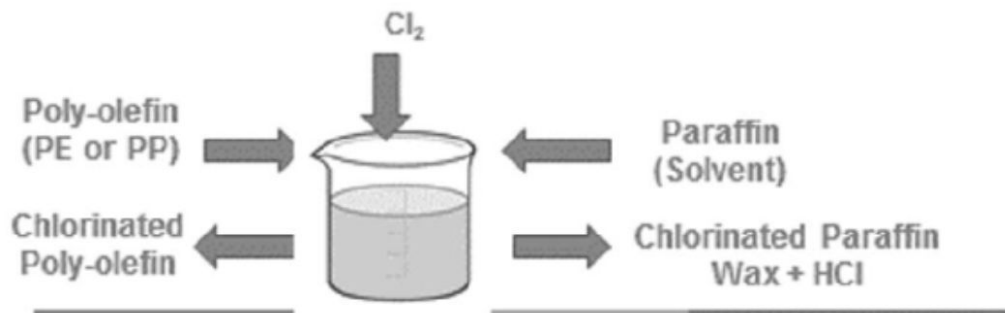


GRANTED

(IN369080)

A co-chlorination process for paraffins and poly-olefins



NEED

Current flame retardants in polymers often degrade under heat or release harmful gases, causing fire hazards and toxic exposure. Plasticizers in industrial materials frequently fail after long-term use, triggering safety risks and \$20B in global product recalls annually. But what if polymers could self-stabilize under heat without toxic residues?

TECHNOLOGY OVERVIEW

This patented process enables co-chlorination of paraffin and poly-olefins like polyethylene and polypropylene in a single step. It produces chlorinated compositions with up to 73% chlorine content, enhancing flame retardancy, thermal stability, and chemical resistance—suitable for wires, coatings, adhesives, and industrial plastic applications.

TECHNOLOGY KEY FEATURES

One-step co-chlorination process yielding dual chlorinated compounds with up to 73% chlorine. Enhances flame retardancy and chemical resistance. Uses common solvents for separation. Compatible with current manufacturing lines.

[Read more here](#)

MARKET ANALYSIS

Global chlorinated polymer market to reach \$18.4B by 2033, CAGR 5.8% (MarketsandMarkets, 2023). India's polymer additive segment expanding due to demand for flame-retardant plastics in infrastructure and electronics. Key trends: thermal stability, low-toxicity additives, integrated processing.

Target Industries

Specialty Chemical Suppliers and/or Electrical & Cable Coating Integrators and/or OEMs in Construction, Packaging, and Automotive

AT A GLANCE

- SDG 9 (Industry, Innovation and Infrastructure), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action)

Technology is available for licensing/ co-development.

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