

Disposal of Non-Hazardous Wipers & Impact of EPA's Solvent-contaminated Wiper Rule



Mercantile Development, Inc.

MISSION STATEMENT

Mercantile Development, Inc. is committed to exceeding the expectations of our customers by delivering quality, cost-effective, nonwoven products. We will provide timely, reliable and customer-driven service. Integrity will always be our guide.



- Lucia Furman, Vice President and third generation of family owned and operated business founded in 1947
- Full line manufacturer of premium quality nonwoven industrial wipers headquartered in Shelton, CT
- Products proudly made in the U.S.A. and available globally through our partner distributors
- Heavily invested in infrastructure and green energy. 155,000 sq. ft. facility featuring state-of-the-art converting lines, energy efficient warehouse and rooftop solar array

Sustainability Through Responsible Business Practices

At MDI, we believe in responsibly using resources for the benefit of future generations. Through the implementation of sustainable business and manufacturing practices, we strive to conduct our operations in a manner that minimizes environmental stress and creates a safe and healthy workplace for our employees. Our ongoing commitment is to continue as we have for three generations – providing our customers the highest quality products and service – while being considerate of our environmental impact at all stages of the value chain.



PROCURE RESPONSIBLY

- Procure environmentally preferable raw materials as available, such as 40% post-consumer recycled and biodegradable
- Use SFI®-certified corrugated suppliers. All corrugated is made from 100% renewable sources and is 100% recyclable containing as much as 46% recycled fiber
- Source domestically and use rail transport to obtain the highest quality product with the fewest emissions

OPERATE CONSCIENTIOUSLY

- 325.5 kW rooftop solar array consisting of 1,302 PV solar panels generates over 400,000 kilowatt hours annually, supplying 60% of MDI's power needs from the sun and reducing our annual carbon footprint by 560 tons of CO₂
- Zero waste to landfill: 100% of office and production waste is either recycled or used to make electricity
- Green cleaning products used for facility maintenance

MANUFACTURE EFFICIENTLY

- Production machinery regularly upgraded to run efficiently over fewer shifts
- Facilities outfitted with motion-sensors, T-8 lighting and special reflective fixtures that maximize lighting efficiency and eliminate the equivalent of 13 tons of carbon dioxide annually
- Fork trucks powered by rechargeable batteries have replaced propane power reducing material handling energy use by 30% and increasing workplace air quality

PACKAGE OPTIMALLY

- Develop smart and innovative products that cut waste by right-sizing wipers for packaging, palletization and end use
- Design packaging with minimal footprint and optimize palletization for increased loadability and reduced fuel use
- Industry-leading use of recyclable shrink-wrap in place of outer corrugated cartons to drastically reduce waste

Task Engineered Nonwoven Wipers Satisfy Specific End User Needs



SLITTING & CREPING

Custom trimming and material finishing to optimize wiper size and minimize waste, increase bulk and absorbency and add texture for task-specific end uses



SATURATING

Individually packaged applicator with specific chemical dosage formatted to meet site specific needs



SHEETING

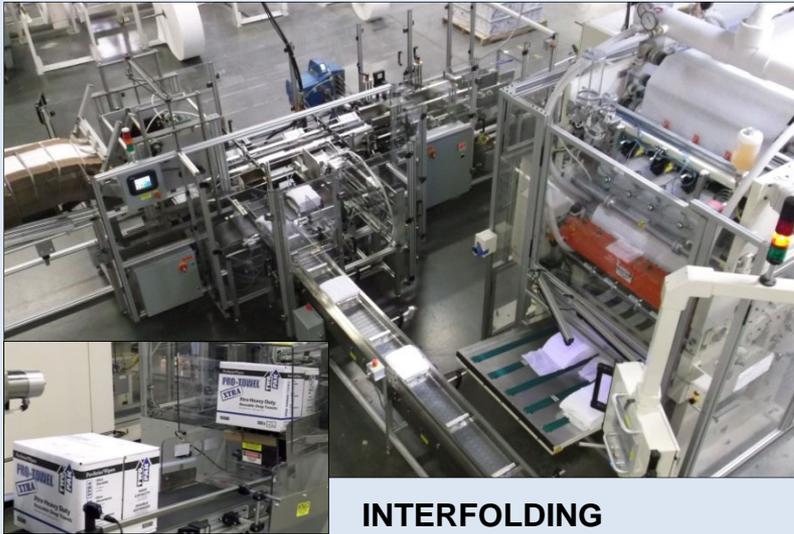
Flat packed, double bagged wipers for critical environments including laboratories, pharmaceutical compounders and electronics manufacturers



