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Umwelt Bundes Amt
Für Mensch und Umwelt

Chemical leasing unburdens environment

UBA presents "sustainable chemicals" concept

Businesses will soon not only be leading cars and computers but also chemicals. The Federal Environment Agency (UBA) makes this proposal in its "Sustainable Chemicals" paper. The idea is simple: producers or importers no longer sell a chemical, say a solvent used in printed-circuit-board production, but instead provide the benefits obtained from the chemical, including its professional and ecological application. After use the supplier recovers the used chemicals, treats them, and handles their ecological disposal. According to the chemical leasing concept suppliers will benefit from providing their know-how and not from the volumes of chemicals sold as in the past. UBA President Andreas Troge expects positive effects for the environment as resources will be saved. Innovative chemical companies in Germany are especially well-placed at present to promote more sustainable management of chemical use through chemical leasing. Anyone who deploys economical technologies in times of crisis has better chances of surviving global competition".

Besides chemical leasing, the UBA paper "Sustainable Chemicals" presents other ideas to promote protection of the environment and resources within and together with the chemicals industry. They include: improved organometallic catalyst technologies that help produce polyethylene and polypropylene plastics with the desired shock resistance and transparency. The new processes produce fewer by-products and consume less material and energy as compared to conventional techniques. These plastics are used to make items such as refrigerator storage containers, drinking water pipes, cable insulation, or bin liners.
A different example is so-called "white biotechnology" in which bacteria, yeasts or moulds are used instead of traditional chemical processes. Vitamin B2 and Vitamin C is almost 100 percent a result of biotechnological production nowadays. White biotechnology is considerably lower in emissions and energy consumption, and what is more, molasses, whey, and other renewable materials are used as culture media. White biotechnology operates using normal pressures and at about room temperature. Traditional chemical processes on the other hand require high pressure and sometimes high temperatures, both of which result in rather high energy costs.
The UBA *Nachhaltige Chemie Positionen und Kriterien des Umweltbundesamtes* paper encourages businesses and scientific communities to exchange ideas—and reach beyond Germany and Europe. "Chemicals affect the global environment and public health. They spread rapidly via the air, water and on the market. Exercising more protection of the environment in

handling chemicals is not just a regional challenge, it is a global one", said UBA's President Troge.

The background paper on sustainable chemicals management is available here http://www.umweltdaten.de/publikationen/fpdf-l/3734.pdf.
Information about the UBA research project on chemical leasing and on international activities is here: http://www.chemikalienleasing.de/

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