to the current delivery of this item distributed over all properties. For items with an agreed **sortation rate of 100% a permissible deviation rate of 10 ppm per property shall apply**.

If the supplier is not able to integrate the permissible ppm error rate in its process using its available technical possibilities, the supplier has to integrate a 100% sortation cycle in its production control plan. If the supplier has any technical and/or economic problems in this respect, Lederer must be addressed immediately in order to find a common solution.

3.1.3. Initial sampling and production clearance

If initial sampling is required, Lederer will specify this in the order. Of course the suppliers can submit initial samples in their own interest.

The delivery deadline indicated on the initial sample order must be mandatorily met. Any deadline delay endangers serial production start-up.

The supplier must hand over to Lederer with the initial sample test report 20 (unless otherwise specified) clearly marked initial samples and all verification documents that are part of this particular stage of submissions. Upon request the supplier shall make available the required data in the material data system IMDS (www.mdsystem.com).

The initial sample test report must not be used for submitting deviations which inevitably lead to re-sampling. All necessary adjustments must be made and considered in the time schedule before initial sampling, also if equipment which is not yet released for series production is exceptionally used. If initial samples with NOK results are sent without a deviation approval, these are rejected without any verification. The same applies to missing documents. New initial samples with OK results or deviation approval must immediately be re-submitted. Lederer reserves the right to charge the additional expense.

Tested parts must be labelled with consecutive numbers in a clearly recognizable way in order ensure their allocation to the measurement results. The nature of the labelling must where needed be coordinated with Lederer.

The conditions set by Lederer limit re-sampling unless otherwise specified to the relevant deviations and missing documents.

The supplier and Lederer will archive the initial sample parts and retention samples as well as all sampling documents for 15 years after serial production has been discontinued, unless Lederer specifies another period of time.

Lederer determines in which case re-sampling is required (cf. section 3.2.5).

3.2. Serial production of the product

3.2.1. Receiving inspection by Lederer and error reporting

Lederer will immediately after arrival of the delivery undertake an identity and quantity test and check the delivery for obvious shipping damage. Lederer reserves the right not to carry out any further technical inspections or evaluations of the delivered products. As far as the partners consider further inspections by the customer as

being necessary, these shall be agreed and integrated in the written testing schedule of Lederer, in particular as far as the inspection equipment and method are concerned.
If Lederer detects any damage or defects in the a.m. inspections, Lederer will immediately report it to the supplier. Damage or defects not detected in the receiving inspection will be reported by Lederer to the supplier as soon as they have been detected by Lederer or by the suppliers of Lederer according to the conditions of proper business procedure.
Lederer has no obligation against the supplier to carry out any further inspections and notices than the ones mentioned above. The supplier shall waive its right to raise defences and objections for delayed presentation of a notice of defects.

3.2.2. Labelling of batches and traceability

The supplier must for all productions lots and material batches maintain a labelling and tracing system by which in the case of quality defects the batch delivered by a sub-supplier or an external supplier can be identified. Furthermore, this system must ensure that the process data and inspection results belonging to the corresponding production lot of the supplier can be identified. The system must allow for finding any products in circulation that show identical quality defects and for analysing the causes of the defects.

The supplier must be able to trace back and detect with certainty at which point of time it delivered which products to Lederer.

Lederer must also maintain a labelling and tracing system by which it can assign free of doubt any defective products to the responsible supplier by stating the delivery data.

The supplier shall at least label each unit supplied to Lederer as follows: Lederer item designation and number, production lot number and quantity. If available, the labelling regulations of the product-specific Technical Terms of Delivery (e.g. ISO 3506ff and ISO 898ff) shall apply.

The supplier and Lederer undertake to continuously advance their product labelling systems so that in the case of a complaint and possible call-backs defective products can fast be located and assigned to the production lots and material batches.

3.2.3. Procedure with deviations identified prior to delivery

If the supplier intends by way of exception to deliver products with inadmissible specification deviations special written clearance must be obtained from Lederer.

Products with approved deviation must be delivered separately and labelled accordingly for each shipping unit. A copy of the special clearance must be enclosed with the delivery documents.

3.2.4. Procedure and complaints

Lederer will immediately report quality defects to the supplier in writing and indicating the relevant delivery unit, as soon as they have been detected under the conditions of proper business procedure.

Lederer describes the product defects and their frequency, if possible, at this point of time, and defines any immediate remedy measures required including deadlines for dealing with the defective quantity delivered.

Lederer will receive a first response of the supplier within 24 hours.

If the supplier needs the defective products or e.g. photos of them, these must be requested immediately and sent by Lederer in the fastest possible way.

The supplier must generally carry out immediate remedy measures (replacement delivery, sorting work, rework, extra shifts, express transport etc.) for all defects for which it is responsible. The supplier must do so at its own expense and in agreement with Lederer.

Lederer will only carry out any immediate measures (e.g. sorting measure and/or remedying of defects) in coordination with the supplier. This procedure is also admissible without coordination in the following special situations:

- The supplier fails to meet the subsequent performance deadline set in this regard.
- Lederer must carry out immediate remedy measures in connection with a client complaint. Reasons for such measures may amongst others be that Lederer must ensure its ability to deliver or its customer's ability to deliver or to produce or only later the supplier can be identified as the cause.

The supplier produces a complete 8D report within 7 working days (a corresponding template is enclosed in the Annex). Foreseeable deadline missing (e.g. as proof of the effectiveness of corrective measures introduced for future avoidance of errors) must be reported to Lederer at an early stage.

3.2.5. Product and process modifications

If Lederer or, if known, its customer plans to modify the further processing process and/or to modify the function of the purchase part and if it cannot estimate whether the specification of the part must for that reason be adapted then it must report this to the supplier in writing in advance of the modification. The supplier will inform Lederer in writing within an agreed period of time whether any change in the specifications and possibly the price is required

If the supplier plans to modify its deployed materials, purchase parts, manufacturing processes, production sites, process and test conditions etc. in relation to the previous process conditions (e.g. according to the initial sample) then it must inform Lederer of this in writing. This explicitly also applies to products without initial samples.

The written information on the above modifications must occur so well in advance and so completely that Lederer and the supplier can check them for their importance and can object to them before the relevant modification is applied to the contractual items.

Lederer will decide on a case-by-case basis whether and to what extent re-sampling is necessary in connection with any process modification.

3.2.6. Criteria and scope of requalification tests

The supplier must, to prove a stable quality level per product group for an annual period, and beginning with the date when the initial sample is released, carry out at least one requalification test.

This requalification test must include all specifications on materials, dimensions and functions specified by Lederer for the product.

