



“ DuPont™ Tyvek® was Nissan’s choice to prevent accidents by handling CO2 at low temperature ”

SUMMARY

- The automaker has improved their special cleaning process, which uses CO2 at low temperature.
- Tyvek® has become a great ally for carrying out said activity, protecting employees from the risk of frostbite - a type of injury generated by skin contact at low temperature.
- By wearing Tyvek® overalls, employees have also reduced the amount of PPE/day, which reduced process costs

Operating in Brazil since 2000, Nissan has an industrial complex in Resende (RJ) since 2014, with capacity to produce 200 thousand cars and 200 thousand engines per year. There, models like Nissan March, Nissan Versa and Nissan Kicks are manufactured, in addition to flex fuel engines 1.0 12V and 1.6 16V. One of the various stages of production process is cleaning the door fixing jigs (templates). This step ensures that doors do not “stick”, making it difficult to transport this item from the car during manufacturing process. Cleaning is done through blasting CO2 at low temperature. This process can remove residues of paint, oils, greases, “biofilms”, foundry, and welding scaling, glues, dust, etc. However, this process blasts particles of paint, in addition to the risk of CO2 causing injuries known as frostbite. In order to improve employee’s protection, Nissan began testing process with protective overalls made with Tyvek®. Adoption of material was not difficult, since Nissan already knew DuPont product, and PPE was already approved for use in industrial plants. Tyvek® garments were subjected to hands-on test in blasting activities for a week, with results that showed zero contact of agents with employees’ skin, and zero contact with surfaces at low temperature. Tyvek® overalls chosen have also enabled that only one PPE is used per day, guaranteeing Nissan to reduce blasting process cost.

There was significant decrease in defects related to dirt in jigs in the first week of implementation. Among Nissan’s achievements we can mention

- In October 2020, historic mark in painting sector was achieved: 400 days

without work-related accident leave.

- 100% of paint workers are satisfied with Tyvek® overalls.
- Significant reduction in dirt levels in jigs, lowering process costs and improving DPHU results (number of defects per 100 cars produced).



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