NIDEC GPM Group

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Container and Packaging Guidelines for Suppliers

Valid for all deliveries to NIDEC GPM GmbH

NIDEC GPM GmbH

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Content

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1. Introduction

To ensure a smooth process for unloading, the acceptance and forwarding of materials to manufacturing, it is necessary to be aware of certain delivery conditions.

These guidelines, should provide all suppliers with information about the packaging requirements, for the following areas:

- *Quality*
- *Transport*
- *Goods receipt*
- *Warehouse*
- *Provision of materials (Handling)*
- *Production (Extraction)*

To ensure correct quality of packaging, packaging must be chosen so that parts

a) are protected against external environmental influences and from
b) mechanical stress between the parts.

The following guidelines should lead to the guarantee of standardised dimensions, matching quantity contents and unit loads, and a rational and trouble-free flow of materials meeting quality requirements between suppliers and NGPM.

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For claims concerning empty packaging:
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2. Packaging Overview

NGPM standard containers

- Euro mesh box
- Euro flat pallet
- SLC – Small load carrier (incl. appropriate ESD-version)

C - SLC with complete composite base	Lid C – SLC	R - SLC with reduced composite base*	Lid RL – SLC	RL – SLC with smooth base	Lid RL – SLC
3214	32	3215	35	4147	45
4314	43	4315	45	6147	65
4328	43	4329	45	6174	65
6417	64	6415	65	6280	65
6428	64	6418	65		
		6429	65		

* preferred SLC-Type

Special packaging/alternative packaging

NGPM can use separate special packaging/alternative packaging to protect components. Suppliers must obtain NGPM's agreement prior to using special packaging/alternative packaging they supply.

Disposable packaging

The use of disposable packaging while taking account of the container and packaging guidelines must only be used after agreement with NGPM. Single packaging or large load containers must be chosen in such a way, that the outer dimensions match approximately with the dimensions of VDA-SLCs or Euro mesh boxes. If this is not possible, the supplier must confer with the packaging management NGPM.

The supplier is also responsible for the procurement and the proper usage of disposable packaging, if it is used additionally to the returnable packaging provided by NGPM. Such additional disposable packaging serves as a protection against transport damages, residual dirt and corrosion. NGPM and the supplier must agree upon a directly applied preservation on the part as a protective measure.

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3. Packaging

Packaging planning is completed by NGPM or the supplier. Packaging planned by the supplier must be agreed with NGPM and cleared by NGPM prior to use. NGPM packaging management decides on the use of NGPM's own packaging. The number of packaging materials needed for a cycle is determined by NGPM according to the present conditions.

After planning, the defined packaging will be documented in a packaging regulation, which must be signed by NGPM and the supplier. The supplier is responsible for delivery analogous to the packaging regulation after signing it.
The packaging regulation is also valid for subsequent indices, as long as there are no packaging relevant modifications to the component.

NGPM will complain a pallet if:
- the supplier delivers parts in unreleased packaging.
- parts are damaged or dirty because of the packaging.

Any costs which may arise will be passed on the perpetrator.
NGPM's own packaging is intended only for the transport of components between the supplier and NGPM.
NGPM's own packaging must not be misused for

- the supplier's internal production cycle,
- the interim storage of semi-finished products at the supplier,
- processing at sub-contractors (extended workbench)
- the build-up of unreconciled stocks of finished products, at the supplier.

4. VDA-Labels

Standard

Every load unit (master-label) and every container (single label) must include a label in accordance with VDA 4902 or Odette (see appendix 9.1).

This documentation should provide:

- a description of parts
- type of container
- NGPM article number with index *
- Quantity per container*
- Supplier address
- Supplier number
- Batch number of supplier
- Delivery note number
- Customer address
- When appropriate component labelling sample (see appendix 9.4)

*This marking must be given numerically/alphanumerically and as a barcode.

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The VDA-label must be clearly displayed on the outside and must not exceed the outer contour of the packaging.
The type of the document chosen should be resistant to environmental influences and stress during transportation so that the label can be read mechanically or manually at the delivery location.
Elements of load unit safety (strapping) must not hinder legibility of the goods label.
Additional labels must only include information for the customer (e.g. information about modifications). Old labels must be removed.