The test results must be documented by the supplier and sent to Lederer upon the latter's demand.

3.2.7. Documentation/Retention

The supplier will archive all order and quality related documents and records for at least 15 years after serial production has been discontinued, unless otherwise specified.

4. Logistic requirements

The logistic requirements apply independent of any other terms of delivery and form part of the contract. As the case may be, exceptions can be agreed in individual cases or for specific works. If non-compliance with the guidelines defined in this section leads to additional expenses for Lederer, the supplier will be charged with the resulting additional costs and be held liable for all sorts of loss incurred.

In order to allow for a smooth flow of work in the receiving goods department, during transport and storage as well as to ensure traceability, the supplier must comply with certain regulations regarding packaging and labelling as well as for the transport of the goods to be delivered. Here the general principles of logistics shall apply which are often defined in the form of the 7 R's of logistics. Lederer's 7 R's are:

"The right goods, in the right quantity, at the right time, at the right location, at the right price, in the right quality and with the right information"

4.1. Packaged goods

"Packaged goods" is the designation for goods for packing. In a first step the task of the supplier in this respect is to pick the right goods in the right quantity. This means that the quantity of the goods delivered must correspond to the quantity ordered in the purchase order.

"The right goods in the right quantity."

4.2. Packages

Primarily packages are used to make the packaged goods transportable. In addition to that they must perform protective, information and storage functions. In order to fulfil these functions, packages should generally be designed so that

- the packaged goods are protected against damage, contamination, loss or environmental influences which could adversely affect the quality of the goods.
- the goods can be moved and stored by hand, hand pallet truck or forklift truck without any additional effort.
- multiple handling is possible.
- easy identification is possible (incl. identification of hazardous goods or handling instructions).

Furthermore the goods must be packed correctly sorted and clearly arranged, so that they can be registered quickly and completely in the goods receiving department.

4.2.1. Packaging materials

The materials from which a package is manufactured are called packaging materials. In general only environmentally compatible and recyclable materials should be used as packaging material. Therefore basically only the following materials may be used:

Paper/cardboard/corrugated cardboard:	Free from harmful substances
Wood:	Non-impregnated solid wood or plywood
Plastic:	PP, PE

For the delivery to Lederer mainly packages made of corrugated cardboard or solid board should be used.

4.2.2. Packaging units and sales packages

The sales package wraps the packaged goods and is therefore the smallest packaging unit. On principle a robust packaging made of corrugated cardboard or solid board which is suitable for the item must be selected. For smaller dimensions (e.g. for nuts and washers < 4 mm) polybags may be used which are then repacked in a cardboard box.

Ideally folding boxes specially designed for fasteners as shown in the illustration on the right should be used. Generally the sales packaging must be stackable and easy to open. Furthermore it must be ensured that the packaging has a continuous bottom. For packages made of corrugated cardboard a minimum quality of **1.30** should be selected.

Quality	Corrugation	Bursting strength	Puncturing energy	Edge crush resistance
		kPa	J	kN/m
1.30	Single-wall	1000	3.5	4.5
1.40	Single-wall	1200	4	5.5
1.50	Single-wall	1450	4.5	6.5

The sales package must be filled saving space. Head or hollow space should be avoided. The filling degree of the package must be at least 80 percent. The packaging must be selected so that it is not deformed, indented or buckled by the product. The cover or seal of the packaging must close tightly and be protected against individual materials falling out of it. If required, folding boxes must be glued on both open sides.

Furthermore the sales package of an item must always have the same size and filling capacity. Cardboard boxes with deviating remaining quantities must be labelled.

4.2.3. Shipping package or master carton

The shipping package is the external packaging and thus fulfils the major part of the protective function. As it must therefore be extremely robust, only corrugated cardboard may be used for packaging. When designing the packaging, the type of shipping must be taken into consideration. Depending on whether a package is to be shipped individually or on a pallet, the packaging is subject to different loads which it must resist.

Individual shipment

In the case of individual shipment the resistance to pressure or puncturing energy from the inside and/or outside is important. In general the following guideline applies: Goods up to 5 kg can be shipped in a single- wall corrugated cardboard box of quality 1.30 – 1.50. For goods weighing more than 5 kg a double-wall corrugated cardboard box of quality 2.5 acc. to DIN 55468 should be used.

Quality	Corrugation	Bursting strength	Puncturing energy	Edge crush resistance
		kPa	J	kN/m
2.50	Multiflute	1600	8.5	8.5

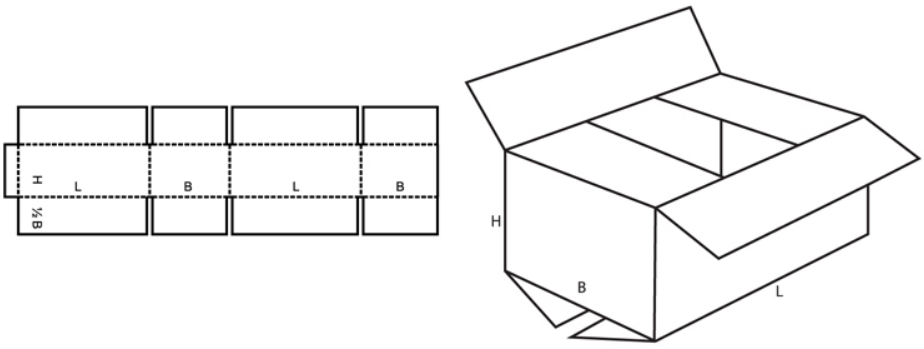
Shipping on pallets

When shipping on pallets, the edge crush resistance is the most important property. It prevents that the cardboard boxes lying on the bottom are indented by the total weight stacked on top. Here independent of the weight cardboard boxes of minimum quality 2.5 must be used.

Design and dimensions

Folding boxes according to the FEFCO-0201 type of design may be used as shipping cardboard box. The filling degree is subject to the specifications for the packaging unit.

Due to the use of automated handling equipment at Lederer, the shipping packaging and the primary packaging must not exceed the dimensions of **320 mm (l) x 240 mm (w) x 180 mm (h)**. The dimensions of the packaging unit packaging and master cartons must be matched so that hollow space is minimized. The weight of the cardboard boxes must not exceed **15 kg**.

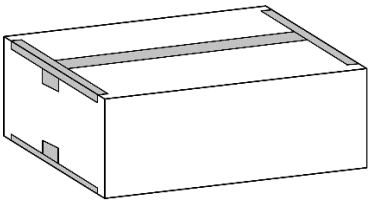


Sealing means

Apart from the suitable shipping box, safe sealing is another important part of packaging. For delivery to Lederer sealing tape must be used as sealing means in this connection.