PERFORATING-REWINDING

Heavy-duty industrial jumbo rolls offer ease of accessibility in high capacity work areas. Portable tote boxes to keep product clean and control dispensing

Task Engineered Nonwoven Wipers Satisfy Specific End User Needs



INTERFOLDING

Pop-up boxes for use where controlled dispensing and compact footprint is key such as individual workstations and utility vehicles



FOLDING & ON-LINE PRINTING

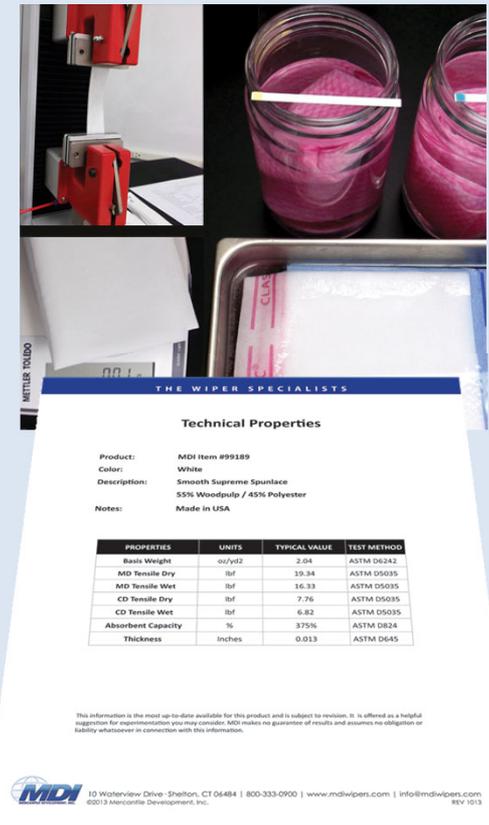
Reduce large sheets down to compact folded towels packaged in dispenser boxes saving space and controlling usage. Color-coded foodservice towels help prevent cross contamination



Task Engineered Nonwoven Wipers Satisfy Specific Hi Tech End User Needs

Generators in clean controlled environments such as aerospace, electronics, bio-pharmaceutical, medical device and other high tech manufacturing have specific needs for task engineered wipers that span from quality to compliance to safety. For example:

- Applying acetone to electronic circuit boards without streaking or breaking down of the applicator
- Cleaning printing presses while leaving no lint
- Prepping vehicles without leaving residue prior to spraying in paint booth
- Avoiding static or abrasion when wiping down newly manufactured metal parts
- Soaking a wiper in sanitizing or disinfecting solution over an extended period of time without deterioration
- Meeting regulatory standards for controlling particulate within a clean room



