

Green facts for ONE and ONE^{Plus}

Both **ONE** and **ONE^{Plus}** are optimised to save natural resources and reduce waste.

Both products are characterised by:

- Reduced resource consumption
- Reduced weight
- Reduced waste
- Reduced disposal cost

ONE and **ONE^{Plus}** are certified according to EN 13432

(European requirements for packaging recoverable through composting and biodegradation). Both products can be composted within 12 weeks in an industrial composting facility.



Your key benefits

- Cost savings
- Dust-free filling at full speed
- Optimised filling process
 - Sturdier bags during filling
 - Good performance at bag applicator
 - Compact bags – easy palletising
- Low transportation costs due to lighter weight
- Low breakage rate
- Best printability
- Biodegradability

Additional benefits of ONE^{Plus}

- Additional moisture protection
- Available with biodegradable film

Areas of application

- Building materials
- Cement
- Chemicals
- Food, feed and seed
- Minerals



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ONE and ONE PLUS

The sustainable way of high speed filling.



SUSTAINABLE by DESIGN

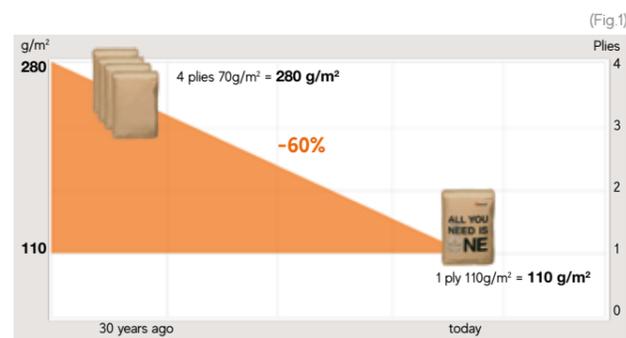
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ONE, a top PERFORMER with LESS WEIGHT

ARE YOU READY
TO TAKE OFF
WITH ONE?



ONE is a strong, stiff and porous one-ply bag concept. Made of 110 g/m² paper (Fig. 1), the bag offers a significant reduction in weight and packaging volume compared with the two-ply 70 g/m² alternatives.



Improved paper qualities allow substantial

Over the past 25 years, the market for sack kraft paper has seen a number of major changes. Thanks to advances in technology, the multi-ply bags so popular in the past have increasingly been replaced by more cost-effective solutions with fewer plies. The constant improvement in paper has made it possible for bags to go all the way from four plies in the 1980s to two plies in the late 1990s. Today, filling companies are still seeking even lighter bags, and further development of paper qualities continues.

ONE has a margin of safety

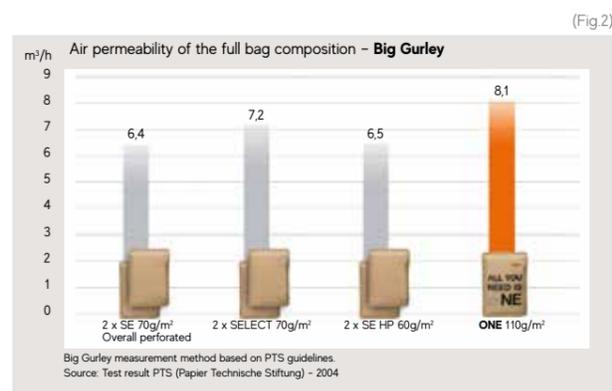
Thanks to the high strength of the bag, ONE is well prepared to do the job. While a TEA value of 300 J/m² would be enough for a 25 kg bag, ONE with its TEA value of 407 J/m² meets even the required level for the minimum strength of a 50 kg bag. This additional margin means that ONE has more than enough strength for bag applications up to 35 kg. With regard to strength, ONE – even with 20% lower paper grammage and higher porosity – performs equally as well as standard two-ply constructions.

The bag also shows other top performance values that are essential for optimal production flow and high-speed filling. Ever since the introduction of ONE to the market, continuous improvements of the one-ply concept have been made based on extensive customer experience and ongoing testing.

Quick and dust-free filling

The strength, stiffness and porosity of the bag have proven that ONE makes for fast, clean and efficient filling. ONE has a high stiffness that provides for optimal bag application on the filling spout. Its high porosity allows for quick de-aeration and dust-free filling without perforating.

ONE shows a Big Gurley value of 8.2 m³/h which is higher than that of any of the tested two-ply constructions (Fig. 2).



Thus, the Mondi one-ply bag creates a savings potential without the need to compromise on performance. Switching to ONE can reduce packaging weight considerably without any negative effect on an optimal filling process and high product performance.

SAVING RESOURCES BY REDUCING WEIGHT AND PACKAGING VOLUME



ONE^{Plus} is the new, cost-effective alternative for everyone who could not benefit from the one-ply concept up until now due to the need for a PE barrier for enhanced moisture protection.

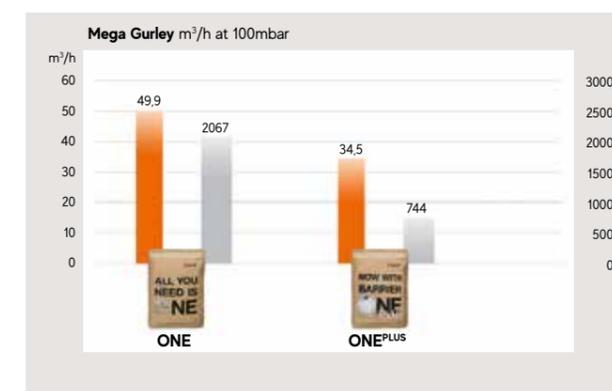


ONE^{Plus} has a unique valve bag construction that delivers top performance. In fact, one ply costs less than two plies, and with a barrier against water vapour, ONE^{Plus} completes our one-ply portfolio. In developing ONE^{Plus}, our engineers had to overcome an unusual situation. Because ONE has only one paper ply, the added PE-foil barrier would be in direct contact with the filled goods, so they had to ensure that even fine powders could not pass through the perforation. At the same time, the filling speed should match the performance of two-ply barrier bags and the moisture protection needed to be increased substantially compared to the one-ply solution without a barrier. With ONE^{Plus}, our experts developed a unique bag construction that resolved all these issues.

ONE^{Plus} has all the advantages of ONE while also offering a PE moisture barrier against water vapour. The bag's characteristic PE-film barrier offers additional moisture protection that ensures the safety of the filled goods.

The ONE^{Plus} bag combines a three-way requirement in the most efficient way (Fig. 3):

- Moisture protection
- High permeability
- Material reduction



(Fig. 3)

The right balance between speed and moisture protection

The development of ONE^{Plus} has filled the gap between offering significant material reduction while still providing a reliable moisture barrier.

Thus, ONE^{Plus} is a solution for every filler needing a high-performance packaging product in their high-speed filling and packaging process, whose product requires additional moisture protection or who shrink wrap the pallets, and who also want to have a safety moisture barrier inside the bag.

Technical data	
ONE and ONE ^{Plus}	
Bag construction	Valve bag up to 35 kg
Number of plies	ONE
Paper	Advantage One
Weight	110 g/m ² (bleached: 120 g/m ²)
TEA (geometric mean):	3.7 J/g – 407 J/m ²
Porosity	9 sec. Gurley
Stretch	8.8%
Stiffness	100 mN

Testing methods: ISO 1924-3, 5636-5