In the case of VDA small load carriers, the goods label must be inserted into a document pocket. With reusable containers, glue down must not be used.

Kanban board

If delivery is to take place in a Kanban system, the marking size of containers must be adapted in size to meet individual requirements

5. Delivery note

The delivery note is an obligatory document, which has to be enclosed to each delivery. This document gives information about the required shipping data of the delivered goods. It also serves NGPM Container Management as the basis for periodic accounts reconciliation and as a control instrument for quantitative and qualitative container inspection at goods receipt.

The delivery note has to be visible fixed in a mailer (see appendix 9.2) at the load unit. This shall ensure, that the document cannot get lost during the transport.

The supplier also has to ensure that shipping documents are correctly filled out.
The following must be entered:

- Delivery note number
- Type and number of load units
- Number and packages for each load unit
- Part description/part number
- Total amount of parts (referred to the single parts)
- Dispatcher/supplier number
- Batch number of supplier
- Exact weight (+/- 10 kg) of the load units
- Departure date
- NGPM delivery address, when appropriate divergent address
- Forwarder
- For dutiable goods: Dispatch note number (T1/No. ...)
- List of packaging materials with the corresponding delivered quantity
  At the same time the marking used by NGPM corresponding to a full load must be used.

Furthermore, the actually delivering forwarder must be mentioned in the delivery note.

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6. ESD- packaging

For parts, which are sensitive to electrostatic discharge (ESDS), the packaging must be chosen according to the norm IEC- 61340-5-3:2015, so that the parts are protected against physical and environmental damages and damages based on static electricity.

Each component of the packaging must be clearly labeled as ESD-packaging (see appendix 9.3).

The use of ESD-packaging will be clarified between NGPM and the supplier before start of production.

7. Packaging of samples

The supplier is responsible for the proper packaging of samples. Sample deliveries must be labeled at the packaging and at the delivery note according to the template “Sample labelling” (see appendix 9.4). The current valid template (effective date: 28.04.17) can be found in the download area at www.nidec-gpm.com. Samples must be delivered at the unloading area “0100SOMU, this term must be shown at the delivery notes. The delivery of ESD parts and components must be done according to IEC- 61340-5-3:2015.

8. Collective load unit/mixed pallets

As a rule, each load unit is only permitted one article number.
If call-off quantities do not make up complete load units, then different load carriers can be made up to a collective load unit. Collective units should be packed so that the same load carriers are grouped together on the pallet.
Here in particular care should be taken that there is accompanying documentation to identify each individual load carrier/ package. The comment "Collective load unit" must be entered on the delivery note.

9. Cleaning

Because of the high quality requirements from components, these may only be delivered in clean packaging materials.
Packaging materials must be protected from contamination. Every supplier is responsible for maintaining cleanliness of the packaging materials currently in use.
In general, the owner of the packaging is responsible for the cleaning. Individual agreements can be found in the packaging regulations. If the supplier neglects to protect the packaging materials currently in use, the supplier must meet the costs of cleaning these packaging materials.

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10. Empties Management

Empties requirements must be agreed with the NGPM Container Management and must be notified to the NGPM Container Management seven working days before the required empties delivery. With empties requirements of pool containers, the order must be placed using a form, which can be found under www.nidec-gpm.com in the download area.

The Supplier have to complain within two working days to Container Management NGPM using the relevant delivery note, if:
a) there is a delivery to the supplier of contaminated empties by NGPM.
b) there is a deviation from the delivery note.
Complaints made later cannot be accepted.

The supplier and NGPM's Container Management are responsible for the account management of empties. Reconciliation of empties' accounts takes place at regular intervals between the supplier and NGPM's Container Management. Unless otherwise stipulated, the supplier is obliged to provide NGPM monthly an empties bank account until the 15th of the following month.

The use of supplier empties

Integration of the supplier's own empties and alternative packaging must not take place without the approval of NGPM's packaging or container management.
Once NGPM has given approval, the empties must be adequately labelled and prior to delivery, notification sent to NGPM Container Management. Otherwise later refunds for empties cannot be guaranteed.