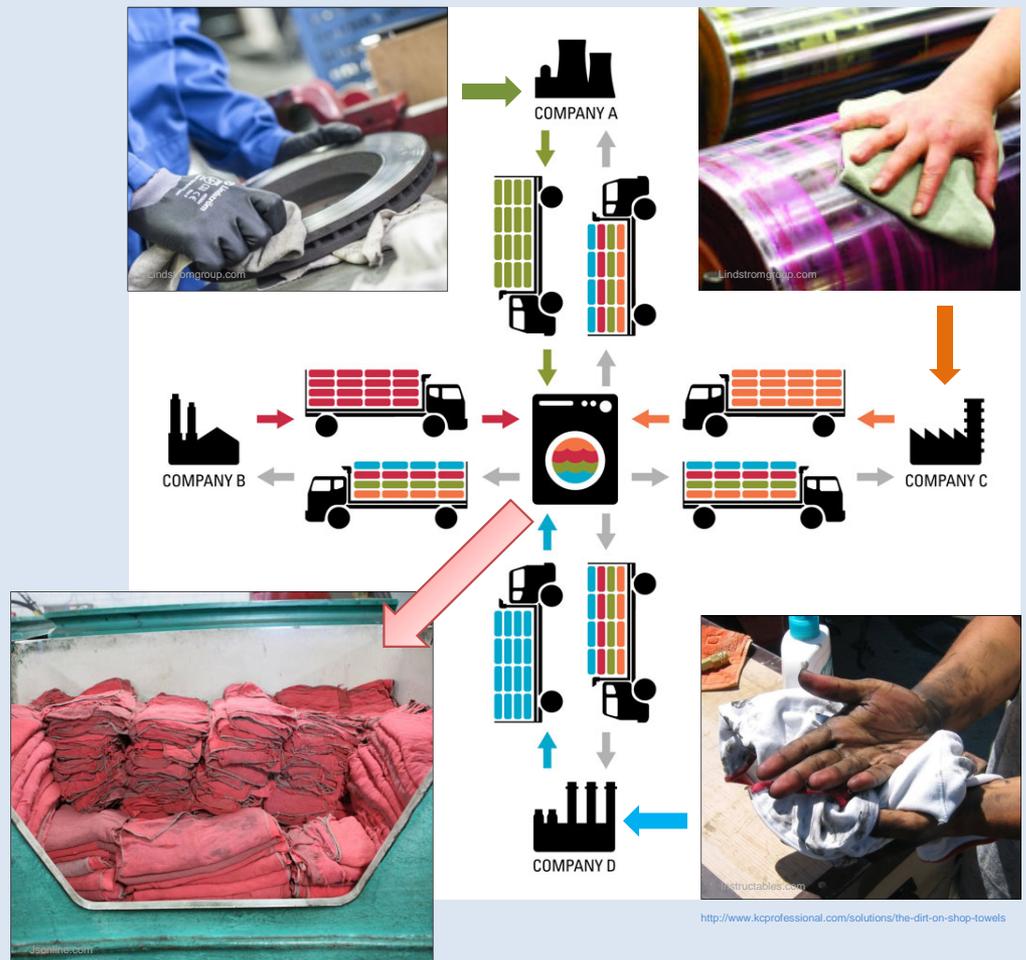
MDI maintains an on-site quality lab for product development and compliance testing

Task Engineered Nonwoven Wipers Contribute to Safe, Productive, Efficient Workplaces

- Maintain productivity levels with speed, consistency and efficiency
 - Consistent in cleanliness, quality, size, shape and performance unlike rags and shop towels
- Safe for people & processes
 - Contaminant-free unlike rags and shop towels which often contain holes, strings, metal chips or heavy metal residue from other workplaces
- Manage costs for economic success
 - Variety of packaging options to minimize waste and maximize efficiency. Jumbo rolls for high capacity areas, dispenser boxes for controlled dispensing, double bagged for cleanrooms
 - Lower cost in use when substrates are engineered for specific tasks, with characteristics such as:
 - Low lint/low particulate
 - Solvent resistance
 - Strength & durability (wet & dry)
 - Abrasion resistance
 - Absorption rate
 - Absorption capacity
 - Basis weight
 - Ability to wipe dry

Non-laundered Nonwoven are Frequently the Best Solution for Connecticut Workplaces

Due to the additional costs of complying with excessive hazardous waste management restrictions applicable to non-laundered wipers, users often feel compelled to use laundered shop towels in situations where non-laundered wipers are better suited to the task at hand and are a safer option for their processes and employees



The EPA Solvent-Contaminated Wipes Final Rule a.k.a. “The Wiper Rule”

- “The Wiper Rule”, with provisions that provide a conditional exclusion from the definition of hazardous waste for non-laundered wipers, was passed July 31, 2013 after:
 - 28 years of consideration
 - Rigorous scientific analysis
 - Input from a broad range of impacted stakeholders

EPA 40 CFR – Section 261.4 (b)(18) regarding disposable wipes:

- “Solvent-contaminated wipes that are sent for disposal are not hazardous wastes, provided the conditions of the exclusion are met”
- Conditions and Exclusions:
 - Type of solvent
 - Proper storage, time limits, and labeling
 - No free liquids in storage
 - Simple record-keeping
 - Proper handling and disposal

EPA 40 CFR – Section 261.4 (a)(26) regarding reusable wipes:

- Reusable wipes are also affected by this Rule being conditionally excluded from the solid waste category provided certain conditions are met