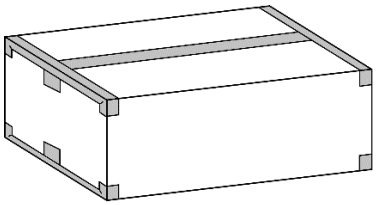
If printed, sealing tape may also be used for labelling the goods or the packaging. This so-called warning tape can also be used to label packaged goods which require special handling.

The correct application of the sealing tape is also important. The table below gives an overview in this respect:



Double-L-sealing

(simple 6-strip sealing) Standard sealing for all deliveries to Lederer.



Double-T-sealing

(closed 6-strip sealing) for heavy cardboard boxes and very high loads during shipping (intercontinental) or long storage. Seals and protects the edges.

4.2.4. Identification and labelling

In general the supplier is responsible for the clear identification of the packages. For identification, labels should be used, which include human readable inscriptions or illustrations and/or machine readable bar codes. Basically each sales and shipping package must be labelled. Printables standardised by Lederer can be obtained online under the following link:

Link:	Anmeldung:
https://www.lederer-online.com/de/siteservice/webcode/index.html	LED Liefe - rant

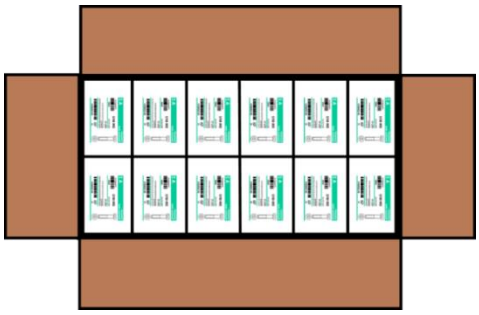
For the labels the following data must be maintained:

- Standard or special part
- Material
- Size
- Lederer item number
- Charge
- Packaging unit
- Country of origin

Due to the colour code for A2 and A4 the labels must be printed in colour. If no charge number is available, the order number and the order date must be entered in this position. The charge number must mandatorily be labelled with "Charge" or "Lot" put in front.

Packaging units or sales packages

The sales package must be labelled with an individual label in a suitable position. The label must be placed in such a position that it is not damaged when opening the package and points upwards in the master cardboard box.



Shipping package or master carton

For correctly sorted packaged goods the labels must be placed on two opposite sides of a shipping package. Remaining quantities in master cartons must also be identified and labelled.

Implementation of the packaging coding according to Directive 94/62/EC

In European countries where there is a labelling obligation according to 97/129/EC, all packaging (primary, secondary and tertiary) placed on the market is subject to the obligation of environmental labelling. It is mandatory to indicate on B2B packaging the code of the packaging material according to Decision 97/129/EC. Other information can be added voluntarily.

Material	Abkürzung	Nummerierung
Plastics		
Polyethyleneterephthalate	PET	1
High density polyethylene	HDPE	2
Polyvinyl chloride	PVC	3
Low density polyethylene	LDPE	4
Polypropylene	PP	5
Polystyrene	PS	6
Paper and cardboard		
Corrugated cardboard	PAP	20
Non-Corrugated cardboard	PAP	21
Paper	PAP	22
Metals		
Steel	FE	40
Aluminium	ALU	41
Wood materials		
Wood	FOR	50
Cork	FOR	51
Textile materials		
Cotton	TEX	60
Jute	TEX	61
Glass		
Colourless glass	GL	70
Green Glass	GL	71
Amber Glass	GL	72
Composite packaging*		
Paper and cardboard/ various metals	C/**	80
Paper and cardboard/ plastic	C/**	81
Paper and cardboard/ aluminium	C/**	82
Paper and cardboard/ tin plate	C/**	83
Paper and cardboard/ plastics/ aluminium	C/**	84
Paper and cardboard/ plastics/ aluminium / tin plate	C/**	85
Plastics/ aluminium	C/**	90
Plastics/ tin plate	C/**	91
Plastics/ various metals	C/**	92
Glass/ plastics	C/**	95
Glass/ aluminium	C/**	96
Glass/ tin plate	C/**	97
Glass/ various metals	C/**	98

Example for the labeling of a cardboard packaging

Example for the labelling of a composite material with paper or cardboard as main component

** A packaging is defined as a composite packaging if the following conditions are met: 1. The packaging consists of different packaging materials that cannot be separated by hand. 2. The secondary packaging material takes more than 5% total weight. Otherwise (share of mass of secondary material < 5% total mass) the code for a single-material packaging shall be used. In this case, the marking of the packaging material with the largest proportion by weight shall be shown.*

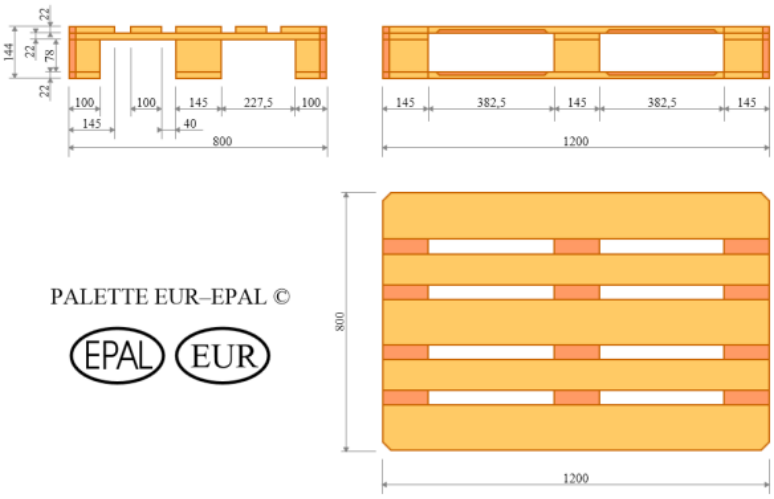
*** For composites, indicate C/ plus abbreviation of the main ingredient.*

4.3. Loading unit

The loading unit is the physical transport unit and normally consists of a load carrier (e.g. Euro pallet) and the packages. It is completed with auxiliary means for securing and stabilizing the loading unit.

4.3.1. Load carrier

Due to standardized goods receiving and storage processes Lederer only accepts delivery on one of the following load carriers: Euro pallets, cartons (parcel service), special pallets and wooden crates for threaded rods (>1m).

