NEXUS® SM EX

Product Information

Translucent and safe – *NEXUS® SM EX UN* IBC

- **Developed for use in EX-Zones 1 and 2**
- **Certified according CENELEC TR50404:2003 and BGR 132**
- **UN-approved for all model liquids**
- **Innovative multi-layer bottle concept for additional safety**
- **Innovative multi-layer bottle concept for translucent inner container**
- **Based on well-known NEXUS SM13 design with composite pallet**
- **Also available with wooden pallet (SM 6 EX)**
- **With or without discharge valve**
- **Clearly diversified against standard units throughout yellow coloured corner protectors**

With *NEXUS® SM EX UN IBC* Nexus Group enlarges its well introduced Mamor SM product family for composite IBCs. Developed for the use in EX-Zones 1 and 2 the *NEXUS® SM EX UN IBC* is certified according to the regulations of CENELEC TR50404:2003 and BGR132.
Concepted as dangerous goods packaging *NEXUS® SM EX UN IBC* is UN-approved and therefore fullfills the requirements of regulations for transport of dangerous goods (RID/ADR and IMDG) concerning liquids with a flash point below 61°C. Product groups that might be affected by these regulations for example are alcoholes, amines, ethers and solvents based on aromatic and aliphatic hydrocarbons. In addition and in regard to their explosive potential filling goods have to be classified as class IIA or in limited cases also as class IIB (minimum ignition energy > 20 mJ). National regulations – as for example german BGR132 – have to be considered within this classification.
UN-approval of *NEXUS® SM EX UN IBC* covers all six model liquids at a level equal to the one known from the standard Mamor SM IBC.

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Registered in Scotland No. SC262044 | VAT No. 829 6449 83

Product information:

Build around a coextruded multilayer bottle *NEXUS® SM EX UN IBC* innovative product concept makes EX-IBCs covered by a closed cover of metal sheet history. With its permanent antistatic outer layer it provides additional safety on several important issues.

- **As part of the bottle itself the permanent antistatic outer layer avoids static charge all over surface even in the geometrical complex area around the discharge valve or close to the filling opening.**
- **Integrated within the bottle the permanent antistatic outer layer sticks to it even if the container collapses due to vacuum build up inside the bottle. Not obvious on the first view such situation occures more than often within every day handling operations like differences in temperature, hot filling, rapid emptying throughout the bottom valve or emptying by pumps.**

Research work carried out by German PTB (Physikalisch Technische Bundesanstalt) results into a clear recommendation for bottle integrated layer concepts against metall surrounded IBCs. ("Sichere Chemiearbeit" 8/2005)

- **First of all *NEXUS® SM EX UN IBC* is constructed to avoid any ignition but also in critical situations, e.g. danger of internal self ignition, it shows superior performance. While IBC with rigid metall surroundings explode more or less uncontrolled and heavily IBC with integrated plastic solutions react much 'calmer' to such situation.**
- **With its bottle being transluscent *NEXUS® SM EX UN IBC* provides decisive advantages when it comes to detection of the inside filling level. In comparison to thin view strips with coloured bottles or local view windows in metal surroundings especially counts when it comes to viscous filling goods. In any case it provides an appearance and handling performance users know from the use of "standard" composite IBC.**
- **Compared to IBCs with coextruded inner containers with black or dark coloured conductive outer layers the heating of the container itself and of the filling good in it is much less with tranparent outer layers.**

With it's multilayer structure (patent pending) the inner layer being directly in contact with the filling good consists out of food approved PE-HD.
All layers are UV stabilized while the outer layer being exposed mainly to weathering has been optimized even more in regard to UV-stability. While long term stability of permant antistatics against UV radiation has been a point of discussion from time to time artificial weathering (according to ASTM G26 A and G26 C) carried out with *NEXUS® SM EX UN IBC* material has shown no significant increase in surface resistivity and charge decay. Physical properties of the material stay stable also under heated conditions.
All other plastic parts, as e.g corner protectors or lids, are produced out of conductive plastic material or are designed in a way, that their geometry with only small friction surfaces does not lead to electrostatic charge of these components.
With implementation of the SM13 composite pallet design *NEXUS® SM 13 EX UN IBC* provides the performance and handling advantages customers are used from this innovative pallet concept. Slightly modified in regard to earthening properties it provides secure conductive contact to the ground.*
Also available on a modified wooden pallet *NEXUS® SM 6 EX UN IBC* provides even more economical benefits where needed.

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***NEXUS® SM EX UN IBC* are available with NEXUS® DN50 butterfly valve or without discharge opening in the bottom. While with the butterfly valve earthening of the filling good is done throughout a corrosion resistant A4 stainless steel screw to provide necessary earthening of the filling good *NEXUS® SM EX UN IBC* version without valve works with welded plastic parts made out of conductive plastics (patent pending). Both parts are connected to the metall cage throughout a two sided srewed cable.**

As the use of packaging and other working equipment in Ex-Zones 1 and 2 is subject to legal and company specific safety measures it certainly is in the responsibility of the user himself. Nevertheless a clear and obvious labelling of each NEXUS® SM EX UN IBC with a list of general safety measures completes this overall innovative composite IBC.

Zertifiziert für den Einsatz in Ex-Zonen 1 + 2 nach CENELEC TR50404:2003, BGR 132

SICHERHEITSHINWEISE

- Der IBC darf nur für Flüssigkeiten der Explosionsgruppe IIA und solche der Gruppe IIB verwendet werden, welche eine minimale Zündenergie von gleich oder mehr als 0.20 mJ aufweisen (entsprechend EN50014).
- Der IBC darf NICHT in Ex-Zone 0 benutzt werden.
- Schnelle, wiederholende Füllvorgänge sind zu vermeiden. Andere stark aufladende Vorgänge, wie z.B. der Einsatz von Rührwerken, bedürfen zusätzlicher (erdender) Sicherungsmaßnahmen.
- Der IBC sollte nicht direkt nach dem Reinigen wiederbefüllt werden.
- Während des Befüllens und Entleerens muß der IBC geerdet werden.

Certified for use in Ex-Zones1 + 2 according to CENELEC TR50404:2003, BGR 132

SAFETY INSTRUCTIONS

- The IBC may only be used for liquids classified as explosion group IIA and those of IIB which have a minimum ignition energy value of equal or more than 0.20 mJ (according to EN50014).
- The IBC should NOT be used in Ex-Zone 0.
- Rapid, repeated fillings are to be avoided. Other high charging processes, like e.g. use of stirring equipment, need additional (earthening) safety meassures.
- The IBC should not be filled immediately after cleaning.
- During filling and emptying operations the IBC is to be earthened.

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