



IBC

# ***The Handling Guide for GCUBE® IBC***

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This guide shall give answers to the most frequently asked questions upon the handling of our GCUBE® IBC.

The responsibility of choosing the right GCUBE® IBC in accordance to the filling goods and shipment is up to its consignor. This is according to the international transport regulations for hazardous materials (e. g. ADR/RID, IMDG-Code).



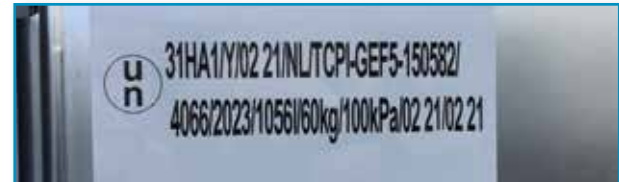
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GCUBE® IBCs are manufactured in order to secure a safe and efficient transport of liquid goods and hazardous materials. All GCUBE® IBCs are surrounded by galvanized and welded steel cages which are mounted to wooden, hybrid or plastic pallets.

The inner receptacle is made from UV-stabilized polyethylene (PE-HD) and comes with the different lid and discharge units on top and front sides.

UN-rated GCUBE® IBCs carry homologation UN31HA1/Y/100/...



**Traceable** through coded and direct reading manufacturing data.



When using the GCUBE® IBC for the on-site handling the internal, national and – wherever required – international safety regulations are in effect.

GCUBE® IBC can be used for active storage according to the TRbF 20 (Läger). The declaration of the manufacturer can be marked on the front label plate.



GCUBE® IBCs are available in variations compatible with **food** and high grade products, according to regulations (EG) no. 1935/2004 (EU) and no. 10/2011.

Standard GCUBE® IBCs are eligible for use in zone 2 areas. For use in zone 1 areas and for the transportation of flammable and combustible liquids (dangerous goods class 3) with a minimum ignition energy of 0.2 mJ or more (explosion groups IIA and IIA/B) **GCUBE® IBC Elektron** is

recommended.

Mentioned safety regulations can be found on the front label plate and have to be followed.



**Light-sensitive products** can go inside GCUBE® IBCs with white or black receptacles, which protect against visible and UV light.



According to international transport regulations a permeation barrier is required for dangerous goods such as toluene and xylene or a mixture of these.

The permeability shall not exceed 0.008 g/l·h.



The GCUBE® IBC Shield is approved for toluene and xylene uses as well as other applications, such as use in zone 1 areas with light protection, and it can also be configured to transport food.

GCUBE® IBCs do not have particular fire protection equipment. German legislations, for instance, regulate storage of flammable liquids in stationary and transportable containers in TRGS 509 und 510. That's without any particular demands or defaults for the construction and workmanship of the containers referring to fire protection.



For use of IBCs in production plants or areas we point to a publication of the VdS: Container with flammable liquids – dangers, risks, protection measures.

GCUBE® IBC should be moved with industrial trucks (e. g. forklift, pallet jack). Prior to being lifted, the entire fork needs be under the pallet.



If the primary use are pallet jacks, then a skid pallet is recommended; for forklifts, our hybrid frame pallet is recommended.

GCUBE® IBC is not eligible for crane lifting.

Damaged GCUBE® IBC should be withdrawn from circulation and blocked for further usage.

The filling of the GCUBE® IBC should be done through the top opening.

When closing the lid and plug, the following torque specification should be followed:

Screw cap DN150 (6")

appr. 90\* Nm

Screw cap DN225 (9")

appr. 130\* Nm

Optional 2" bung

appr. 20 Nm



Greif recommends placing a tamper-evident seal onto the lid (e. g. pull-tight cable seal).

\* with EPDM gasket, TPE-S, FKM in our portfolio

GCUBE® IBC can be equipped with lids which can be handled by automated filling lines.



**Warm fillings** can be done up to a temperature of 80 °C provided that the filling process is done at a room temperature of approximately 20 °C. After filling is complete, the liquid needs to cool down prior to the IBC being closed.

