

Chemistry Critical to National Priorities

U.S. chemical producers provide chemistry needed to achieve national priorities, including the manufacturing of computer chips and automobiles, energy development, rebuilding the country's infrastructure, and supporting healthcare and biotechnology. Pro-growth, science-based policies are needed to ensure we can produce more of these critical chemistries here at home and help make America the world's manufacturing superpower. For more information visit: chemistrycreates.org

Case Study: Clean Energy

U.S. chemical manufacturers produce materials used in batteries; hydrogen fuel cells and electrolyzers; electric vehicles; EV charging equipment; wind energy and solar energy; small modular nuclear reactors; carbon capture, utilization and storage just to name a few.

PFAS:

Fluoropolymer coatings help solar panels and wind turbines withstand rain, hail and environmental contaminants.

Formaldehyde: Formaldehyde is used for the production of some epoxy resins which are then largely employed in composites and adhesives needed to produce wind turbine rotor blades and other structural elements.

Cyclic Aliphatic Bromide Cluster (HBCD): used as a potential flame retardant for EV chargers.

Methylene Chloride:

used as a refrigerant in electric vehicle air conditioners.

Perchloroethylene (PERC):

used as a solvent in industrial cleaning processes, particularly for equipment maintenance in clean energy production facilities, such as wind turbines and solar panel manufacturing.

Trichloroethylene (TCE):

used to create PVDF, which is used as insulation on electrical wires.

PFAS: Fluoropolymers are used in films for photovoltaic solar cells to help protect against extreme heat and moisture, while also providing high-performance electrical insulation properties for the wiring inside the panels.

Methylene Chloride: Used to make polycarbonate, which is used in various applications such as photovoltaic (PV) panels, skylights, greenhouses, and canopies.

PFAS: Fluoropolymers support efficient electrolytic ionic migration, allowing for smaller, more efficient lithium batteries.

Ethylene Oxide: used to produce ethylene carbonate, which is used in lithium-ion batteries to allow the electricity generated to travel more easily through the battery.

Methylene Chloride: used as a refrigerant in electric vehicle air conditioners.

Formaldehyde:

formaldehyde-based technologies are used to make interior molded and under-the-hood components that allow for higher fuel efficiency by reducing vehicle weight.

Ethylene Oxide:

Used to create PET (polyethylene terephthalate) flexible photovoltaic systems. PET is a flexible polymer that can be used as the top layer of solar panels.