

Packaging guideline

for suppliers

of

MSG Mechatronic Systems GmbH Auf der Aue 11 A-8551 Wies

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1. Introduction

The packaging guideline applies to all parts delivered to MSG, Mechatronic Systems GmbH, and informs about the packaging regulations of MSG. The aim of the directive is a rationalised packaging system that allows a smooth, quality-assured material flow.

It is the responsibility of the supplier to ensure that all delivered components are properly and adequately preserved, protected and packed so that they reach their destination safely and without damage and can be stored at MSG until further processing.

2. Packaging information

Regardless of the type of packaging chosen, the following requirements must be met:

- Delivery without any loss of quality due to transport or the choice of packaging.
- Compliance with MSG purity and cleanliness requirements.
- Creation of rational loading units and efficient use of transport capacities (stackable).
- Use of materials in accordance with environmental protection aspects.
- Sufficient transport security.
- Parts removal suitable for handling.
- Proper labelling.
- In the case of cross-border trade in goods, the import regulations for packaging materials made of wood must be observed. This also includes the proper marking of all treated materials according to the IPPC standard.

3. Purity and cleanliness requirements

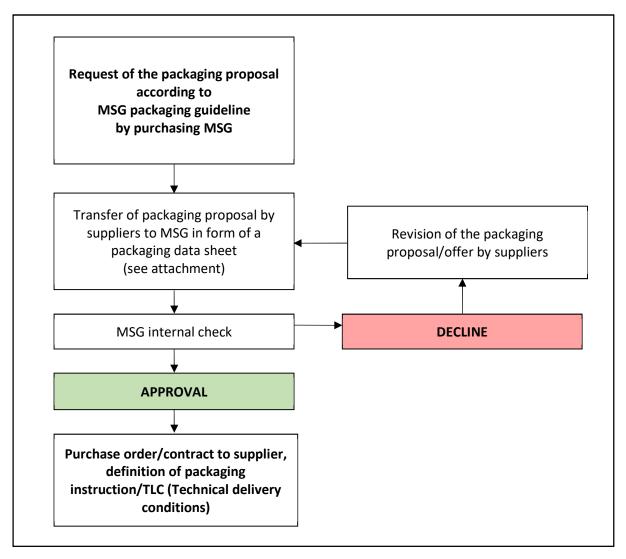
To meet the purity and cleanliness requirements of MSG and its customers in the long term, the entire production at MSG is designed at least as a clean zone in accordance with the VDA 19 Part 2 specification. According to this specification, depending on the particle composition (compact particles, fibrous particles, or airborne or sinking particles), different sizes and numbers are permissible. Unless there are special requirements for the technical cleanliness of the products to be delivered, the supplier's packaging concept must be selected in coordination with MSG in such a way that the requirements for the clean zone in accordance with VDA 19 are fulfilled.

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4. General packaging definition

The following procedure must be followed when determining the packaging:



The packaging data sheet completed by the supplier (see attachment) is sent to the respective purchaser at MSG together with the offer.

This packaging proposal is forwarded by the purchasing department to the respective affected areas, checked and, after release, included as a packing instruction in the contract.

The sample deliveries are already delivered in accordance with the packaging corresponding to the packaging data sheet.

The packaging proposal approved by MSG is a packaging instruction and is binding for the supplier.

If the packaging instruction is not suitable from the supplier's or MSG's point of view, it can only be changed after prior approval by MSG.

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4.1. Material selection

When selecting the packaging material, any particle emissions must be avoided (see paragraph 3. Purity and cleanliness requirements or determination of TLC).

4.2. Size selection and weight

The container size is selected according to the criterion of the best possible volume utilisation, considering the maximum gross weight. All repacking and handling efforts should be avoided, and the delivered container should be suitable for automated storage. The standard dimensions for load units (pallets) are as follows:

LxWxH (mm): 1200 x 800 x 750

1200 x 800 x 1400

The following weight restrictions must be observed:

The total weight per packaging must not exceed 20 kg.

The total weight per loading unit (pallet) must not exceed 1.000 kg.

In the case of one-way packaging, the dimensions of the packaging must be adapted to the following standard dimensions (external dimensions):

LxWxH (mm): 400 x 300 x 120

400 x 300 x 325 600 x 400 x 75 600 x 400 x 147 600 x 400 x 325

These parts are repacked into MSG's own containers at MSG due to the purity and cleanliness requirements. Here, attention must be paid to simple handling and the highest possible volume utilisation.

The design (thickness) of the one-way packaging must be coordinated with MSG regarding stackability.

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4.3. Container filling

In principle, the supplier is responsible for filling only clean and dry containers. If the cleanliness of the containers does not meet the quality requirements for the material to be transported therein, the supplier must carry out cleaning measures at his own expense.

Reusable containers filled with oiled articles must first be lined with a plastic bag (PE, VCI...) of a thickness appropriate to the filling weight to avoid contamination or special containers must be used which are only approved for the transport of these products (special marking!).

Corrosion-sensitive components must be delivered in an appropriate corrosion-protective packaging (e.g. VCI).

Only one part number may be delivered in one container (carton...). Deviations must be agreed with Purchasing MSG in writing and recorded in the packaging data sheet/TLC.

4.4. Container labelling

Each container and/or loading unit (also for identical parts) must be labelled in accordance with VDA 4902. The following information must be indicated on the label:

- Consignee
- Unloading point at MSG
- Delivery note number (text and barcode)
- MSG part number (text and barcode)
- MSG designation
- Filling quantity (text and barcode)
- Batch number (text and barcode)
- Supplier number (text and barcode)
- Date
- Revision status (Index)

If self-adhesive labels are used for marking containers, it is essential to ensure that they can be removed.

4.5. Additional handling costs

If the specified packaging is not adhered to for the supplier's fault, any additional costs incurred (handling, disposal, rejects and repackaging costs) will be charged to the supplier.

If containers are delivered with incomplete or missing labelling or with several different parts in one packaging, the supplier will be invoiced for all additional costs incurred.

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5. Provision of packaging by MSG

In agreement with MSG, it is possible for MSG to provide reusable packaging - see Appendix 1: Catalogue of packaging materials.

If required, the following disposable packaging is also provided:

- Trays
- PE bags

This disposable packaging must be ordered from the responsible purchaser or dispatcher at MSG.

5.1. Container selection

The packaging materials listed in Appendix 1 shall be used. When selecting the container size, it must always be ensured that the container volume is used as efficiently as possible.

5.2. Container filling

The supplier is responsible for ensuring that only clean and dry containers are used (see 4.3). MSG must be informed about the delivery of defective or dirty containers and the further procedure must be agreed.

5.3. Container labelling

Each packaging material must be labelled in accordance with VDA 4902 (see 4.4). Any additional costs for incomplete or missing labelling will be charged to the supplier.

5.4. Storage of provided packaging

The packaging provided must be stored at the supplier's premises in covered areas and contamination by other materials must be avoided (-> no storage together).

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5.5. Container requirements and ordering

The requirement for reusable empties is to be determined by the supplier based on the available delivery schedules and the specified packaging and has to be ordered from MSG in advance.

The lead times are at least 2 days, subject to collection by the supplier. If MSG organizes the transport, the lead time is at least 4 days.

Empties may not be misused by the supplier for internal production cycles or storage for more than the current delivery schedules.

5.6. Stock control

To check the quantities circulating in the containers, the type and number of empty containers and the number of possible reusable additional packaging materials must be indicated on the delivery documents. MSG compares stocks with the respective supplier monthly to check the number of empties.

5.7. Container accounts

MSG creates an account for each reusable package on which all incoming and outgoing goods are kept. All movements of loading equipment and the final status at the end of the month are transmitted to the respective supplier. This list must be checked, and differences must be reported or documented as soon as possible. If MSG does not receive a reply within 10 working days, the stocks are confirmed irrevocably.

5.8. Inventory

Once a year, at MSG's request, an annual inventory of the loading equipment must be done. These stocks must be recorded physically. If there is no confirmation, all documented stocks are considered as accepted.

In case of differences due to loss or damage of MSG's own containers, the costs for the replacement procurement shall be invoiced to the originator or, if the originator cannot be clearly identified, shared between the supplier and MSG in a ratio of 50:50. Replacement shall be procured exclusively by MSG.

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6. Provision of packaging by the supplier

In agreement with MSG, it is also possible for the supplier to provide packaging. In principle, the guidelines specified in points 3 and 4 must be observed. Any deviations must be agreed with MSG.

The supplier is responsible for ensuring that enough packaging (containers, KLT's, etc.) is available and reordered.

7. Alternative packaging

The use of alternative packaging, contrary to the packaging regulations, must be justified and agreed in advance with MSG's disposition. The corresponding note "Alternative packaging" must be indicated on the delivery note, stating the contact person with whom this packaging was specified (name, telephone number). For alternative packaging, the same procedure applies as for packaging in general (see point 4).

If MSG has not specified any packaging, a packaging proposed by the supplier can be used in coordination with MSG. This packaging must comply with MSG's specifications regarding size and weight (see 4.2) and be approved by MSG.

The packaging data sheet must be sent to the responsible purchaser at MSG in the case of changes or redefining.

The release of the packaging (including the alternative packaging) does not release the supplier from his responsibility for a correct delivery of parts.

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8. Assumption of costs and responsibility

	Assumpt	nption by	
	Supplier	MSG	
Acquisition costs and responsibility for the procurement of reusable loading units (owned by MSG)		Х	
Acquisition costs and responsibility for the procurement of supplier's own containers	Х		
Acquisition costs and responsibility for the procurement of reusable and disposable internal packaging	Х		
Costs and responsibility for the procurement of containers for additional supplier-internal production requirements and the build-up of non-agreed safety stocks	Х		
Costs and responsibility for the procurement of containers for the interim storage of semi-finished products	Х		
Costs and responsibility for the procurement of containers for deliveries from suppliers	X		
Costs and responsibility for delivery in non-coordinated alternative packaging and the resulting follow-up costs	Х		
Costs and responsibility for delivery in defective, wet and soiled packaging and the resulting follow-up costs	Х		
Costs and responsibility for non-compliance with specified packaging	Х		
Costs and responsibility for uncoordinated deliveries from/to containers in need of repair	Х		
Repair costs of MSG returnable loading units	Origin	ator	
Costs for unauthorised scrapping of MSG's own containers and loss of loading units through fault	Х		
Responsibility for the procurement of disposable packaging	Х		
Responsibility for notifying MSG of changes in the place of delivery for empties	Х		
Costs and responsibility for packaging that is not, insufficiently or incorrectly coordinated	Х		
Responsibility for the procurement of replacement packaging	Х		
Costs for replacement packaging and resulting additional expenses	Origin	ator	
Costs and responsibility for cleaning heavily soiled loading units	Origin	ator	
Costs for additional work if the loading units are not marked or are not sufficiently marked	Х		
Reporting obligation in case of under delivery, over delivery or incorrect delivery to MSG	Х		

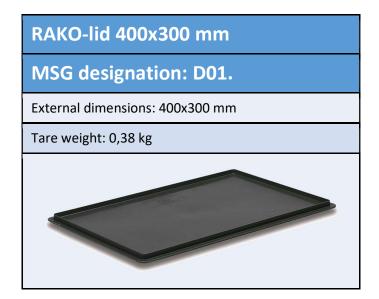
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Appendix 1: MSG Packaging materials catalogue

Containers and matching lids:

Euro-container 400x30	00x120	MSG desig	nation: 01.
External dimensions: 400x300x120 mm	Internal dimensions: 356x256x117 mm		Dimensions folded: not folding
Tare weight: 1,55 kg	Max. filling weight: 20 kg		Max. quantity per pallet: 80



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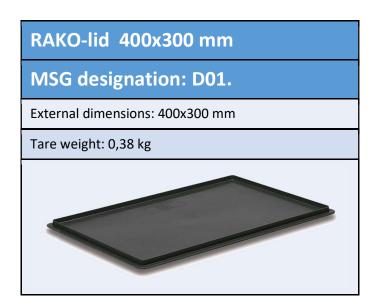
Euro-container 600x40	00x75	MSG desig	nation: 02.
External dimensions: 600x400x75 mm	Internal dimensions: 570x370x70 mm		Dimensions folded: not folding
Tare weight: 1,02 kg	Max. filling weight: 20 kg		Max. quantity per pallet: 64
		RELIEF	



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Euro-container 400x300x325		MSG desig	nation: 03.
External dimensions: 400x300x325 mm	Internal dimensions: 358x258x316 mm		Dimensions folded: not folding
Tare weight: 1,00 kg	Max. filling weight: 20 kg		Max. quantity per pallet: 24



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Euro-container 600x40	00x325	MSG desig	nation: 04.
External dimensions: 600x400x325 mm	Internal dimensions: 558x358x305 mm		Dimensions folded: not folding
Tare weight: 3,0 kg	Max. filling weight: 20 kg		Max. quantity per pallet: 12



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Euro-container 600x40	00x147	MSG desig	nation: 06Y.
External dimensions: 600x400x147 mm	Internal dimensions: 557x357x143 mm		Dimensions folded: not folding
Tare weight: 1,7 kg	Max. filling weight: 20 kg		Max. quantity per pallet: 32



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Paletts:

Euro palette		MSG design	ation: P02.
External dimensions: Tare weight: ca 1200x800x150 mm		a. 25 kg	
Disposable palette			
External dimensions: 1200x800x150 mm	Tare weight: ca	a. 15 kg	
Heavy duty Paloxe 3-622	-300R	MSG design	ation: 05.
External dimensions: 1200x800x765 mm	Tare weight: ca. 48 kg		Load capacity: 600kg
Internal dimensions: 1120x920x600 mm	Superimposed	load: 4000 kg	Side walls: closed

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PACKAGING GUIDELINE FOR SUPPLIERS

Appendix 2: Packaging data sheet

compl	ete y	our					M	Ve	G	4
₩ te	echno	olog	У				Mecl	natronic Syste	ems GmbH	•
			Pac	kaging o	data shee	et - Supplier	C'			
Please select:								Date:		
Packaging data sheet:			ase select:							
New article: Article change:	Yes Yes		No No							
				Ш						
1. Supplier information						2. Part specifications				
Supplier name: Supplier number MSG:					1	MSG part number (withor Supplier part number:	out index):			
Adress:						MSG part name:				
Contact person:						Unit:				
Telephone number:										
E-Mail adress:										
3. Packaging informatio	n									
				Container container, box,	Y	Inner packagi (interlayer,			nal packaging allet, one-way	
Description				container, box,	/	(mendyer,	1	(curo pr	mer, one way	panet,,
Ownership (MSG, supplier)									
Transport responsibility (fu	ull/empty pa	ckaging)				I				
One-way or returnable										
ESD-capable (yes/no) Outside dimension LxWxH	I (mm)									T
Outside dimension LxWxH		the unit lo	ad				1			
Parts per layer										
Number of layers per cont	ainer									
Parts per packing	• •									
Number of containers/pall Stackable containers (yes/										
Weight per packing [kg]	110,									
Weight per packing unit [k	gl									
Container cleaning (KLT's)	Container cleaning (KLT's) is done by:					Please select	:			
Additional packaging for container/pallet (interlayers, bags, lids, foil,)						T		_		_
		et		dimension H (mm)	Ownership (MSG/ supplier)	One-way/returnable	pcs./tray	pcs./ container	pcs./pal.	ESD-capable
		et			(MSG/	One-way/returnable			pcs./pal.	ESD-capable
		et			(MSG/	One-way/returnable			pcs./pal.	ESD-capable
		let			(MSG/	One-way/returnable			pcs./pal.	ESD-capable
(interlayers, bags, lids, foil,)	et			(MSG/	One-way/returnable			pcs./pal.	ESD-capable
)	et			(MSG/	One-way/returnable			pcs./pal.	ESD-capable
(interlayers, bags, lids, foil,	awing		re with full con	H (mm)	(MSG/			container		ESD-capable
(interlayers, bags, lids, foil,	awing	rawing he	re with full con	H (mm)	(MSG/ supplier)		pcs./tray	container		ESD-capable
(interlayers, bags, lids, foil,	awing t photo / d. visible	rawing he	re with full corckaging.	H (mm)	(MSG/ supplier)	Please ins	pcs./tray	container		ESD-capable
4. Packaging photo / dra Please inser	awing t photo / d. visible	rawing he e inner pa	re with full corckaging.	H (mm)	(MSG/ supplier)	Please ins	pcs./tray	photo / dra	wing here.	ESD-capable
4. Packaging photo / dra	awing t photo / d. visible	rawing he e inner pad a	re with full corckaging.	ntainer and	(MSG/ supplier)	Please ins	pcs./tray	photo / dra	wing here.	ESD-capable
4. Packaging photo / dra Please inser	awing t photo / d. visible	rawing he e inner pa	re with full corckaging.	ntainer and	(MSG/ supplier)	Please ins bulk materia	pcs./tray	photo / dra	wing here.	ESD-capable
4. Packaging photo / dra Please inser	awing t photo / d. visible	rawing he e inner pad a	re with full corckaging.	ntainer and	(MSG/ supplier)	Please ins bulk materia	pcs./tray	photo / dra	wing here.	ESD-capable

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Appendix 3: Sample VDA Label 4902 Version 4

(1) Receiver Company XYZ Street 123 A-1111 City (3) Advice Note No (N) 1234	(2) Dock - Gate A1-L1 (4) Supplier Address		444.00
	(5) Net weight 345	, Street 111, A- (6) Gross weight 450	(7) No Boxes 01
0123456789			
(9) Quantity (Q) pc	(10) Description TEST OBJEC (11) Supplier Part No (30S)	T	
(12) Supplier (V) 11111	0-123	(14) Eng. Change	
(15) Serial No (S)	01.10.201((16) Batch No (H) B1; Warenanhänger VDA 4902, Ve		1

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PACKAGING GUIDELINE FOR SUPPLIERS

9. Revision history

Version	Date	Description	Created	Reviewed	Approved
00	24.07.2018	First version	Fr. Weinberger	Fr. Kurzmann	Hr. Kriebernegg
01	18.02.2019	Logo change	Fr. Weinberger	Fr. Kurzmann	Hr. Kriebernegg

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