Exception: Vent system with proper airflow inside of the lid.

### Transport stacking

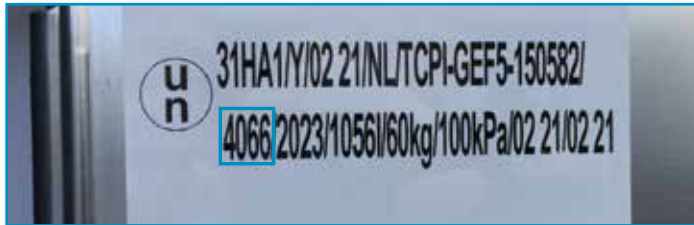
Up to two GCUBE® IBCs can be stacked on top of one another during transport. The maximum load (in kg) of the lower IBC can be found on the label plate and must be adhered to. The pallet of the top IBC has to be properly fitted onto the lower IBC.

#### Example:



Multiple GCUBE® IBCs can be placed on top of one another while resting. The exact number depends on the density of the filled liquid, respectively the gross weight and the maximum stacking weight which can be found on the front label plate (declaration in kg).

### Example:



The pallet of the top IBC has to be properly fitted onto the lower IBC.

Loads, including load restraints and loading equipment, are to be loaded and restrained in a sufficient manner (see e. g. §22 (1) StVO). This must be done in accordance with the sound engineering practice.

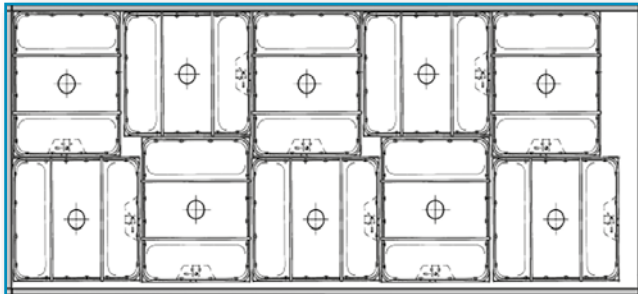


Even in an emergency braking situation or if the vehicle suddenly swerves, the load should not slip or fall over.



Loader and driver are responsible for the proper loading and bracing.

18 GCUBE® IBCs can be loaded inside of one ISO container (20'). The placement of the IBC must be done as shown below:



This example shows a restraint system with fabric straps and airbags.



When fastening an IBC, appropriate straps and edge protectors have to be used to protect the IBC from damage, particularly, in the cage.





The bottom discharge valve is secured three times. The handle of the butterfly valve is secured with a locking screw, which needs to be unscrewed prior to turning of the handle. The front screw cap protects the connecting thread and the aluminum seal foil serves as a tamper-evident cover.



**Prior to discharge** a check of a tight and precise fit of the hose connection has to be done. It is recommended to secure the hose or pipeline close to the valve.

**Preheating** of the filled goods prior to discharge has to be limited to six hours, in case the good's temperature is maxed out at 70 °C. The IBC can be equipped with a heating mat.

In the case of food filling, the heating time has to be limited to two hours according to the conformity declaration.

The ends of the discharge valve can be equipped with three different connections:

- DN50 (2") with external thread S60x6
- DN50 (2") with camlock male or NPS
- DN80 (3") with external thread S100x8

The front thread on the camlock male **cannot be used** as connection for hoses or pipelines!

The discharge has to be done with a proper camlock female coupler.



### Return of empty GCUBE® IBC

We recommend to use our provided recollection service with a reference to our terms and conditions.

GCUBE® IBC complies with the 94/62/EG guideline (for packaging waste).



For more information, please visit:  
[www.earthminded.com](http://www.earthminded.com)

Our technical service department and sales team will help you with different topics and questions.

### ISO 9001

GCUBE® IBCs are DIN ISO 9001:2015 certified (certificate reg. no.: 01 100 1401108).



Additional certifications:

ISO 14001:2015

ISO 50001:2011

FSC 22000 + ISO/TS 22002-4

Kosher/Halal



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