

## 3M Sustainability In-depth: Management and Characterization of Product Opportunity and Risk

Inherent in 3M's Life Cycle Management Process is the characterization and management of both product risk and opportunity. Risk reflects the potential for exposure and the hazards of the materials associated with the product over its life cycle, as well as the degree of uncertainty and feasibility of controlling exposure. Opportunity addresses finding solutions to these issues. This proactive approach by 3M to product risk characterization and management complements the American Chemistry Council's (ACC) Global Chemical Management Policy and the Responsible Care initiative. The chemical operation of 3M is a member of the ACC.

Factors that may be considered when reviewing a product include exposure, hazard, uncertainty and market opportunity.

- Exposure considerations may include the following: duration, concentration, distribution, frequency, pattern of product use, location, demographics, impurities and byproducts, competency of user, and potential for abuse or misuse.
- Consideration of potential marketing opportunities from a product's reduced impact on the environment, health or safety may include increased energy efficiency, reduced toxicity, reduced global warming potential, reduced energy use, recycle-ability, and reduced worker health and/or safety concerns.
- Hazard considerations may include the following: type of outcome, potential severity of outcome, uniqueness of hazards, permanence of effect, and treat-ability.
- Uncertainty considerations may include the following: completeness of information, knowledge of product, product history and analogy to similar products, knowledge of customer, and knowledge of ultimate end-

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