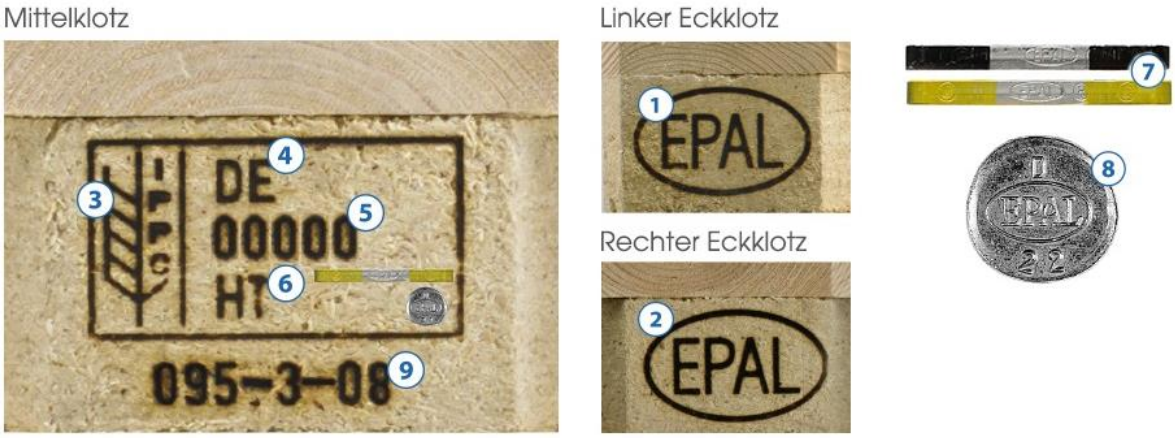


Euro pallet

The Euro pallet is a standard wooden pallet precisely specified by the European Pallet Association (EPAL). It offers four-way entry and has a maximum load capacity of at least 1.000 kg. Euro pallets can be exchanged within the European Pallet Pool (EPP).

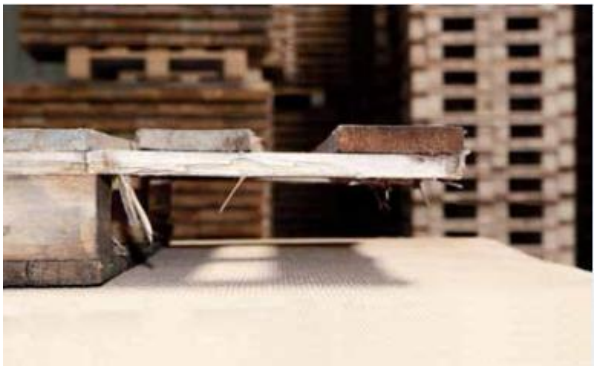
All deliveries must generally be loaded onto undamaged and technically flawless Euro pallets according to the UIC standard 435-2 (standard dimensions 800x1200x144mm). Furthermore the pallets must comply with the IPPC standard ISPM No. 15[1] for wood packaging material. The following labels identify a Euro pallet in line with the standard:

[1] The IPPC standard ISPM No. 15 for wood packaging material specifies phytosanitary treatments and monitoring measures, in order to reduce the risk of spread of quarantine pests associated with the movement of wood packaging material in international trade.



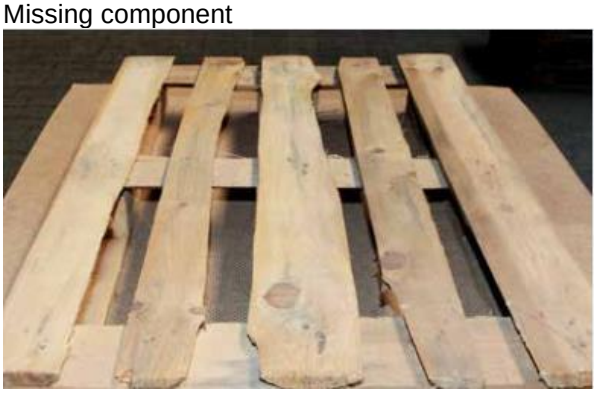
Markings: **1, 2** Branded markings of the European Pallet Association e.V **3** IPPC branded in accordance with the national plant protection rules (mandatory for EPAL pallets from 01/01/2010) **4** Country code **5** Registration number of the responsible National Plant Protection Organization **6** Method of treatment (heat treatment) **7** EPAL control staple (obligatory) **8** Repair nail (only present, if the pallet is a repaired EPAL pallet) **9** Licence number - Year - Month.

If Euro pallets display one of the following faults, the pallets are rejected and cannot be exchanged:



Missing component

Visible fasteners e.g. nails



Unacceptable components

Contamination e.g. paint, oil, mould

Diagonally,transversally or partially broken board

Unacceptable repair

Twisted block

Missing markings

One-way pallets

In exceptional cases one-way pallets may be used instead of Euro pallets. These pallets must be constructed in the same way as the Euro pallet and consist of wood complying with the IPPC standard. Pallets made of deviating materials (e.g. pressed wood) or with deviating dimensions will not be accepted.

Special pallets and wooden crates for threaded rods

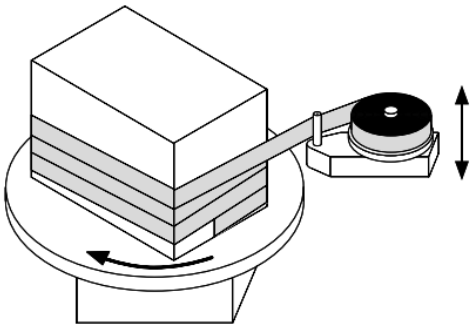
Threaded rods up to 1.0 m in length must be delivered on Euro pallets. For longer threaded rods a special pallet or wooden crate must be selected which sufficiently pads the transport goods and can be transported with a forklift truck (if required with extended forks). The special pallet as well as the wooden crate should make further transport possible.

4.3.2. Securing means for loading units

Completed loading units must be secured against shifting, fanning out, falling down, falling over and also against theft. For this purpose different means are available: stretch or shrink foils, straps or pallet stacking frames.

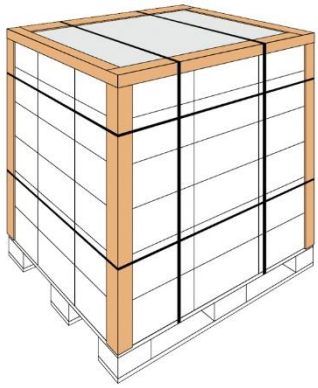
Stretching

Stretching is carried out by mechanically overstretching thin, tear-resistant foils of approx. 20 to 120 µ thickness up to 300% and wrapping them around the loading unit to be secured using the pretension of the foil. Thus the reset forces of the foil secure the loading unit. Stretching is a relatively cost-efficient alternative and helps to protect packages against shifting, falling over, contamination and climatic influences. However, loading units secured by stretching should not be exposed to excessive temperatures, since variations in temperature have a significant influence on the reset forces of the foil.



