

PVC 2014 – BRIGHTON, UK

The PVCMed Alliance Activities

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Introduction - the use of PVC in medical devices

Today PVC is considered a material that best meets the performance, safety and cost criteria for a wide variety of medical applications, especially those intended for single use. As a result, around 40 per cent of all plastic-based disposable medical devices used in hospitals, are made from PVC. PVC devices are easier to sterilize, transparent, chemically stable, cost-effective, easy to process by different technologies and have long shelf-life stability. In addition to this, PVC often has important functional attributes such as convenience in use, softness and flexibility.

It is not just in the manufacture of medical devices that the PVC-material contributes positively in hospitals. PVC flooring is also a must when infection prevention is on the agenda. A smooth, tough surface of PVC flooring prevents dust and dirt from building up and stops microbes from breeding. This keeps the hospital rooms sterile and therefore plays a crucial role in preventing infections. To prevent infections is on top of the agenda in every hospital.

Making the PVCMed Alliance?

Partly in order to communicate about the benefit that PVC gives to health care and partly in order to proactively engage in projects that ensure the use of PVC in medical applications will meet the challenges of a sustainable future, PVCMed Alliance was established in 2012. PVCMed Alliance is an alliance of the PVC medical industry chain represented by PVC resin and plasticiser producers and PVC converters.

Strategic Projects

Important part of the activities in the PVCMed Alliance is to build relationships with relevant authorities in order to push the sustainability agenda forward. At the moment PVCMed Alliance participates in two different strategic projects. One is dealing with the recycling of medical plastics waste , the other deals with the use of ***Alternatives to DEHP in medical devices*** . The first is carried out together with

Swedish regional authorities the latter with the Danish Environmental Protection Agency and the Danish Health and Medicines Authorities.

Strategic project no 1: Recycling of medical plastic waste

Sometimes we tend to forget that the introduction of plastics in the manufacture of medical devices has really changed and improved healthcare over time.

The introduction began, to a wide extent, in the mid-sixties. Different plastic materials were used to manufacture the many thousands of various plastic-based medical devices. PVC takes the largest single share with – as already mentioned - nearly 40% of all plastic-made devices.

The transition, away from traditional materials like glass and metal in devices, not only entailed a technological improvement, which brought better devices to hospitals, but also reduced the cross-contamination between patients. Since plastic disposables were cost effective, it was economically justifiable to incinerate them after single-use. The multi-use practice, earlier, of the traditional devices often caused cross-contamination between patients – a disadvantage that the use of plastics put to an end.

However, times have changed. Nowadays we are looking at sustainability, and single-use of any product is not regarded a proper waste management solution. Luckily most plastic materials are suitable for recycling, and recycling of medical plastic waste could be normal practice in the future. The buzz word of today is incineration free hospitals.

Two important projects with a clear objective to recycle medical plastic waste are carried out at the moment. In Australia a project has demonstrated that it is possible to establish sorting and recycling systems for PVC medical waste in hospitals without compromising safety. In Sweden PVCMed Alliance co-finances and participates in a project with the Swedish authorities with the objective of developing a comprehensive methodology to collect and recycle medical plastic waste.

The objective of the project that is being carried out together with among other partners The Stockholm City Council is to make the management of plastic waste from health care resource-efficient and resource-smart with focus on recycling, reuse and prevention. The title of the project is “Sustainable Management of Plastic

Waste from Health Care”. The project intends to put the emphasis on polymers present in significant amounts, such as PVC, PE, PP and PET. A major challenge will be to develop systems for improved management, which do not interfere with the health care itself or raise problems such as contamination and infection. The “Sustainable Management of Plastic Waste from Health Care” project is split up in two parts. The first part application was finalized in 2014. An application for the second part was sent to VINNOVA in January 2014 for financial support. VINNOVA is the Swedish Governmental Agency for Innovation Systems. If the project will be approved by VINNOVA, VinylPlus has agreed to co-finance it and PVCMed Alliance will participate as one of the partners. In the second part of the project the Capital Region of Denmark has also decided to participate.

Strategic project no. 2: Alternatives to DEHP in medical devices.

The objective of the project “Alternatives to classified phthalates in medical devices” carried out together with the Danish Environmental Protection Agency and the Danish Health and Medicine Authority is to speed up the substitution process, away from the use of DEHP in PVC-based medical devices. DEHP is a CMR substance and on the REACH authorization list. The alternatives to DEHP, that were evaluated in the project, are already on the market and actually already used in medical devices. This new evaluation will help the medical device companies NOT shifting to plasticiser alternatives, the authorities might consider problematic. The project was done together with the PVC Information Council Denmark representing the PVCMed Alliance. The job of the PVC Information Council DK was mainly to make sure that environmental and health data of alternatives produced by members of the PVCMed Alliance partners are communicated to Danish authorities. The result of the project was presented at a big international conference in Copenhagen in March 2014.

10 alternatives to DEHP were evaluated in terms of their human health hazard profiles based on the available data sets and these are to a various degree considered relevant alternatives to DEHP in terms of human health hazards.

Communication activities

Besides a comprehensive website targeted the different stakeholders involved in the manufacture and use of PVC in medical applications, the PVC Med Alliance makes presentations at international conferences, visits hospitals to discuss with nurses and other hospital staff, visit medical device companies, participates in exhibitions, publishes the PVCMed Matters newsletter, meets with politicians and regulators etc. On the social media front PVCMed manages a very active Twitter account. PVCMed often tweets live from different conferences and other events. The best way to be informed of all PVCMed activities and other relevant aspects related to the use of PVC in medical devices is to follow PVCMed on twitter.

PVC and PVCMed in the future

According to the GBI Research report, “Medical Polymers Market to 2015”, published in 2010 the demand for PVC-based medical devices will grow in the future. In Europe, US and Asia it is expected that PVC will continue to be the dominate material on the medical devices market.

The aim of PVC Med Alliance is to ensure that this positive market expectation for PVC will be accompanied by a medical industry chain of companies that will build partnerships with different stakeholders in order to ensure that the use of PVC in medical devices will continue to move in a sustainable direction.

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