

# New generation PVDF

Solvay Solexis has recently launched a new grade of Solef® PVDF, a polyvinylidene fluoride line for lithium-ion (Li-ion) batteries. Solef® is used in a wide variety of applications apart from batteries, but this new generation PVDF considerably increases the amount of electricity that batteries can store at equivalent volume and weight. The first grades in this new Solef® PVDF range are already on the market and recognized by the major Li-ion batteries producers. The new Solef® PVDF range will be

used in the lithium-ion batteries of the Solar Impulse aircraft, powered exclusively by solar energy. The development of electric and hybrid cars is also closely tied to increasing battery performance, in particular in terms of weight, which directly impacts the amount of energy needed to propel the vehicle. For Jacques van Rijckevorsel, Group General Manager of the Plastics Sector and Member of the Executive Committee, "Solvay is contributing to developing the market for lithium-ion batteries and



Lithium-ion batteries (Samsung SDI).

taking part in the challenge of producing hybrid and electric cars". In turn Pierre Joris, Managing Director of Solvay Solexis, believes that his company "is proving once

again its ability to place its scientific expertise at the service of industry to develop ever more efficient and less costly solutions based on fluoropolymers!"



## REACH, GHS, CLP...

### As regulations pile up

REACH is evolving, being complemented now by the CLP regulation, deriving from the new global GHS standard. Classification, labeling and technical documentation will all have to be adapted. The REACH regulation, in force since 1 June 2007, extends the European Union's former regulatory framework for chemicals. In parallel, the global GHS standard (Globally Harmonized System of Classification and Labeling of Chemicals), adopted in 2003, harmonizes the communication

of the dangers associated with hazardous materials. It defines new means of communication (icons, labels, risk phrases to be used in technical datasheets, etc.) to ensure that the risks attached to each product can be immediately understood by anyone confronted with this product, anywhere on the planet. The European Union has therefore adopted the CLP (Classification, Labelling, Packaging) regulation. This came into force in January 2009 and becomes mandatory



for all 27 member states from 1 January 2010, complementing the existing REACH obligations.

#### At Solvay everyone is concerned!

CLP involves everyone, purchasing, legal, medical, transportation and production staff as much as toxicologists. All Business Units and all sites

are concerned. Solvay employees and workers will be informed (by posters, brochures, intranet) of the new symbols and their meanings by the ROM (Reach Operational Management) project team and its HSE (Health, Safety, Environment) partners.

Consult the Solvay REACH intranet site: <http://research-technology.solvay.com/reach>

## H1N1 influenza: Solvay is ready

Following the H1N1 flu outbreak, Solvay has taken a number of measures to protect the health of its employees and their families. Hygiene kits – to be kept in a dry place – were distributed during 2009. Nobody can predict how or in what form the virus may reappear, so the PPT (Pandemic Preparedness Team) has developed tools to quickly inform Solvay employees: an intranet site for employees but also a website accessible to all, including outside the company. In this way employees' families too can easily learn about the development of the situation and any action to be taken.

**Intranet site:**  
<https://partners.solvay.com/sites/pandemicflu/default.aspx>  
**Internet site:**  
<http://www.solvay-pandemic-influenza.com/>



### Vaccines at Weesp

## Tests validated and approved

At Weesp (Netherlands), a new 3 900 m<sup>2</sup> plant has been installed to produce influenza vaccines from cell cultures. Last May, it successfully completed the various steps of a GMP (Good Manufacturing Practice) inspection by the Dutch authorities. This series of controls marks the end of several years' intense work. Traditionally, we worked with specialized farms that produce each year millions of fertilized eggs for vaccine culture. This supply chain is obviously fragile, for example in the case of a bird flu

pandemic. It is to avoid the risk of being deprived of its supply that Solvay Pharmaceuticals has turned to another technology: the MDCK (Madin Darbin Canine Kidney) process. Free of any chicken-derived product, this cell culture process presents additionally a solution for people allergic to avian proteins. The process of producing vaccine from MDCK cells is not fundamentally different from that using cells derived from eggs: it is the supply of cell cultures that changes. These come from a cell bank,

where they are stored in liquid nitrogen at -170°C. After thawing and multiplication, they are contaminated with an influenza virus seed. The viral particles penetrate the host cells and reproduce. After a few days the liquid containing the virus is harvested, purified and concentrated in different stages. The production process ends with packaging and quality control. In 2010, the plant will face a new inspection, this time by the American Food and Drug Administration (FDA).