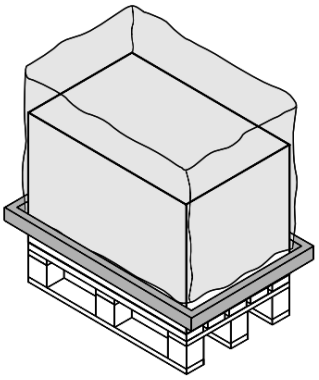
Strapping

Straps may be applied vertically and/or horizontally and establish a safe unit of packages and pallet. The tension of the strap acts as compressive force on the packages thus preventing shifting. In order to avoid that the packages are indented, the use of corner or edge guards is recommendable. Straps are available in different types. The following table gives an overview.



	PP strap	**PET strap**	**Composite strap/ textile strap/ fabric strap**	**Steel strap**
Characteristics	Elastic	Low elasticity	Soft, flexible, very tear-resistant, re-adjustable, weatherproof	Extremely tear-resistant, insensitive surface
Application	For closing cartons, pallet straps, closing straps	Pallets straps, for closing heavy cartons	Transport securing devices of all types	For securing heavy loads
Min. tear resistance	1300 - 3100 N	2700 – 4400 N	2940 N – 13730 N	5500 – 10200 N

Shrink wrapping



Shrink wrapping is carried out by mechanically stretching a plastic foil of approx. 25 bis 150 µ thickness at a certain temperature and cooling it down while being stretched. Thus the loading unit becomes fully protected against splash water and dust all around its faces. All in all this solution provides for a high stability and cohesion of the loading unit. Shrink wrapping is especially suitable for securing mixed and bulky goods.

Edge protection

When shrink wrapping, stretching or strapping, additional edge protection strips should be used. They protect the edges of cartons against weight loading and additionally stabilize the loading unit. Typical materials are corrugated cardboard, PE foam or wood.

Pallet stacking frames

Other securing means are pallet stacking frames made of wood which are usually foldable. They are placed onto Euro pallets and are primarily used to secure the packages against slipping off. Several pallet stacking frames can be stacked on top of each other. The use of additional stacking corners facilitates the stacking of pallets.

Further possibilities for stabilizing

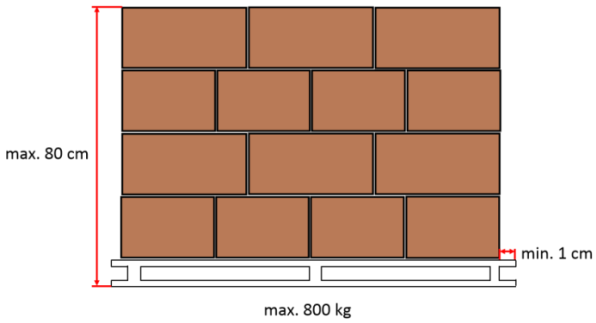
The means listed below can be used for additionally stabilizing and protecting the loading unit:

- *Underliners made of paper or cardboard* helps to prevent shifting of cartons on pallets. Furthermore they distribute the weight of the packages lying on top all over the packages on the bottom.
- *Pallets covers* close the loading unit towards the top and protect the packages against contamination.

4.3.3. Forming a loading unit

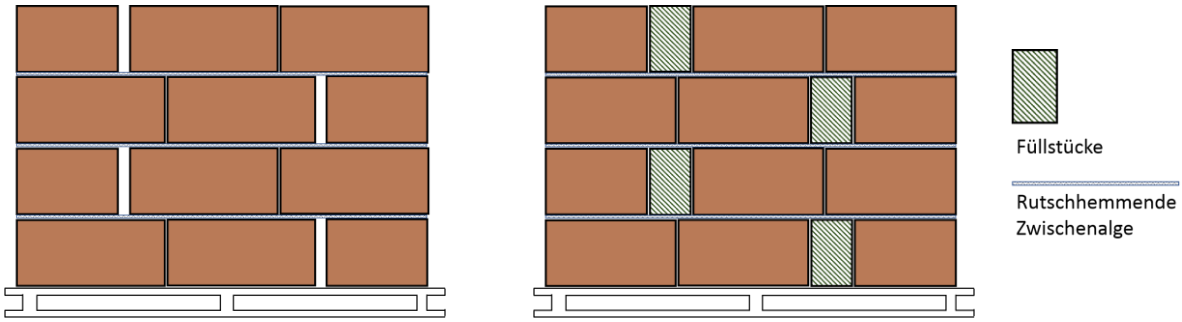
All in all a pallet may be loaded up to max.1 cm up to the edge. In no case packages or securing means may protrude from the pallet edge. This means that the maximum available area for the goods is 118 cm x 78cm. After receipt Euro pallets are stored in standard pallet racks with a maximum storage height. Therefore loading units (incl. pallet) must not exceed the maximum height of 0.80 m. The total weight of the loading unit must not exceed 800 kg.

Furthermore the way in which the package are arranged and/or stacked on the pallet largely influences the stability of the whole loading unit. Optimum stability can be reached by arranging the packages in an offset pattern. Additionally it must be ensured that in the case of different package weights the heavier packages are arranged on the bottom.



Unfavourable dimensions of the packages may lead to gaps in the arrangement pattern. These gaps can often be minimized by deliberately arranging the packages. They should be arranged in an offset pattern in the different layers (see illustration on the left below). If larger gaps cannot be avoided, filler pieces (e.g. made of cardboard) must be inserted (see illustration on the right below).

The adhesion of the individual layers depends on the coefficient of sliding friction of their surface. Therefore anti-skid liners (paper or cardboard liners) should be used for smooth package surfaces, in order to increase the coefficient of sliding friction between the layers.



