KOCH SOLUTIONS

Manuals and Instructions

Packing Instructions

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1. Introduction

1.1 Object of these Instructions

The Packing Instructions at hand is valid for inquiries, purchase orders and orders (in these Instructions referred to as POs) issued by KOCH Solutions GmbH (in these Instructions referred to as KOCH) and form an integral part of before said inquiries and POs. It has to be taken into account not only to fulfil the contractual obligations under the relevant PO in regard to packing and storage requirements, but to guarantee a correct, smooth handling of the packages and goods, equipment, etc. ordered by KOCH (in these Instructions referred to as Material) that has to be unharmed when it is needed for usage or assembling at the final destination, workshop, place of installation, etc. (in these Instructions referred to as Site).

1.2 The Functions of Packing

During transport and storage packing has to perform the following functions:

- protection of the Material from physical damage - to be ensured with sufficient stability for the maximum stackability
- easy and secure handling during lifting, moving, relocating, settling, securing, stowing
- protection from static and environmental influence, strains and stresses
- space-saving usage of storage capacity
- user-friendliness during handling and unpacking
- information via legible and visible marking
- assurance of environmental safety (recycling and disposing given without problems; legal requirements to be kept)
- warranty: when undamaged, the Contractor guarantees that the information on the package/the packing list corresponds with the contents of the package
- rationalization, ensured with efficient shipping and storage units in regard to the mode of transport, the weight of the package, and secure handling and disposal

2. General Packing Instructions

2.1 Safety and Environment

The Contractor (Supplier, Sub-Supplier) has to meet all commonly accepted as well as any legal requirements that are currently valid for each type of packing, selected for the given mode of transport and storage requirements under consideration of the kind of Material to be packed.
In addition, environmental, electronic, electromagnetic and any other material- and packing-related regulations in force in the country of manufacture and in the one of the final destination of the Material must be followed.

2.2 Warranty

The Contractor guarantees packing that meets the contractual and country-related requirements, such as, but not limited to, the country of final destination, the mode of transport, the climatic conditions, the marking, the handling, and treatment requirements.

Furthermore the Contractor ensures that the packing is state of the art and that the packing material used is new and of high quality.
In case the Contractor considers, due to a necessity, to use packing that deviates from the minimum specification in this document and/or from the legal and commonly accepted standards for the packing of the relevant Material, the Contractor has to notify KOCH in advance in writing of these considerations.

The Contractor is liable for all damages that will arise during handling, transport and storage from factors such as, but not limited to, faulty design of the packing, poor quality of the used packing material, non-compliance with these packing instructions, and inaccurate execution of the packing by the Contractor or its subcontractors.

2.3 Contractor's further Obligations

- The Contractor is responsible for providing appropriate packing (e.g. protection against corrosion, packing materials to be used) for each Material and purpose.
- The packing must guarantee at least sufficient protection during loading, transportation and storage of the Material against such as, but not limited to, loss, mechanical damage, weather, and climatic conditions.
- The packing material has to be constructed, used and secured and the packing has to be executed to ensure that the static or dynamic loads arising during transport, handling and/or storage will have no negative effect on the Material and the handling of the packages.
- The Contractor is responsible to provide packing that is appropriate for the relevant product-specific properties and the contract-specific conditions of the relevant project. The Contractor has the obligation to obtain the contract-specific conditions in case KOCH did not provide these when the PO was placed.

Contract-specific conditions are e.g.:

- Country of final destination (climatic conditions)
- Mode of transport
- Climatic conditions during transport
- Duration and way of storage on Site

Further contract-specific conditions will be indicated in the PO and/or the Shipping Instructions issued by KOCH.

2.4 Standard Packing Requirements

The following specifications constitute the minimum requirements for packing the Material ordered by KOCH. The Contractor has to meet these requirements in any case, irrespective of the Material that has to be packed and of special contract-specific requirements.

- All equipment must be clear of debris, thoroughly cleaned in- and outside, and free of all dirt and foreign matter before application of any anti-corrosive material. Sealed interiors should be provided with desiccant.

