

CONTENTS

THE USE OF SOLVENTS IN HOUSEHOLD PRODUCTS	1
SOMETHING IN THE AIR	2
ESIG AWARDS: REWARDING EXCELLENCE IN THE USE OF SOLVENTS SINCE 1999	3
GENERIC EXPOSURE SCENARIOS LIBRARY	4
SOLVENTS: ONE WORD, MANY SOLUTIONS	4
NEW REACH SECTION ON THE ESIG WEBSITE	4

THE USE OF SOLVENTS IN HOUSEHOLD PRODUCTS

Last week, did you perhaps paint your nails, light a fire, clean the kitchen, mop a floor, work in your garden, wash your clothing, spray perfume, style your hair or wax your car? If you did just one of these activities, you can be certain that solvents made it possible. So many of your daily household activities rely, directly or indirectly, on solvents. Here are some examples you might not have thought of:

SHAVING FOAM

Thanks to glycols, solvents from the alcohol family, shaving foam is not only velvety and smooth in consistency but the foam also stays moist on your skin until you have finished shaving. Glycols have high solvency yet low evaporation rates. Without low evaporation rates, shaving foam would not remain in its liquid state long enough and would harden before you finished shaving. The high solvency enables the shaving foam to be easily diluted and washed off with water. Specifically, glycols act as a bridge between the shaving foam and water; they dissolve the shaving foam so it can be easily rinsed off your skin.

MEDICINES

While there are absolutely no solvents in any medication ready for consumption, solvents like n-propanol, butyl acetates or isopropanol are indispensable for the production of medicine, such as: penicillin, aspirin and cough syrup. Solvents are also used to produce the casing of pills.

CLEANING PRODUCTS

Glycol ethers, e.g. butoxypropanols and butoxy-ethanols, used in floor cleaning products, have high solvency power and slow evaporation rates. When cleaning the floor, glycol ethers make sure the maximum amount of dirt is dissolved and the floors stay wet until the entire surface has been mopped. Glycol ethers are also present in oven cleaner, ensuring the product does not evaporate before the oven is fully cleaned. When cleaning the oven, you are instructed to leave the product for 30 minutes before rinsing it off, that allows it to break down the more difficult dirt in your oven.

STAIN REMOVER

Why can't greasy stains be removed with water or normal laundry detergent? Stain removers with hydrocarbon solvents are essential to effectively remove stains. This concept is best illustrated by the principle "like dissolves like". Generally, hydrocarbon solvents are derived from crude oil through a physical distillation process and further chemical treatment, like hydrogenation, to reduce odors. In our case, greasy stains and the hydrocarbon solvents are both non-polar, thus enabling the stain remover to seep under the stain and effectively break it down. Hydrocarbon solvents, such as isoparaffins, are odorless and relatively high boiling. They are compatible with many modern polymeric (nylon and polyester) and natural (cotton and wool) fabrics. Thus, while the stain removers can easily attack the non-polar material (i.e. grease) they do not harm the fabric.

Without solvents, removing stains would be more difficult. The detergent would need to be more aggressive and the water temperature higher. What's more, you would likely use your washing machine more frequently; all these factors would have an adverse impact on the environment.