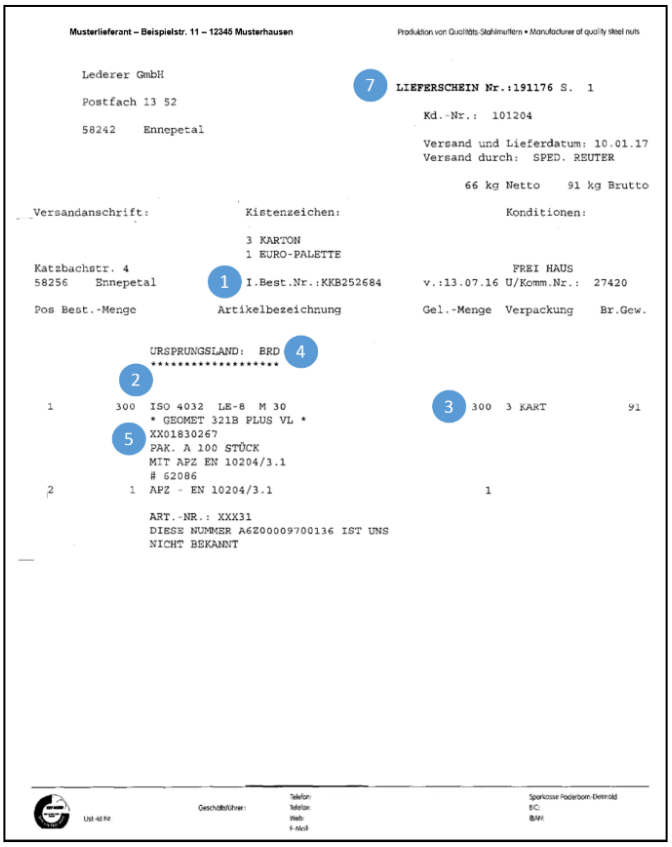
Wooden edge protection strips and pallet covers should be used for securing the loading unit. The edge protection may be fastened with a maximum of two nails (ideally no nails are used). In a final step stretching foil should be used to stabilize the loading unit and to keep the securing means in place. The photo below shows an example of a loading unit configured in this way.

4.4. Documents accompanying the goods

4.4.1. Delivery note

Each delivery must be accompanied with an original delivery note. The delivery note must be applied to the outside of the package in a clearly visible manner by means of a delivery note pocket. It must not be given loosely to the forwarding agent or enclosed with the shipping documents. The delivery note must include the following information:

1. Lederer order number
2. Unique item designation (incl. standard, material /strength class)
3. Quantity/quantity unit
4. Country of origin
5. Batch number
6. Lederer item number
7. Delivery note number
8. Expiration date (as required)


Musterlieferant – Beispielstr. 11 – 12345 Musterhausen

Produktion von Qualitäts-Stahlmuttern • Manufacturer of quality steel nuts

Lederer GmbH
Postfach 13 52
58242 Ennepetal

7 LIEFERSCHEIN Nr.:191176 S. 1

Kd.-Nr.: 101204
Versand und Lieferdatum: 10.01.17
Versand durch: SPED. REUTER

66 kg Netto 91 kg Brutto

Versandanschrift:
Katzbachstr. 4
58256 Ennepetal

Kistenzeichen:
3 KARTON
1 EURO-PALETTE

1 I.Best.Nr.:KKB252684

Konditionen:
FREI HAUS
v.:13.07.16 U/Komm.Nr.: 27420

Pos	Best.-Menge	Artikelbezeichnung	Gel.-Menge	Verpackung	Br.Gew.
		URSPRUNGSLAND: BRD 4			
		********** 2			
1	300	ISO 4032 LE-8 M 30	3 300	3 KART	91
		* GEOMET 321B PLUS VL *			
		5 XX01830267			
		PAK. A 100 STÜCK			
		MIT APZ EN 10204/3.1			
		# 62086			
2	1	APZ - EN 10204/3.1	1		
		ART.-NR.: XXX31			
		DIESE NUMMER A6Z00009700136 IST UNS			
		NICHT BEKANNT			

Geschäftsführer:
Telefon:
Telefax:
Web:
E-Mail:
Sparkasse Paderborn-Detmold
BIC:
IBAN:

4.4.2. Customs documents

The supplier shall make available to the forwarding agent all documents necessary for customs clearance, i.e. all documents for the export in the country of departure, if required for transit and for import to the county of destination, in admissible form and at the right time. The following documents for customs clearance are normally relevant:

- Export Classification Number (ECCN) acc. to the U.S. Commerce Control List (CCL), if the goods are subject to the U.S. Export Administration Regulations
- Export Declaration
- Commercial Invoice (or in the case of e.g. consignment goods or free samples a pro forma invoice)
- Packing List
- Packing Declaration
- Certificate of Non Preferential Origin or Proof of Preferential Origin indication of the REX number in the invoice and the packing list (as provided in the relevant preference regulations or free trade agreements)

4.5. Transport and receiving goods

The following items must be observed for the transport from the supplier to Lederer, to the packer or to the customer:

- Suppliers are generally obliged to meet the delivery date agreed with Lederer.
- Deliveries should consist of a single batch, if possible. If two or more batches are delivered, the packages must be declared correspondingly on the pallet (packing list, corresponding labelling).
- The goods must be separated properly (e.g. by inlays).
- All documents accompanying the order for the transport must be handed over to the haulier/forwarding agent in proper form (see section 5.2.4.).
- The supplier undertakes to correctly store the packages ready for transport until the forwarding agent arrives. This means that the packages must be protected against damage, contamination and environmental influences.
- Depending on the agreed INCOTERM the supplier or its forwarding agent is responsible for proper loading and transport. Also here the packages must be protected against damage, contamination and environmental influences. Furthermore it must be ensured that the goods can be unloaded safely and without any problems.
- All deliveries to Lederer must be made in line with the dispatch conditions agreed. Exempt from this is the transfer of risk according to the terms and conditions of purchase of Lederer.

Higher transport costs due to modes of shipment deviating from the order (air freight, express, courier service, etc.) must be communicated in advance. Additional costs can only be acknowledged, if such a mode of shipment has explicitly been approved by Lederer in writing.

4.5.1. Customer exempted from forwarding insurance/waiver customer

Basically Lederer is a customer exempted from forwarding insurance or waiver customer, i.e. Lederer takes out insurance for all transports[2] on its own. Therefore the forwarding agents are not allowed to take out insurance for goods on behalf of Lederer GmbH.

4.5.2. Load safety

As far as load safety is concerned, basically the one will be held accountable for one's actions or omissions, if these cause a state of not being roadworthy or damage. Therefore all parties involved in the loading process are responsible for the load safety. Here two aspects have to be distinguished: loading for roadworthiness or for safe transport. The haulier is responsible for the first, because he has to make sure that the loaded vehicle complies with all road traffic regulations at any time. However, the party dispatching the goods must ensure that the vehicle is loaded for safe transport. According to the relevant version of the power to issue statutory

[2] This only applies to transports ordered by Lederer.

instruments for loading and unloading (Code of Commerce) the party dispatching the goods is obliged to load, stow and secure the packaged goods/packages.

Responsibility of the shipper	**Responsibility of the haulier**
Safe for transport	Roadworthy
• The packaged goods and their packaging must be in proper condition and suitable for transport (solid packaging unit). • The pallets or other load carriers used must be technically flawless. • The load must be stowed and secured in such a way that it cannot shift, damage is avoided and falling over or falling off the vehicle is excluded.	• Compliance with the gross vehicle weight • Compliance with the gross axle weight rating • Compliance with the admissible vehicle dimensions including load • Roadside inspection of load securing measures for their effectiveness (e.g. retightening of the lashing straps). • Vehicle functions must not be impeded (single-sided stowing, top-heavy loading).