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11. Appendices

Appendix 9.1 – VDA Label

Example of VAD 4902 label Version 4 / ODETTE Transport Label

(1) Warenempfänger		(2) Abladestelle - Lagerort - Verbrauchsstelle -	
(3) Lieferschein-Nr. (N)		(4) Lieferantenanschrift (Kurzname, Werk, PLZ, Ort)	
	(5) Gewicht netto (KG)	(6) Gewicht brutto (KG)	(7) Anzahl Packstücke
(8) Sach-Nr. Kunde (P)			
(9) Füllmenge (Q)		(10) Bezeichnung Lieferung	
		(11) Sach-Nr. Lieferant	
(12) Lieferanten-Nr (V)		(13) Versanddatum	(14) Änderungsstand Konstruktion
(15) Packstücknummer (S,M,G)		(16) Chargen-Nr. (H)	

Appendix 9.2 – Mailer

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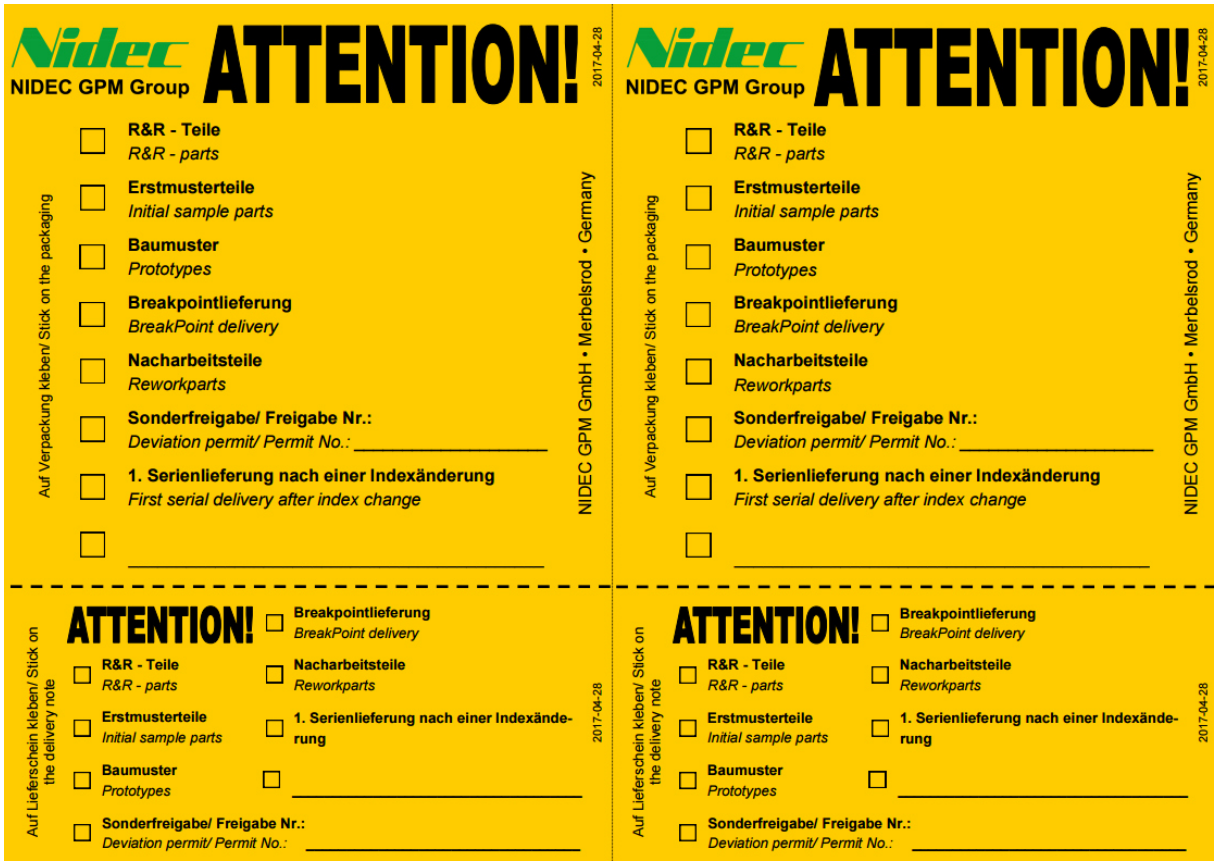
Appendix 9.3 – Labelling of ESD-packaging

