

***SPECIFICATIONS "BIGBAGS"
SUPPLIERS TRANSPORT & STORAGE
CHEMICAL PRODUCTS***

APRIL 1ST 2020

DIRECTION OPÉRATIONNELLE ACHATS

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1- Purpose :

The purpose of the present document is to define our dimensional and qualitative requirements for the BIGBAGS used for the transport and storage of chemical products.

2- Scope :

The present Specifications are to be used by all suppliers of the Michelin group.

The BIGBAGS as defined herein may be used on all sites of the Michelin group.

3 - Generalities :

In general, for the packaging of raw materials delivered in the Michelin Group, the following colors are prohibited: Red / Blue / Violet / Orange

4- Definitions :

BIGBAG : Common term for **F**lexible **I**ntermediate **B**ulk **C**ontainers (FIBC) used to ship non-liquid products in bulk.

Other names used: GRVS / Flexible Großpackmittel

MIE : **M**inimum **I**gnition **E**nergy: Minimum energy required to ignite a combustible dust cloud with air or oxygen, measured by means of a standard method.

SDS : **S**afety **D**ata **S**heet providing the characteristics of the product in question.

IBC : **I**mmEDIATE **B**ulk **C**ontainer: Flexible or rigid transportable packaging of which the capacity does not exceed 3m³ for solid or liquid materials of packaging groups II and III (definition for dangerous goods – ADR).

FIBC : **F**lexible **I**ntermediate **B**ulk **C**ontainer: container for semi-bulk, of which the body consists of flexible materials such as woven fabric, plastic or paper film, designed to be in contact with the contents either directly or by means of an inner lining, and collapsible when empty (definition for non-dangerous goods – standard ISO 21898).

5- Characteristics of the BIGBAGS to be used :

- **Fabric :**

- In most cases, this is woven polypropylene, coated with watertight molten propylene.
- Watertight conductive packaging
- The seams must be watertight
- The fabric must not be prone to fraying
- Some BIGBAG have reinforcing cords in the corners, it is forbidden for a reinforcement cord to be cut



- It must be contamination-proof

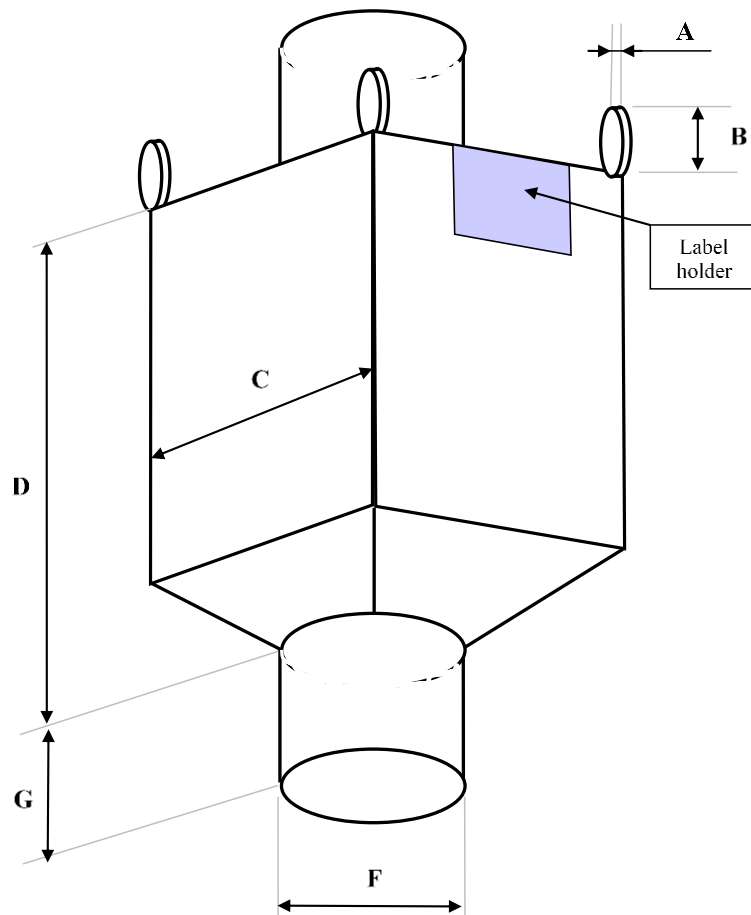
- **Body Dimensions :**

- C: Square base: 900x900 mm to 1100x1100 mm (35x35 inches to 43x43 inches)
- D: Body height (including conical bottom): MAXIMUM 1800 mm (71 inches)

- Full design diameter from 1.16 to 1.25 metre (46 inches to 49 inches)
 - The BIGBAG bottom shall be of the “flat” or “conical” type with a discharge spout.
- ***"FOUR-POINT" lifting system :***
 - The BIGBAG shall be fitted with 4 lifting straps (one fitted to each of the upper corners).
 - Recommended strap colour: **WHITE**
 - Safety factor (SF):
 - 6/1 for a load of 1000 kg (US: in accordance with US DOT and FIBCA)
 - 5/1 for a load of 1000 kg (EUR: in accordance with standard ISO 21898)
 - **A:** Width: 35 to 75 mm (1,4 to 3,0 inches).
 - **B:** Useful height: 250 mm. ± 10 mm (10 ± 0.5 inches)
 - ***Discharge spout :***
 - **F:** MAXIMUM diameter: 500 mm (20 inches)
 - **G:** Height: 405 -10 / +50 mm (16 -0,4 / +2 inches)

Discharge spout closure

- The closure system must be easy to open, formed integrally with the BIGBAG and there must be no risk of it becoming detached (fully or partially) before or during opening.



