

# CHEMICAL FOOTPRINT: TAPECON

A CASE STUDY TO ASSESS AND REDUCE A CHEMICAL FOOTPRINT

## SUMMARY

Tapecon Inc. is an advanced manufacturer and specialized contract printer located in Buffalo, NY. Tapecon has 118 employees and recorded \$24.7M in revenue in 2020. In 2021, through a program called the Chemical Footprint Project (CFP) run by Clean Production Action (CPA), and funded by a Source Reduction Assistance Environmental Protection Agency (EPA) Grant, Tapecon assessed the chemical footprint of their industrial cleaning products. Tapecon's printing process requires cleaning products to maintain the printing equipment. These products were analyzed by the New York State Pollution Prevention Institute (NYSP2I) at the Rochester Institute of Technology (RIT). Twelve products were submitted and seven chemicals in four products were found on either the CFP Chemicals of High Concern (CoHC) Reference List and EU Substances of Very High Concern (SVHC) Reference List. With knowledge of these high concern chemicals, Tapecon has switched suppliers and has eliminated Glycol Ether PM from its cleaning processes. Trials are presently being run to eliminate the use of Glycol Ether EM and to replace it with a different chemical that does not have any CoHC. Alternative chemicals are also being sought to replace the use of DriRite 110 and Rubber Rejuvenator.

## COMPANY

*An advanced manufacturer and specialized contract printer in Buffalo, NY.*

Established in 1919, Tapecon is a 5-generation, family-owned business based in Buffalo, New York. Tapecon has 118 employees and generated \$24.7M in revenue in 2020. Tapecon provides expertise in specialized printing and converting, printed flexible electronics, and contract manufacturing of disposable devices for medical and industrial original equipment manufacturers (OEMs).

In order to produce its products, Tapecon utilizes screen printing, also known as analog print technology, which requires the use of inks, solvents, and other chemicals in the printing process. Likewise, machine maintenance requires chemical cleaning products. Tapecon strives to use fewer chemicals, produce products with fewer volatile organic compounds (VOCs) and wasted materials, and lower energy usage.

**Tapecon is a founding member of WNY Sustainable Roundtable (WNY SBR). The WNY Sustainable Business Roundtable is a "business-driven" organization focused on creating an environmentally and economically resilient Buffalo-Niagara through business innovation, knowledge, and co-operation.**

## OBJECTIVE

*Preparing a chemical footprint to assess and reduce high concern chemical usage.*

Tapecon enrolled in the Clean Production Action's (CPA) Chemical Footprint Project (CFP) and requested assistance from the NYS Pollution Prevention Institute (NYSP2I) at the Rochester Institute of Technology (RIT) to determine their chemical footprint. A chemical footprint, as defined by the CFP, is the total mass of chemicals of high concern, screened against the CFP Chemicals of High Concern (CoHC) Reference List or EU Substances of Very High Concern (SVHC) Reference List, used by an event, organization, service, building, or product. The objective of the CFP is to highlight chemicals of high concern and deliver strategic solutions for sustainable materials and environmentally preferable products. Tapecon's participation will help provide effective platforms for scientists and organizations to work together in advancing safer chemicals and healthy materials.



## METHODS AND RESULTS

This project was limited to the industrial cleaning products Tapecon uses in cleaning its printing equipment, which includes the presses (seen below), ink dispensers, dies, aniloxes, and rollers. This chemical footprint did not include inks and printing chemicals, as these are dictated by customers and vary from product to product.

Tapecon provided twelve industrial cleaning products and their safety data sheets to NYSP2I for the analysis. NYSP2I identified seven chemicals in four products which appeared on either the CoHC and EU SVHC lists. Of special note was Glycol Ether EM which contains 100% 2-methoxyethanol and appears on both the CoHC and EU SVHC lists. Rubber Rejuvenator #184 and Dri Rite 110 followed, with 15-30% and 12.6-36% of their contents being on the CFP CoHC list. Lastly, Glycol Ether PM solvent contained less than half a percent of a chemical on the CFP CoHC list.

## SOLUTIONS

In April 2021, NYSP21 presented Tapecon's chemical footprint to the CFP working group. NYSP2I discussed the challenges Tapecon and other contract manufacturers face compiling and analyzing this information. Tapecon's participation provided invaluable feedback to CPA to assist other contract and smaller manufacturers complete their own footprints. As a result of this analysis, Tapecon has eliminated the use of the CoHC identified in *Glycol Ether PM* by switching to a different supplier. Trials to eliminate the use of *Glycol Ether EM* are being run, with hopes to replace it with a different chemical that does not have any CoHC. Alternative chemicals are also being sought to replace the use of *DriRite 110* and *Rubber Rejuvenator*.

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Tapecon has eliminated the use of *Glycol Ether PM*. Trials to eliminate the use of *Glycol Ether EM* are being run. Alternative chemicals are also being sought to replace the use of *DriRite 110* and *Rubber Rejuvenator*.”



**The above image contains a screenprint press used by Tapecon for commercial printing. It requires several cleaning products to be maintained, all of which were analyzed in this study.**

**Information on Clean Production Action, the Chemical Footprint Project (cited above) and high concern chemical lists:**

<https://www.cleanproduction.org/>  
<https://www.chemicalfootprint.org/learn/about-cfp>  
**CFP Chemicals of High Concern**  
**EU Substances of Very High Concern**

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**Funding:** Provided by a Source Reduction Assistance Environmental Protection Agency (EPA) Grant #96264300.

**Chemical footprint analysis:** Conducted by the New York State Pollution Prevention Institute (P2I) at the Rochester Institute of Technology (RIT).