Appendix 9.4 – Sample labelling



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Appendix 9.5 – NGPM Standard containers

Euro mesh box

External dimension in mm	1240 x 835 x 960
Internal dimension in mm	1200 x 800 x 800
Weight in kg	85
Load capacity in kg	1000
Packaging number	PK301

Not allowed:

- deformed angle pieces or corner pillars
- front panel flaps are immobile or so deformed that they can no longer be opened or closed
- floor frame or feet are bent so that the box no longer stands on four feet, or can no longer be stacked without danger
- torn steel mesh with outward or inward protruding wire ends
- damaged base
- essential markings are missing or unreadable
- false box pallets, which do not conform to the EPAL standard

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Euro flat pallet

Dimensions in mm	1200 x 800 x 144
Weight in kg	20
Packaging number	PK203

Not allowed:

- a board is missing or broken transversely or diagonally
- more than two lower or upper edge boards are so splintered that more than one nail or screw shank is visible in each board.
- a block is missing or so broken or splintered that more than or nail or screw shank is visible.
- fake euro pallets, which do not conform to the EPAL standard

plastic pallet

Dimension in mm	1200 x 800 x 150
Weight in kg	15
Packaging number	PK210 / PMPALESD (ESD)

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Adapter-pallet 600x400

Dimensions in mm	600 x 400 x 103
Weight in kg	2
Packaging number	PMTF0135 / PMTF0137 (ESD)

Adapter-pallet 800x600

Dimensions in mm	800 x 600 x 103
Weight in kg	4
Packaging number	PMTF0136 / PMTF0138 (ESD)

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Small load carriers conforming to VDA 4500

A SLC (KLT) must not exceed an overall weight (incl. own weight) of 15 kg.

C – SLC

C – SLC 3214

External dimensions in mm	300 x 200 x 147
Internal dimensions in mm	260 x 136 x 127
Weight in kg	0.7
Packaging number	PK105

- 16 SLCs/layer
- 4 layers/pallet
- 64 SLCs/pallet

C – SLC 4314

External dimensions in mm	400 x 300 x 147
Internal dimensions in mm	334 x 247 x 103
Weight in kg	1.6
Packaging number	PK103

- 8 SLCs/layer
- 6 layers/pallet
- 48 SLCs/pallet

C – SLC 4328

External dimensions in mm	400 x 300 x 280
Internal dimensions in mm	334 x 247 x 236
Weight in kg	2.6
Packaging number	PK101

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- 8 SLCs/layer
- 3 layers/pallet
- 24 SLCs/pallet

C – SLC 6417

External dimensions in mm	600 x 400 x 174
Internal dimensions in mm	532 x 346 x 125
Weight in kg	3.0
Packaging number	PK115

- 4 SLCs/layer
- 5 layers/pallet
- 20 SLCs/pallet

C – SLC 6428

External dimensions in mm	600 x 400 x 280
Internal dimensions in mm	532 x 346 x 231
Weight in kg	4.4
Packaging number	PK110

- 4 SLCs/layer
- 3 layers/pallet
- 12 SLCs/pallet

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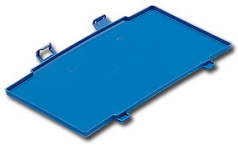
Lid C – SLC

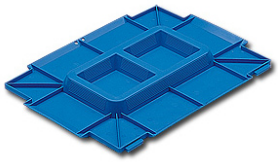
D – 32

Dimensions in mm	300 x 200
Weight in kg	0.1
Packaging number	PK502



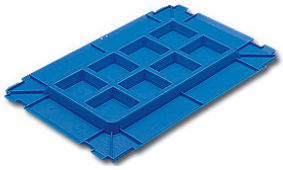
D – 43

Dimensions in mm	400 x 300
Weight in kg	0.2
Packaging number	PK503



D – 64

Dimensions in mm	600 x 400
Weight in kg	0.6
Packaging number	PK504



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R – SLC

R – SLC 3215 / 3115 (ESD)