Uniform and proper load restraining is defined in different EN standards. The most important standards in this connection are:

DIN EN 12195-1:2014	DIN EN 12642	DIN EN 12640
Load restraining on road vehicles	*Body structure of commercial vehicles (L-/ Norma- or XL-trailer)*	*Lashing points (e.g. securing force and arrangement of lashing rings on the trailer)*

Depending on the mechanical and climatic stress during transport, load restraining is subject to the following basic requirements:

- In combined traffic, dynamic stress is caused by different dispatch and handling operations. Depending on the mode of transport, stresses of up to $1.0\ g$ in horizontal direction and of up to $1.0\ g$ (road) or $1.8\ g$ (ship) in vertical direction downwards must be considered.
- In order to consider load restraining as being sufficient, the acting load restraining forces must at least be equal to the accelerating forces.
- It is essential for effective load restraining that the goods have no room to move.
- When the load is secured against shifting, safety against falling over must be observed.
- Shipping containers must be rain and saltwater-proof.

4.5.3. Additional requirements for sea freight shipments (container)

In freight container traffic two types of loads have to be distinguished: Full container loads (FCL) und less than container loads (LCL). Depending on the type of load there is a difference between the parties which are responsible for loading and thus also for securing the load.

In the case of FCL the supplier hands over a fully loaded container which has already been sealed by the customs authority for shipment. The container will only be opened by Lederer at the end of the transport chain. The responsibility for loading the container and securing the goods inside the container thus lies with the supplier.

If the volume of the freight to be shipped is not sufficient to fill a container a shipment by less than container loads (LCL) is possible. In this case the supplier makes loading units which are ready for shipment available to the haulier, who subsequently loads the freight into a container together with the unit loads of other customers and ships them. The container is opened in the port of destination and the different unit loads are handled. Due to multiple handling of the freight, protection against damage and theft is much lower than with FCL shipment. Therefore the supplier must instruct the haulier in advance and in writing, how the freight is to be secured inside the container and how it is to be handled in general.

For actuarial reasons only self-propelled ocean-going vessels of steel construction and relating age category may be used for actual sea transport:

- Multi-purpose vessels for bulk cargo (combination carriers) up to an age of 10 years
- Other vessels up to an age of 15 years

Without limitation the vessels must be classified as follows:

Germanischer Lloyd	✠ 100 A 5
Lloyd's Register	100 A 1
American Bureau of Shipping	✠ A 1
Bureau Veritas	I ✠
China Classification Society	★ CSA 5/5
Nippon Kaiji Kyokai	NS*
Korean Register of Shipping	✠ KRS 1
Norske Veritas	✠ 1 A 1
Russian Register	KM ★
Registro Italiano Navale	C ✠
DNV GL	(✠) 100 A5, ✠ 1 A 1, ✠ MC

4.5.4. Notification and receiving of goods

The following information applies to the delivery to Lederer:

Lederer GmbH

Katzbachstr. 4

58256 Ennepetal

Deutschland

Opening hours of the receiving goods department:

Monday to Friday 6 a.m. to 7 p.m.

In order to expedite and facilitate the receiving of goods it is necessary to notify the receiving goods department of deliveries containing more than 10 pallets two days in advance. For the corresponding contact data see Annex.

If delivery dates cannot be met, Lederer must be informed immediately.

4.5.5. Transport damage

Transport damage resulting from incorrect packaging in the sense of section "4.2. Packages" will be invoiced to the supplier. If the goods cannot be received due to damage, the supplier must provide for a replacement delivery. Otherwise the supplier may be in default.

In order to protect its claim for compensation, Lederer shall call in the haulier for damage assessment immediately or within a certain period. Here one has to distinguish between two different types of transport damage:

- Obvious transport damage: Any transport damage visible from the outside shall immediately be reported to the haulier and confirmed by the driver in writing on the shipping documents.
- Concealed transport damage: Any concealed transport damage shall immediately be reported to the haulier in writing. The period to do so is seven days (§ 438 Code of Commerce).

4.5.6. Receiving goods inspection and complaints

As a rule all receiving goods are inspected at random. Depending on the type, any defects (e.g. incorrect deliveries) can be detected immediately or at a later point of time (e.g. complaints of the customer after having received the goods). The costs incurred shall be invoiced to the supplier depending on the type and scope of the complaint.

If Lederer has to bear any additional logistics costs as a result of non-compliance with the requirements defined in this Supplier's Manual, these shall be invoiced to the supplier.

5. Others

5.1. Cross reference to standards and regulations

In the following all standards and regulations are listed to which reference is made within the framework of this document. In addition to that further regulations are mentioned

Quality management

DIN 11204: Verbindungselemente - Prüfbescheinigungen - Liste und Beschreibung der Angaben.

DIN EN ISO 16228: Mechanische Verbindungselemente - Prüfbescheinigungen (Norm zzt. in Vorbereitung)

DIN EN 10204: Metallische Erzeugnisse - Arten von Prüfbescheinigungen.

ISO 898 ff: Mechanische Eigenschaften von Verbindungselementen aus Kohlenstoffstahl und legiertem Stahl

ISO 3506 ff: Mechanische Eigenschaften von Verbindungselementen aus nichtrostenden Stählen.

ISO 6157 ff: Verbindungselemente: Oberflächenfehler.

ISO 8992: Verbindungselemente - Allgemeine Anforderungen für Schrauben und Muttern.

ISO 16048: Passivierung von Verbindungselementen aus nicht-rostenden Stählen.

ISO/TS 16949: Qualitätsmanagement Norm Automobilindustrie

ISO/TS 22163: Bahnanwendungen - Qualitätsmanagementsystem - Besondere Anforderungen für die Anwendung der ISO 9001:2015 im Eisenbahnsektor

Logistics

DIN 6120: Kennzeichnung von Packstoffen und Packmitteln zu deren Verwertung - Packstoffe und Packmittel aus Kunststoff

DIN EN 12195-1:2014: Ladungssicherung auf Straßenfahrzeugen - Sicherheit - Teil 1: Berechnung von Sicherungskräften.

DIN 55468: Packstoffe - Wellpappe - Teil 1: Anforderungen, Prüfung.

DIN EN 12640: Ladungssicherung auf Straßenfahrzeugen - Zurrpunkte an Nutzfahrzeugen zur Güterbeförderung - Mindestanforderungen und Prüfung.