- Selection of packing has to be done in accordance with the characteristics of the Material, its protection requirements, the mode of transport, and the duration and way of storage.
- Packing material has to be of top quality - new, clean (without any traces of contamination) and undamaged.
- The packing material has to ensure and be in accordance with environmental protection.
- Material shall be shipped fully assembled whenever practical. When it is not possible to ship Material fully assembled, it has to be disassembled so that it can be properly packed and protected. Instructions for the Material have to be included with the shipment.
- Sensitive Material has to be protected by e.g. bubble foil.
- Rotating Material has to be braced so that shafts do not rotate or displace axially during shipment. Instructions must be supplied for the proper removal of the bracing.
- Nozzle Flange openings have to be protected with e.g. bolted-on wooden external grade plywood (min. 6mm thickness) or metal covers using at least four bolts. (Fixing the covers with wire is not acceptable). An adequate gasket shall be used between the flange and the cover. After openings have been covered, the joint shall be wrapped with heavy plastic bags, or the like, taped to the nozzles.
- Where rotating Material is concerned, porous bags filled with desiccant shall be hung on the inside of the wooden or metal bolt-on covers on all major connections unless physical size prohibit, and it shall be clearly identified on the outside of the package that desiccant is inside. The type of desiccant used shall be clearly shown on the packing list.
- Material subject to damage by water or humidity has to be protected accordingly. All exposed metal surfaces must be protected with a barrier as required by the relevant Material specification. In general, items have to be cleaned and protected in accordance with the supplier's standard packing procedure, fully wrapped in a waterproof vapour barrier type paper and boxed in water-proof paper lined packages.
- Where Material is vacuum packed this must be shown on the packing list and the package involved.
- The packing has to ensure adequate corrosion protection under consideration of transport, handling and storage for each type of Material where necessary up to extremely corrosion-sensitive Material. All packaging and protective material must maintain its integrity and perform its intended function through all phases of handling, transport, and storage subject to the extreme temperatures and conditions that might be encountered.
- In case the Site is situated in a Third Country from the Contractor's perspective, all wooden packing material has to be treated according to the IPPC-norms (ISPM15) and marked that way (see clause 3.1).
- The weight inside the package has to be distributed as evenly as possible.
- Inside the package, small parts of one type - such as screws and washers - have to be packed together in e.g. cartons or plastic bags to avoid loss of the goods.
- Combined packing of Material for different lines, machines etc. may only be effected in case the logistics department of KOCH notifies the Contractor in writing about such a possibility.
- Combined packing of main Material and spare parts is prohibited.

- In order to prevent damages by friction and/or shifting of the Material dunnage material must be used.
- Packages have to be stackable: All cases and crates shall be capable of supporting a top load of at least 10,0 kPa (1.000 kg/m^2). In case that due to the nature of the contents of a package the relevant package cannot be stacked, the package has to be marked accordingly. Furthermore the logistics department of KOCH has to be informed of this matter.
- Palletized cases or crates for fork lift handling are preferred.
- Saddles have to be used as required to secure Material during transport. Saddles shall be of steel for all items weighing 15tons and more and may be of timber for items weighing less than 15tons.
- When making skids, bundles, crates, cases, partial packings, etc., the packing must correspond with the weight and characteristics of the goods.
- Supports have to be designed to ensure that local bending of the Material will not occur. Steel wrapper plates have to be provided, when necessary, to distribute the load and protect the Material.
- Cases or crates for top-heavy pieces of Material shall be designed to protect the Material against falling over.
- Optimal space utilization has to be ensured, taking into consideration dimensions of general purpose containers and euro-pallets (rational and efficient packing units). Dimensions and weights of the packages have to reflect the dimensions and maximum payload of the means of transport. In case questions in regard to the respective limitations arise, the Contractor has to contact the logistics department of KOCH.
- Cable drums must have the battens secured to the drums by e.g. nailing at each end and four heavy duty steel bands (two at each end). The internal end of the cable has to be secured to the drum to prevent it breaking loose during transport.
- Packages weighing more than 25 kg (gross weight) have to be delivered with skids no more than 800 mm apart that permit handling with fork lifts.
- Packing units have to guarantee efficient and secure handling, loading onto and unloading from various means of transport (e.g. truck, ship, aeroplane) by means of e.g. fork lifts and various kinds of cranes.
- Desiccant with some form of humidity indicator are required in all types of protection and packaging where condensation or vapour diffusion across vapour barriers would create a condition in the interior of the package harmful to the contents. Desiccant shall be fully contained to prevent dispersion, securely fixed in place, and easily removed. The type of desiccant used, its location and indicators and applicable removal procedures have to be attached to the packing list. The type of desiccant and its location shall also be clearly marked on the outside of any package containing desiccant. Desiccant should not be used to protect rubber products.
- The possibility of securing the packages during transport in accordance with the requirements of the Material, the package itself and the mode of transport has to be ensured.
- The packing list has to state all Material packed inside the respective package, without exemption.
- At least one correct and contract-specific packing list has to be packed inside each package, another one must be fixed under a weather-proof cover on the outside of each package (see also clause 5).

- Any item shipped that weighs 2.000 kg or more has to be marked with centre of gravity, sling marks (designated lifting points) and fork lift entry points. Packages have to include lifting lugs where applicable.
- Each package has to be marked correctly and contract-specific on at least two non-opposite sides (see also clause 6.2).
- In case the Material will not be re-packed prior shipping to the end-user the shipping documents as well as the marking have to be neutralized, that is to say have to be issued according to the contract between the end-user and KOCH and therefore must not bear any reference to the Contractor resp. its sub-supplier.
- Information must be sent to the logistic department of KOCH prior to the shipment if any of the following applies. Furthermore, instructions have to be given on the outside of the packing resp. accompany the package with the packing list:
    - Material requiring maintenance if left undisturbed in shipping containers and stored.
    - Material requiring periodic operation, movement, or turning to prevent damage to internal parts and such effects as permanent deflection of rotating shafts and bearing surfaces.
    - Components of Material which require removal if long standing time is detrimental in that they cannot be adequately protected in non-operating condition or would be subject to permanent deformation.
    - Material requiring indoor or temperature controlled storage.
    - Material requiring purging, or to be held at a set pressure, shall have the pressure clearly shown on the Material and on all documentation.
    - Clearly marked if oil etc. needs to be added before operation or locking mechanisms need releasing.

2.5 Photographic Documentation

To prove evidence for the packing procedure a detailed photographic documentation of all the packages is required. Several photos have to be taken during the actual packing procedure that is to say of the inside of the package, showing how dunnage material, foil etc. and Material are arranged.
Photos of the closed package are obviously not sufficient, as the way of packing cannot be retraced that way. However, after packing is finished, photos from at least two different sides have to be taken from the marked package that is ready for pickup.
The photo documentation has to be uploaded according to KOCH's vendor document requirements (VDR).

3. Packing Materials

KOCH recommends the following packing materials: solid wood, untreated plywood, cardboard free from harmful substances, plastics like PE, anti-tarnish paper like VCI.

The Contractor has to consider Directive 94/62/EC – the „EU packing directive" – and its amending acts (Directive 2004/12/EC, Directive 2005/20/EC, Regulation (EC) No 219/2009, Directive 2013/2/EU). Amongst other information they list maximum values for lead, mercury, chromium and cadmium concentration in packaging materials.

The use of hygroscopic filling and cushioning (such as wood wool, wood shavings, hay, straw, paper, etc.) for filling empty spaces or for cushioning purposes is prohibited.

Cardboard cartons are not acceptable except for:

- airfreight (in which case only heavy duty waterproof cartons may be used)
- internal packaging

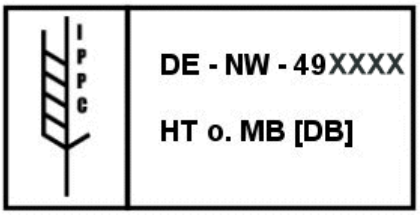
Skids, pallets, cases, crates and any other type of wood packing must be made from new, well-seasoned wood, free from bark.

Note: The following information about certain packing materials is not a list of all packing materials that should or can be used.

3.1 Wooden Packing/Dunnage Material

As a matter of principle, any wooden material used for packing, such as but not limited to, wooden crates, pallets, cradles and dunnage material, has to be treated according to the provisions of the ISPM 15 (IPPC) standard valid at the date of shipment in case the Site is situated in a Third Country from the Contractor's perspective.

It is mandatory that material made of solid wood is marked according to this standard: Permanent and legible marking of the packaging must be provided on two opposite sides of the package.
The mark is composed of the ISO 3166 two letter country code (e.g. DE for Germany), the regional identifier (e.g. NW for North Rhine-Westphalia) and a registration number issued by the regional phytosanitary authority to the packaging container manufacturer, the packer or the consignor (unique number - beginning with 49 in case the packer or consignor is situated in Germany as indicated in picture A). The treatment method is denoted by the abbreviation HT for heat treatment or MB for fumigation with methyl bromide. The letters DB may also be included where debarking is required.
For countries participating in the IPPC standard an official phytosanitary certificate is no longer required.



Picture A

3.2 Corrosion Protection Materials (VCI film/desiccant)

Selecting the appropriate corrosion protection method for each Material shipped, under consideration of the information about the country of destination, mode of transport, condition and duration of storage, is the Contractor's obligation. However, only corrosion inhibitors approved by the relevant authorities (e.g.

Department of the Environment), have to be used. The use of Tectyl, VCI Materials and desiccants is recommended by KOCH.

3.2.1 Tectyl

Tectyl 506 or equivalent is applied to machined surfaces to prevent rust.

3.2.2 VCI Material (Volatile Corrosion Inhibitor Material)

Before using any VCI poly or paper products, it is necessary to know as to how VCI materials work for corrosion and rust control.

A very small dose of inhibitor from the carrier material is continually released by evaporation into the surrounding area in which the item to be protected is stored. VCI molecules saturate on evaporation the enclosed air space and also settle on the metal surface to form an invisible thin film protecting the metal from corrosion attack.

The absolute duration, effectiveness and degree of protection of VCI materials is determined by many factors such as selection of VCI material, packing method, duration of protection desired, surrounding conditions which includes temperature, humidity, air flow, presence of salt and sulphur in the atmosphere. However, the following guidelines should be followed for optimum protection. VCI plastic material should not be combined with other methods of corrosion protection. Finished products, parts, components and assemblies made of ferrous or non-ferrous metal material should be packed immediately after manufacturing. Items to be packed should be free from moisture, dust, dirt and rust. The surfaces of metal components should be clean and free from finger prints before packing into VCI bags, tubing, liners, sheets or wrappers.

For better protection gloves should be worn while handling metal parts. Between the VCI product and the surface of metal items to be protected no barrier should exist. VCI material should not to be stocked for more than six months before use. Unused VCI material should be kept in original packing and should be stored in a cool, dry area and out of direct sunlight.

Important: Information about quantity of VCI used has to be given at a visible spot - when opening the package this information has to be clearly visible.

3.2.3 Desiccants

Desiccants come in a multitude of shapes, sizes and compounds, and are used to absorb moisture. In case corrosion protection is not possible by means of using e.g. VCI materials using desiccants offer the protection the Material needs.
The Contractor has to ensure that an adequate number of desiccants is packed together with the Material and that these are positioned correctly and according to the producer's instructions.
Generally:

- Desiccants should be applied inside of the barrier and no material that includes moisture (e.g. wood) shall be placed inside the barrier.
- The desiccant must not have contact with the products directly.

- Desiccants are used together with foil. The Contractor has to ensure that the minimum thickness of the foil is 0,2 mm, although the obligation for using the correct thickness of foil stays in the Contractor's responsibility.

A sticker bearing the relevant data should be used on the outside of the foil (see picture B). The package itself has to be marked accordingly on the outside - see handling symbol: "Do not destroy barrier".

Picture B

4. Special Packing Requirements

The nature of the Material may require special considerations when packing the same. As examples the five following cases are described in detail: seaworthy packing; packing suitable for airfreight; packing for dangerous goods, electronic equipment and Lithium batteries.

4.1 Seaworthy Packing

In addition to the measurements to be taken according to the general packing instructions, the Contractor has to pay special attention to the requirements of packing for seafreight. Cold, heat, seawater, cargo and/or ship's sweat and extreme stresses during cargo handling in addition to corrosion have to be considered when choosing the appropriate way of packing.
Corrosion protection must ensure that the Material is protected against harmful climatic effects, as well as the above mentioned and other moisture events. This protection has to preserve the Material in the same quality from the time of preservation to the day the Material is unpacked on Site.

As already mentioned in clause 2.4 the dimensions of the packages should be designed to fit into general purpose containers respectively their door openings. Latest 8 weeks prior to shipping the logistics department of KOCH has to be informed by the Contractor in case this prescription cannot be met.
In addition to the space saving and functional design the seaworthy packages need fixtures permitting securing and lashing inside the container to keep the packages from slipping and thus guaranteeing a safe journey.

4.2 Packing suitable for Airfreight

In addition to the measurements to be taken in regard to the general packing instructions, the Contractor has to consider turbulences and centrifugal forces especially when fixing the Material inside the package as well as temperature variations. Packing has to be according to standards but has to be kept as light as possible.

4.3 Dangerous Goods

Dangerous Goods are substances that represent a threat for humans, animals, environment and/or public safety when transported (road, rail, inland waterway, sea, air). All applicable laws, regulations and provisions for Dangerous Goods have to be kept.
Amongst others that might apply, the following principal national and international rules have to be observed:

- European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR); *Regulation for the Transportation of Hazardous Substance Transportation for Germany (GGVS)*
- Regulations Concerning the International Carriage of Dangerous Goods by Rail (RID)
- European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN)
- International Maritime Dangerous Goods Code (IMDG Code)
- Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO-TI) – issued by the International Civil Aviation Organization (ICAO). These are applied by the International Air Transport Association (IATA) in conjunction with the IATA Dangerous Goods Regulations (IATA-DGR).

The Contractor has to inform KOCH latest 4 weeks after the PO has been issued about the details of the Dangerous Goods included in the order. The technical data sheet has to be submitted to KOCH logistics department for this purpose and later also provided according to KOCH's VDR.

It is vital that under no circumstances the Dangerous Goods are packed together with other, non-dangerous Material or with Dangerous Goods not of the same class. The current regulations have to be observed most accurately in regard to – but not limited to – the kind of package, maximum weight of the Dangerous Good per package, necessity of air-conditioned transport and/or storage, and special marking of the packages. The marking has to be compliant to the general marking instructions – see clause 6.2.

4.3.1 UN Numbers

When goods are classified as dangerous they are given a four-digit UN number (gasoline, for example, is "UN 1203"). This identifies the substance or article on the packaging materials, in the transport document and to some extent on the orange dangerous goods placards affixed to vehicles and containers. In order to determine if Material is dangerous the safety data sheet resp. the material data sheet has to be checked. Section 14 gives transport-relevant information:

- 14.1. UN number
- 14.2. UN proper shipping name
- 14.3. Transport hazard class(es)
- 14.4. Packing group
- 14.5. Environmental hazards

- 14.6. Special precautions for user
- 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

4.3.2 Classification Categories

Dangerous Goods are furthermore classified in the following categories:

Class 1: Explosive substances and articles

Class 2: Gases

Class 3: Flammable liquids

Class 4.1: Flammable solids, self-reactive substances and solid desensitized explosives

Class 4.2: Substances liable to spontaneous combustion

Class 4.3: Substances which, in contact with water, emit flammable gases

Class 5.1: Oxidizing substances

Class 5.2: Organic peroxides

Class 6.1: Toxic substances

Class 6.2: Infectious substances

Class 7: Radioactive material

Class 8: Corrosive substances

Class 9: Miscellaneous dangerous substances and articles

4.3.2.1 Hazard Labels and Placards

A hazard symbol, its colour and its numeric code indicate the class of the Dangerous Goods concerned. Appropriate hazard labels must be affixed to packaging materials, whilst placards are used primarily on containers, road tankers and goods wagons. For limited quantities of certain substances, the packaging can carry a diamond-shaped label marked simply with the UN number or with "LQ", instead of a hazard label.

Table 1 shows examples of hazard labels. The number at the bottom indicates the class of the dangerous good.

Table 1 – Hazard Labels:

	Explosives		Flammable Solids		Infectious Substances
	Substances which present no particular Hazard		Substances liable to spontaneous Combustion		Radioactive Material Category I
	Flammable Gases		Substances which, in Contact with Water, emit flammable Gases		Radioactive Material Category II or III
	Non-Flammable Non-Toxic Gases		Oxidizing Substances		Fissile Material
	Toxic Gases		Organic Peroxides		Corrosive Substances
	Flammable Liquids		Toxic Substances		Miscellaneous dangerous Substances and Articles

4.4 Electronic Equipment

Packaging of electronic equipment has to be chosen in order to minimize the risk of electrostatic discharge. The Contractor has to consider that packing material such as but not limited to bubble wrap, stretch film and packing chips can cause severe discharges. Antistatic and/or dissipative materials have to be used.

If electrostatically sensitive devices are packed, non-conductive packing material such as PVC or polystyrene should not be used. To prevent damages during transport and storage non-chargeable paddings such as cardboard with a conductive layer on the outside are to be used. Furthermore the general requirements for packing such as but not limited to the risk of moisture inside the packages has to be taken into account.

4.5 Lithium Batteries

In case Lithium batteries are part of the Material ordered by KOCH, the Contractor has to follow the current regulations in force for the transport of such batteries. The regulation valid at the date of issue of this document is effective since April 1st, 2016.

To assist shippers in understanding the complete requirements related to the transport of Lithium batteries, including packing instructions, IATA has prepared the Lithium Battery Shipping Guidelines (LBSG). The Contractor's obligation is to follow the instructions according to these guidelines in regard to state of charge, packing, overpacks and restrictions for shipping.

5. Packing List

A packing list has to accompany the goods *inside* each package (protected by a waterproof envelope). As well another copy of the packing list has to be attached outside any packages like crates, cases, boxes, cartons, shipper's own container. This copy must be protected by a waterproof envelope and a sheet cover, a metal plate or any similar cover.

The designation and description of the package content stated on the packing list must be in complete and exact accordance with the packed goods. KOCH logistics department will send the packing lists in digital form after the Contractor has provided the Supply List (*SLPD*) including all package details for the relevant shipment according to KOCH's VDR.

6. Marking and Labelling

In order to ensure immediate identification and correct handling of the packages, each individual part and each package has to be marked properly under consideration of the specifications in this clause.

6.1 Labelling of individual Parts

The labelling of individual parts resp. of shipping unities of small parts (e.g. screws) has to be effected in any case. If the contract with the end-user demands certain labelling of the Material, the instructions will be given by KOCH in time. KOCH will provide the labels in digital form after the Contractor made available the Supply List (*SLLP*) including all shipping positions for the relevant shipment according to KOCH's VDR. The labels to be used have to fulfil certain demands: They have to be non-fading, wipe- and weather-proof, lightfast, UV-radiation/light- and seawater-resistant. The labels have to be adhered

firmly to the relevant Material (e.g. with wire) to prevent them from being detached, ensuring that they will still be fixed to the Material when erection starts on Site.

6.2 Marking of Packages

A complete and correct marking ensures that accidents, incorrect handling, loss of quantity and weight and customs fines are avoided. *The Contractor will be held responsible for all costs related to incorrect or incomplete marking of packages*.

The marking is an essential part of the packing. In case the marking differs from the information stated in the shipping documents, customs authorities will object to the shipment. Incomplete markings for the handling of the package might lead to an exemption from liability for freight forwarders, carriers, agents, handling and storing companies in case a damage was inflicted while the package was in the custody of one of the before said parties.

General marking requirements

All Markings (information marks, handling instructions etc.) have to be applied to the package permanently, clearly, distinctly, uncovered, easily legible, parallel to the bottom edge. If the size of the package allows, the size of the letters should be approx. 50 mm. If the package is smaller, the shipping marks can be proportionally adjusted, whereby in that case the height of the shipping marks should be at least 2/3 of the height of the package. However, the minimum size of the shipping marks has to be A4-format.

- Markings have to be applied at least on two sides (one long side and one short end) of the package. Depending on the package it might be useful to apply a marking also on top of it.
- Marking with ink requires the base to be either smooth or prepared by e.g. using a primer in case of wooden packing material, metal has to be degreased. The ink has to be non-fading, wipe- and weatherproof, lightfast, UV-radiation/light- and seawater-resistant.
- Each marking has to be clear and precise. It has to contrast sharply and distinctly with the background resp. the base it is applied upon.
- Generally markings are applied in black paint that is wipe- and weatherproof, lightfast, UV-light/radiation- and seawater resistant.
- The use of plates and/or plastic marking plates is permitted, provided they are nonfading, weather-proof, resistant to seawater and UV-radiation/light and the marking cannot be applied directly on the piece resp. package.
- Alternatively the marking can be fixed onto the package with adhesive labels. Note: This way of marking is not feasible for crates and cases. The numbers and letters have to be black on a white base.
- The Contractor has to ensure that the marking is legible and durably affixed onto the package.

6.2.1 Marking Details

A complete marking consists of three parts. Each package has to be marked separately with at least the following information:

1. Routing mark

- Place of destination and, if applicable, port of destination
- Identification mark (e.g. contract number)
- Consecutive number

2. Information mark

- If applicable (e.g. according to contract): Country of Origin
- Net and gross weight of the package
- Dimensions of the package (length x width x height, in cm)

3. Handling instructions

- The handling instructions indicate if the package is sensitive to heat- and/or humidity, if it is fragile, where the centre of gravity is located etc. For details see clause 6.2.1.1.
- The symbol corresponding to the required storage instructions shall be applied to the package in accordance with the packing list (see also clause 6.2.1.3).

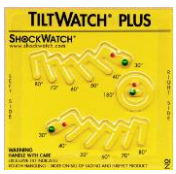
In case contract-specific marking instructions have to be kept, the details of these will be given by KOCH logistics department in time. The details for the routing and information marks will be sent together with the packing list by KOCH after the Contractor has provided the Supply List (*SLPD*) including all package details for the relevant shipment according to KOCH's VDR.

6.2.1.1 Handling Symbols

Which symbols are appropriate and are used is the responsibility of the Contractor.
In case packages weigh more than 2 tons or less, but require special handling, the packages have to be marked accordingly with the applicable symbols (DIN 55 402 and ISO R780).

Table 2 shows a summary of common handling symbols including their descriptions.

Table 2: Handling symbols according to DIN 55402

	Fragile, handle with care		Use no hooks
	This way up		Keep away from heat
	Sling here		Keep dry
	Centre of gravity		No hand truck here
	Stacking limitation		Temperature limitations
	Do not use fork lift truck here		Electrostatic sensitive device
	Do not destroy barrier		Top heavy
	Do not stack		Special devices/markings: Single use tip indicator - Handle with care - This way up
	Special devices/markings: Impact indicator - Handle with care		Special devices/markings: Indicator for degree of tilt - Handle with care - This way up

6.2.1.1.1 Non-Stackability

Basically packages have to be designed in order to be stackable. In case the packed goods do not tolerate stacking, the package has to be marked accordingly.
The Contractor will be liable for any damage occurring to packages and Material due to missing labelling of the package and in case the logistics department of KOCH was not informed in writing about the non-stackability of the said package.

6.2.1.2 Shock-, Tip-, Impact-Indicators

In case the Contractor is obliged or decides to attach special indicators to the packages KOCH logistics department has to be informed at least 8 weeks prior the delivery is scheduled to take place. The relevant numbers have to be indicated in the documentation and photographic proof has to be provided.

6.2.1.3 Storage Instructions

Each package has to be marked with the applicable storage code. The Contractor has to choose the code accordant to the Material's requirements under consideration of the duration of storage and the conditions in the country of final destination.

Table 3: Storage codes

Abbreviation	Description
OO	Outdoor open
OC	Outdoor covered
IU	Indoor unheated
IT	Indoor temperature and humidity controlled

7. Packing Inspection

The end-user and/or KOCH might inspect the packing either due to contractual obligations or to ensure a proper process. The Contractor will be informed in time of such an inspection. The packing procedure cannot be finished prior to such an inspection, that is to say the package(s) will have to stay open to that date.

8. SOLAS Regulation

8.1 Incoterms® FOB or FCA

For shipments based on a PO with the delivery term "FOB [port] acc. to Incoterms® 2010", "FOB [port] acc. to Incoterms® 2020", "FCA [place] acc. to Incoterms® 2010" or "FCA [place] acc. to Incoterms®

2020" (for FCA only if further carriage to a port and a successive sea freight are arranged by KOCH), the following requirements for Verified Weights complying with the IMO International Convention for the Safety of Life at Sea (SOLAS) regulations must be kept:
Individual, original sealed packages that have the accurate mass (gross weight) of the packages and cargo items - including any other material such as packing material and refrigerants inside the packages - clearly and permanently marked on their surfaces do not need to be weighed again when they are packed into the container (IMO Guidelines, paragraph 5.1.2.1). Therefore, it is inevitable that the below stated instructions are followed:

- Estimating the cargo weight is not permitted.
- Accurate weights that have been previously derived from weighing the product(s) and the total packing material incl. e.g. dunnage material OR from weighing the complete packed and sealed package must be used.
- The weights must be clearly and permanently marked on each individual, original sealed package.

The weights stated in all shipping documents (e.g. packing lists) must state the above mentioned accurate weights. The weighing equipment used by the Contractor must meet the accuracy standards and requirements according to the national laws of the country where the packing takes place. KOCH will claim reimbursement of any fines or other costs imposed on KOCH due to the Contractor's failure to comply with the SOLAS regulations resp. the above stated instructions.

If the Material is delayed during the shipment phase as a result of the Contractor's violation of SOLAS regulations, Art. 4 of the current KOCH General Conditions of Purchase will be applicable as well.

8.2 Shipper's Own Container

If the Contractor is stuffing Shipper's Own Container itself, the following requirements for Verified Weights complying with the IMO International Convention for the Safety of Life at Sea (SOLAS) regulations must be kept:

The net and tare weights stated in the Supply List (SLPD) submitted by the Contractor that will be used by KOCH to issue the packing lists and shipping marks must add up to the Verified Gross Weight (VGM) in accordance with the SOLAS regulations, method 1 or 2. The Contractor is not permitted to estimate weights stated in the Supply List (SLPD) for packages and/or containers.

The weighing equipment used by the Contractor must meet the accuracy standards and requirements according to the national laws of the country where the packing takes place. KOCH will claim reimbursement of any fines or other costs imposed on KOCH due to the Contractor's failure to comply with the SOLAS regulations resp. the above stated instructions.

If the Material is delayed during the shipment phase as a result of the Contractor's violation of SOLAS regulations, Art. 4 of the current KOCH General Conditions of Purchase will be applicable as well.