- **Fill opening :**

- To avoid risks of pollution, the fastening system on the upper portion of the BIGBAG must be perfectly sealed.

- **Weight constraints :**

- Permissible gross load: **1,100kg**
- Minimum net load: **850 kg**

- **BIGBAG Type :**

- The types of referenced BIGBAGS are: A, B, C. Types D, CD, D+ are not accepted.
- The type of BIGBAG use depends as a function of :
 - The Minimum Ignition Energy (EMI) of the raw material carried, complying with the recommendations of the products SDS
 - The environment of the unloading workstation

CHOIX DU TYPE DE BIG-BAG

Le type de big-bag doit être défini en fonction de l'énergie minimale d'inflammation (EMI)* du produit considéré et de l'environnement au poste de travail pour garantir la sécurité à l'exploitation de ces produits.

Caractéristiques de la poudre		Environnement	Pas d'atmosphère explosive autour du big-bag	Présence d'une atmosphère explosive	
				"poudre" autour du big-bag (zone 20, 21 ou 22)	"gaz – vapeurs" autour du big-bag (zone 0, 1 ou 2)
Poudre inerte			Type A	Type B	Type C
Poudre combustible	EMI > 10 J		Type A	Type B	Type C
	3 mJ < EMI ≤ 10 J		Type B	Type B	Type C
	1 mJ < EMI ≤ 3 mJ		Type C	Type C	Type C
	EMI ≤ 1 mJ		Type C plus précautions particulières pendant le vidage (inertage)		

- The static charge discharging resistor on type C BIGBAGS shall be: **R < 10⁸ Ohms**. The ground strap positions and markings shall comply with REF 515 EP.
- **Before delivery, the choice of the type of BIGBAG used shall be approved by Michelin in the specifications of the product concerned.**
- ***BIGBAGS for products subjected to regulations :***
 - The BIGBAGS must comply with the applicable regulations of the countries concerned (Labour Law, Transport, Safety, etc).
 - Depending on the product carried (refer to SDS), it may be ADR approved (Europe) as an **Immediate Bulk Container**. The approval mark must be printed on the BIGBAG in a legible fashion (refer to the ADR regulations concerning this mark).

6- Pallet :

• ***Description :***

- Pallet will be made of Plastic or Metal, recoverable or not by the supplier. In order to take environmental considerations into account, the Michelin Group encourages the use of reusable pallets rather than single-use pallets.
- **Wood ban.**
- **Dimensions :**
 - Length 1m à 1,2m
 - Width 1m à 1,2m
 - Maximum height 160 mm maxi
- Pallet 4 inputs for handling with wide forks for easy transport with a truck

- Static resistance of the pallet according to the load :

Load (kg)	Static resistance (kg)
1000<charge> 650	≥1000
1500<charge> 1000	≥1500

7- Identification of Raw Materials :

- **Label Holder :**

- A transparent plastic document pocket measuring 255 mm (10 inches) in length and 305 mm (12 inches) in width (minimum dimensions) shall be affixed to the top of the BIGBAG.
- It shall be designed to accommodate documents that may be inserted and removed from the side.
- The document pockets shall be neither ripped nor unstitched.

- **Identification of the product :**

Identification of pallet with the label MP06 (Specifications labels MP06-EU).
The access of specification with the web link below :

<https://purchasing.michelin.com/fr/espace-documents/>

- **Labels for products subjected to regulations :**

- The products must be labeled in accordance with the regulations in force (Labour Law, Transport, etc).
- The label must be clearly visible and legible, either in a label holder formed integrally w
- with the BIGBAG, or imprinted on the BIGBAG.

8- Handling and Transport :

- **Fondamental rules :**

- It is strictly prohibited to stack the flexible containers during transport or in

the storage areas.

- A tilted flexible container on a pallet will not be accepted if the tilt angle is such that the container overhangs the pallet.
- In no case shall the BIGBAG be covered with plastic film (shrinkable or not) (with the exception of materials protecting the product itself).
- **During transport, the BIGBAGS must be prevented from coming into direct contact with the wood.**
- If the truck boards are wooden, when loading, for each span the load will be plated to the ground using the ground rings and straps.



- ***BIGBAG and/or pallets returnable to the supplier:***

Should BIGBAGS and/or pallets be returned to the supplier, regulations for packaging the empty items and the procedure for their return shall be clearly defined, acknowledged, and approved by the Michelin Customer.

Standard NF EN ISO 21898: Packaging - Flexible Intermediate Bulk Container (FIBC)

Standard NF EN ISO 61340-4-4 : Electrostatic