DIN EN 12642: Ladungssicherung auf Straßenfahrzeugen - Aufbauten an Nutzfahrzeugen – Mindestanforderungen.

DIN EN 13247: Spezifikation für Umreifungsbänder aus Stahl zum Heben, Binden und Sichern von Ladungen

DIN EN 13393: Spezifikation von Kantenschutzwinkeln

DIN 13394: Spezifikation von nichtmetallischen Umreifungsbändern

RAL-GZ 492: Wellpappe – Gütesicherung

UIC Norm 435-2: Gütenorm für einen EUR-Ladungsträger aus Holz mit den Abmessungen 800 mm x 1200 mm (EUR-1)

VDI 3968: Sicherung von Ladeeinheiten

Others

IEC 62474:2013-05: Materialdeklaration für Produkte der elektrotechnischen Industrie und für die elektrotechnische Industrie.

IPPC-Standard ISPM Nr. 15: Phytohygienische Bestimmungen der IPPC für Verpackungsmaterial aus Massivholz im internationalen Handel

ISO R/780: Symbole für die Handhabungshinweise von Verpackungen

ISO 9001: Qualitätsmanagementsysteme - Anforderungen

ISO 14001: Umweltmanagementsysteme - Anforderungen mit Anleitung zur Anwendung

Richtlinie 2011/65/EU: Beschränkung (der Verwendung bestimmter) gefährlicher Stoffe

Verordnung (EG) Nr. 1272/2008 des Europäischen Parlaments und des Rates: Einstufung, Kennzeichnung und Verpackung von Stoffen und Gemischen

6. Applicable law/severability clause

In the event that one or more provisions of this Supplier's Manual in whole or in part violate applicable law or law applicable in the future or any contractual agreements existing in parallel with the customer, the validity of the remaining provisions shall not be affected thereby. The same shall apply to any regulatory gaps in the Supplier's Manual. The invalid provision or the regulatory gap shall be replaced by a provision, if legally possible, which comes as close as possible to what the parties intended or would have intended according to the spirit and purpose of the Supplier's Manual, if they had considered this point when completing the Supplier's Manual. Any supplementary or collateral agreements and modifications or amendments to the Supplier's Manual must be made in written form. These formal requirements can only be annulled or modified in written form. The written form in the sense of this agreement is only considered to be given, if the declaration has been signed by the parties with their names in manuscript. The written form described in the aforementioned sentence cannot be replaced by an electronic form. The Supplier‘s Manual shall be governed exclusively by the substantive law of the Federal Republic of Germany to the exclusion of the Private International Law/Conflict of Laws and the United Nations Convention on Contracts for the International Sale of Goods.

Annex

Contact partners

Function	Name	
Goods receiving department	Adrian Kaftan	Fon +49 (0) 23 33 / 83 09-558 Fax +49 (0) 23 33 / 83 09-559 akaftan@lederer-online.com
Purchasing	Daniel Ziplies	Fon +49 (0) 23 33 / 83 09-980 Fax +49 (0) 23 33 / 83 09-981 dziplies@lederer-online.com
Quality management	Jörg Baumann	Fon +49 (0) 23 33 / 83 09-780 Fax +49 (0) 23 33 / 83 09-781 jbaumann@lederer-online.com
Supply Chain Management	Stefan Witte	Fon +49 (0) 23 33 / 83 09-482 Fax +49 (0) 23 33 / 83 09-483 switte@lederer-online.com

8Dreport

General expectations:

- The complete 8D report is available within 7 working days upon receipt of the complaint by Lederer. If the processing of the complaint requires more time, a new date will be agreed within the a.m. period.
- In the case of repeated faults a detailed analysis will be carried out with a new verification of the effectiveness check already effected.
- The resulting 8D report is used as a summary for the fault described. Therefore all the information is listed in the 8D report without referring to other documents.
- The supplier's own template for processing complaints may be maintained.

Expectations with regard to contents and remarks:

D2 – Description of the problem:

- The fault pattern is described clearly and in detail.
- If a fault cannot be tracked, Lederer will be consulted.
- If a fault is not acknowledged, this will be justified.

D3 – Immediate measures

- The query listed below has been processed completely:
  - Complaint distributed and discussed with problem solution team D1 on: _____
  - Is production running? □ No □ Yes, action:
  - Is other work in progress concerned? □ No □ Yes, action:
  - Are further deliveries to the customer concerned? □ No □ Yes, action:
  - Is inventory concerned? □ No □ Yes, action:
- Immediate feedback is requested, if actions by Lederer become necessary.

D4 – Analysis of the causes

- It must be clarified whether the fault is accidental or systematic.
- The cause stated in D4 is the real cause of the fault and not a consequence.

D5 – Planned corrective action

- The planned corrective actions are suitable to prevent that the fault occurs again.
- Training measures and instructions alone will not be sufficient to avoid a fault permanently.

D6 – Implementation of the corrective action

- The planned corrective actions must be implemented before the next production starts.

D7 – Preventive measures

- Any findings gained to avoid faults are transferred to components having similar characteristics.

Supplier	8D report	Date	
		Issued:	
		D1 to D3:	
		Intermediate report:	
		Final report:	

Header data

Complaining customer			Q report no./of:	
Responsible at customer's:			Telephone:	
Department:			Email:	
Supplier/no.:			Telephone:	
Responsible/Department:			Email:	
Designation:				
Part number:			Index:	
Complaint acknowledged:	Yes ☐	No ☐	Not acknowledge, justification:	
Repeated fault:	Yes ☐	No ☐		
8D no./of				

D1 Problem solution team

	First name	Surname	Department	Email
Team leader:				
Team:				

D2 Problem description

Complaint:					
Delivered quantity:		Rejected quantity:		Returned quantity:	
Manufacturing date:				Date end of D2:	

D3 Immediate measures

Selection:	Yes ☐ No ☐	Result: Number of NOK parts	
Responsible:		D3 completed on:	

D4 Analysis of the causes

Cause/Causing process:

Why could the fault occur?

Responsible:		Settled on:	

Why has the fault not been detected?

Responsible:		Settled on:	

D5 Planned corrective actions

Responsible:		Settled on:	

D6 Implementation of the corrective actions

Description of the corrective actions:

Responsible:		Planned implemntation	
Implemented on:		Effective from:	

Proof of effectiveness of the corrective actions implemented:

Responsible:		Settled on:	

Termination of the immediate measures:

Responsible:		Settled on:	

D7 Preventive measures

Transfer of the possible solutions for similar components

Responsible:			
Introduction planned on:		Settled on:	

D8 Final discussion

	First name	Surname	Email
Participant:			
Carried out on:			

Result: