Welcome to the world of Big Bags

Electrostatic A,B,C,D & Storstat CD

Storsackgroup
www.storsack.com

product information

Conductive bag

Why a conductive bag?

Flexible intermediate bulk containers (FIBC) are widely used for the storage, transportation and handling of powdered, flaked or granular material. Untreated polypropylene is a good electrical insulator, as is often the case with products placed in FIBC's. There is ample opportunity for the generation of electrostatic charge during filling and emptying operations and in unprotected FIBC's high levels of charge can quickly build up. In such cases electrostatic discharges are inevitable and can be a severe problem when FIBC's are used in flammable environments.

A flammable environment can be generated when handling fine powders that create dust clouds or thin layers of powder, both of which can be ignited by electrostatic discharges. A flammable environment can also be generated when using gases or volatile solvents. In these industrial situations there is clearly a need to eliminate incendive electrostatic discharges.

We have the solution, you have the choice

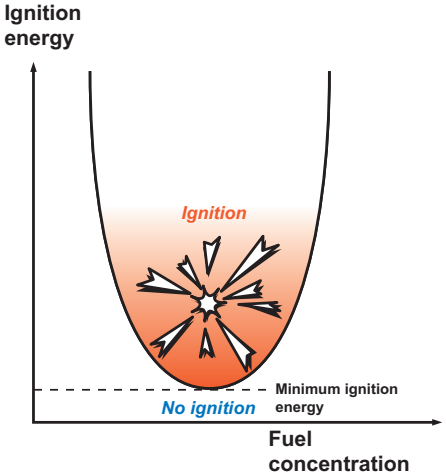
We have developed various FIBC designs to reduce electrostatic hazards. Depending on the application 4 categories can be offered:

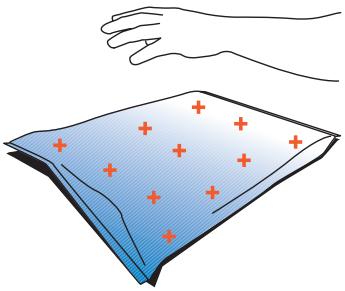
Type A

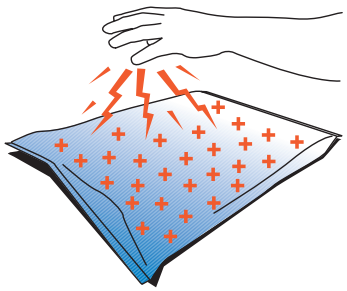
- constructed from non-treated insulating fabric.
- No requirements are specified for Type A FIBC's.
- They are not intended for use in potentially explosive atmospheres.

Type B

- constructed from insulating fabric but has a breakdown voltage less than 4kV.
- This provision prevents the risk of energetic propagating brush discharges which can ignite dust-air mixture.
- Type B bags may be used in the presence of combustable dusts with MIE of greater than 3 mJ but in the absence of flammable vapours or gases.







Type C or conductive bag

- constructed from fabrics having interconnected conductive threads, the result of which is the Faraday Cage. This unique design of Storsackeurea is a patented system.
- Resistance from any location on FIBC to ground < 108 Ohm.
- Must be electrically grounded during filling and emptying.
- May be used where combustable dusts and flammable atmosphere with MIE of 3 mJ or less are present.
- No propagating brush discharge, no brush discharges and no spark discharges are to be expected if it is properly grounded.

Type D Ecostat

- constructed from antistatic fabric that includes static dissapative, antistatic threads (yellow threads), this unique system of Ecostat is patented world-wide.
- Surface resistance over complete bag surface between 106 and 1010 Ohm.
- This specific discharge by yellow threads is called the Corona-effect; grounding is not necessary.
- May be used where combustable dusts and flammable atmosphere with MIE of 3 mJ or less are present.
- The Ecostat can be used in Zone 1 (flammable atmosphere with a minimum ignition energy of 0.15 mJ).
- The minimum distance to conductive, non-grounded objects (also persons) has to be 1 meter (charging by induction is possible).

Type Storstat CD

constructed from fabrics which are coated with special long lasting antistatic coating.

- Surface resistance over complete bag surface between 106 and 1010 Ohm.
- Storstat CD designed bags are the only bags worldwide which offer type C and type D properties.
- If the bag is grounded it works as a type C bag.
- If the bag is not grounded it works as a type D bag.
- Ignition tests by Swiss Safety Institute and Chilworth show that Storstat CD bags can be used safely as type D bags without grounding in environments with MIE of > 0.07 mJ.
- The bag is only to be used in areas where there is no flowing water in contact with the bag.

Sounds very complicated? Ask for our special service!

When it comes to your product specifications (such as MIE and resistivity) and your handling facilities we can help you find the most safe and liable bag for your application.

Please be advised that MIE or product resistivity values should be considered as indications. Other safety precautions should also be taken into account.

Recommendations for using FIBC's in different environments

Bulk product (medium particle size < 0.1 mm)	Non-explosive atmosphere	Explosive ZONE 21 & 22	Explosive ZONE 2	Explosive ZONE 1
MIE > 10 J	Type A	Type A	Type B Type C Type D Storstat CD	*Type C *Type D *Storstat CD
10 J MIE > 3 mJ	Type B Type C Type D Storstat CD	Type B Type C Type D Storstat CD	Type B Type C Type D Storstat CD	*Type C *Type D *Storstat CD
MIE > 3 mJ	Type C Type D Storstat CD	Type C Type D Storstat CD	Type C Type D Storstat CD	*Type C *Type D *Storstat CD
Dust and fammable solvents	*Type C *Type D *Storstat CD			

*) Filling only with additional measure e.g. puring by air
**) Filling and discharging only with additional measure e.g. inerting

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