External dimensions in mm	300 x 200 x 147
Internal dimensions in mm	243 x 162 x 129
Weight in kg	0.6
Packaging number	PK104 / PK139 (ESD)

- 16 SLCs/layer
- 6 layers/pallet
- 96 SLCs/pallet

R – SLC 4315 / 4115 (ESD)

External dimensions in mm	400 x 300 x 147
Internal dimensions in mm	346 x 265 x 109
Weight in kg	1.3
Packaging number	PK111 / PK140 (ESD)

- 8 SLCs/layer
- 6 layers/pallet
- 48 SLCs/pallet

R – SLC 4329 / 4129 (ESD)

External dimensions in mm	400 x 300 x 280
Internal dimensions in mm	346 x 265 x 242
Weight in kg	1.9
Packaging number	PK124 / PK143 (ESD)

- 8 SLCs/layer
- 3 layers/pallet
- 24 SLCs/pallet

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R – SLC 6415 / 6115 (ESD)

External dimensions in mm	600 x 400 x 147
Internal dimensions in mm	544 x 364 x 109
Weight in kg	2.1
Packaging number	PK120 / PK144 (ESD)

- 4 SLCs/layer
- 6 layers/pallet
- 24 SLCs/pallet

R – SLC 6418* / 6118 (ESD)

External dimensions in mm	600 x 400 x 174
Internal dimensions in mm	544 x 364 x 136
Weight in kg	2.3
Packaging number	PK119 / PK145 (ESD)

- 4 SLCs/layer
- 5 layers/pallet
- 20 SLCs/pallet

R – SLC 6429 / 6129 (ESD)

External dimensions in mm	600 x 400 x 280
Internal dimensions in mm	544 x 364 x 242
Weight in kg	3.0
Packaging number	PK117 / PK147 (ESD)

- 4 SLCs/layer
- 3 layers/pallet
- 12 SLCs/pallet

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RL – SLC

RL – SLC 4147

External dimensions in mm	400 x 300 x 147
Internal dimensions in mm	345 x 260 x 129
Weight in kg	1.1
Packaging number	PK107 /PK149 (ESD)

- 8 SLCs/layer
- 6 layers/pallet
- 48 SLCs/pallet

RL – SLC 6147

External dimensions in mm	600 x 400 x 147
Internal dimensions in mm	544 x 359 x 129
Weight in kg	1.8
Packaging number	PK131 / PK153 (ESD)

- 4 SLCs/layer
- 6 layers/pallet
- 24 SLCs/pallet

RL – SLC 6174*

External dimensions in mm	600 x 400 x 174
Internal dimensions in mm	544 x 359 x 156
Weight in kg	1.8
Packaging number	PK132 /PK154 (ESD)

- 4 SLCs/layer
- 5 layers/pallet
- 20 SLCs/pallet

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RL – SLC 6280

External dimensions in mm	600 x 400 x 280
Internal dimensions in mm	544 x 359 x 262
Weight in kg	2.7
Packaging number	PK116 / PK156 (ESD)

- 4 SLCs/layer
- 3 layers/pallet
- 12 SLCs/pallet

Lid RL – SLC

Lid – 35

Dimensions in mm	300 x 200
Weight in kg	0.2
Packaging number	PK508 / PK511 (ESD)

Lid – 45

Dimensions in mm	400 x 300
Weight in kg	0.4
Packaging number	PK509 / PK512 (ESD)

Lid – 65

Dimensions in mm	600 x 400
Weight in kg	0.7
Packaging number	PK510 / PK513 (ESD)

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Pallet lid

A 1208

External dimensions in mm	1200 x 800 x 150
Weight in kg	6,0
Packaging number	PK501 / PMPALESD (ESD)

* does not correspond to VDA 4500

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