



## Critical Chemistry Uses

**1, 3-Butadiene** - A variety of construction goods and materials are made of synthetic rubbers (or elastomers), latexes and plastics made using 1, 3-butadiene, including styrene-butadiene rubber (SBR), polybutadiene rubber (PBR), polychloroprene (wall neoprene), styrene-butadiene latex (SB latex) and nitrile rubber (NR). Butadiene is used to make nylon for carpeting, roofing underlayment, concrete modification and more. SB latex comprises about 8 percent of the butadiene end-use in the United States. SB latex applications include foam rubber (carpet backing, cushions, pads, sponges, etc.), adhesives (floorings, tiles, road, and roofing, etc.), sealants and paper coatings. SB latex is used in the back coatings in tufted carpets, anchoring the pile fibers and providing improved stability and resistance to fraying or tuft loss at the cut edges of the carpet.

**Tetrabromobisphenol A (TBBPA)** - TBBPA is a flame retardant used in a variety of building and construction materials for homes, offices and public buildings, including schools and hospitals. Incorporating flame retardants into the material fillings and fibers used in upholstery helps provide an extra layer of fire protection. TBBPA is used in electrical and electronic equipment where printed circuit boards are required, such as household and office electronics and appliances. TBBPA is a critical element used to produce electronic displays and monitors.

**Diisodecyl phthalate (DIDP) and diisononyl phthalate (DINP)** - DIDP and DINP help improve the longevity of wall coverings and contribute to low indoor air emissions. DIDP and DINP in roofing materials help to make roofs UV resistant with a long service life and more energy efficient. Durability, low volatility, low temperature flexibility, low conductivity, heat resistance and electrical resistivity make DIDP a material of choice for safeguarding wires in homes.

**Carbon tetrachloride (CTC)** - CTC is a feedstock used in the production of next-generation, low global warming potential (GWP) refrigerants and foam blowing agents. These products are essential for enhancing energy efficiency in households and buildings. For example, low GWP blowing agents are used to produce foamed polymers that function as insulating materials in roofing, flooring and walls.

**Triphenyl phosphate (TPP)** - TPP is a flame-retardant plasticizer used in a wide range of building and construction materials. TPP is used in wiring, polyvinyl chloride (PVC), glues, adhesives and casting resins.

**Formaldehyde** - Cabinetry, countertops, moldings, shelving and décor, stair systems, flooring, wall coverings, support beams and trusses, and many other household furnishings and structures are made with composite and engineered wood products manufactured with formaldehyde-based resins. Glues and adhesives that use formaldehyde as a building block are exceptional bonding agents, delivering high-quality performance that is also economical. The wood products industry uses formaldehyde-based resins in a wide range of panel and board products, enabling sustainable use of forestry resources and minimizing waste. For example, composite wood panels are typically made from recovered wood waste that might otherwise be burned or disposed of in a landfill.

**Octamethylcyclotetrasiloxane (D4)** - D4 is used to manufacture silicone-based polymers for use in building and construction materials including flooring, tile and grout, bathtubs, drywall and concrete binders, carpeting, wall, roof and foundation insulation and in semi-permanent fixtures such as water piping and lighting. Building and construction applications for D4 include caulk and sealants to fix cracks and leaks, in paints or stains for decorating and in photovoltaic cell encapsulations for solar panels.

**Perchloroethylene (Perc)** - Due to its excellent solvent properties, perc is used as an ingredient to make a range of common building and construction materials such as water repellants, paint removers, glues and adhesives, polishes and lubricants. Perc is also widely used as a feedstock for hydrofluorocarbon refrigerants which are commonly used in stationary air conditioning systems (i.e. R-410A).

**1,4-Dioxane** - 1,4-Dioxane is used as a wetting and dispersing agent in textile processing and in wood pulping. Other uses of 1,4-dioxane include fire retardant manufacturing, production of weed and pest control products and art restoration.

**N-Methyl-2-pyrrolidone (NMP)** - NMP is used as a solvent in the production of paints and coatings, caulk and sealants.

*\*While these chemistries are used in the manufacture of products for housing, building and construction, this does not mean these products have unsafe levels – or even any levels – of chemicals remaining on or within the finished product.*

*\*\*These critical chemistries are undergoing risk evaluation under the Toxic Substances Control Act (TSCA)*

It is imperative for sound science and accurate exposure information be used to inform the risk evaluations or these critical chemistries could be restricted or eliminated from the supply chain, impacting product availability due to faulty processes and inaccurate information.