EPA Basis for “The Wiper Rule”

- **Maintain and Enhance Protection of Human Health & the Environment without Over-regulating**
 - The final rule is based on EPA's final risk analysis, peer reviewed in 2008 and published for public comment in 2009, which demonstrates that wipers contaminated with certain hazardous solvents do not pose significant risks to human health and the environment when managed under reduced requirements. Most wiping products can be handled, managed and disposed of safely without the onerous controls currently in place
- **Establish Consistent Regulatory Framework Providing the Covered Community with Clarity and Certainty**
 - Provide a consistent, nationwide, regulatory framework for solvent-contaminated wipers that is appropriate to the level of risk posed by these wipers in a way that maintains protection of human health and the environment, while reducing overall compliance costs for industry, many of which are small businesses

EPA Estimated Benefits of “The Wiper Rule”

- **Reduced Regulatory Burden**
 - Solvent-contaminated wipes managed according to the conditions in the final rule are non-hazardous wastes
 - Generators do not need to meet the more stringent hazardous waste regulations
 - Example: Solvent-contaminated wipes managed under the final rule exclusions no longer have to be manifested when being sent off-site and may be sent to non-hazardous waste handling facilities
- **Economic Benefits**
 - Over-regulation of non-laundered wipers creates costs that are unnecessary to achieve environmental objectives
 - EPA estimates a net savings nationwide between \$21.7 and \$27.8 million per year
 - \$18.0 million per year in avoided regulatory costs
 - Between \$3.7 million and \$9.9 million per year in other expected benefits

“The Wiper Rule” is Based on Nearly 30 Years of Advocacy and Research

- **1985:** manufacturers of non-laundered wipers formally petitioned EPA to conditionally exclude wipers from the RCRA definition of hazardous waste, arguing that these materials are over-regulated
- The EPA spent **nine years** conducting research, collecting data, receiving vast amounts of input and reviewing options
- **2003:** the EPA proposed a final rule and collected input from many states, including Connecticut, and then conducted **yet another risk analysis**
- **2009:** Peer review and public comment period
- **2013:** Finally, after nearly 30 years, the EPA published its final Solvent-Contaminated Wipes Rule
- **2016:** 27 States have adopted the rule, six more are likely to adopt in 2016, and Connecticut leaders in DEEP are considering review of the rule

“The Wiper Rule” is Simple to Understand

THE WIPER RULE

WHAT DOES THE EPA'S NEW “CONDITIONAL EXCLUSIONS FROM SOLID AND HAZARDOUS WASTE FOR SOLVENT-CONTAMINATED WIPES” RULE AKA “THE WIPER RULE” MEAN TO ME AS A USER OF DISPOSABLE RAGS AND WIPES?

Under this rule, my disposable rags or wipes that are contaminated with solvents may not need to be disposed of as hazardous waste.

WHAT TYPES OF RAGS ARE WE TALKING ABOUT?

We're talking about “a woven or non-woven shop towel, rag, pad or swab made of wood pulp, fabric, cotton, polyester blends or other material” or an absorbent pad used for spill cleanup.



How do I know if the rags or wipes I use need to be managed as hazardous waste or if they can be disposed of with other, non-hazardous waste?

HOW DO I KNOW?

First, I need to take a look at the solvents I use with my rags/wipes.

If I used one or more of the following solvents on my rag or wipe, then the used rag/wipe may be eligible to be disposed of as non-hazardous waste:

acetone, isobutyl alcohol, benzene, methanol, n-butanol, methyl ethyl ketone, chlorobenzene, methyl isobutyl ketone, creosols, methylene chloride, cyclohexanone, tetrachloroethylene, 1,2-dichlorobenzene, toluene, ethyl acetate, 1,1,2-trichloroethane, ethyl benzene, 2-ethoxyethanol, and xylenes



DO THE RAGS OR WIPES I'M USING CONTAIN OTHER FORMS OF HAZARDOUS WASTE?

 Then I must dispose of these rags/wipes as hazardous waste.

YES

OK. It looks like I meet the preliminary criteria for disposing of my used rags and wipes as non-hazardous waste. Yay! Now what do I do?

NO

WHAT IF I'M USING SOLVENTS OTHER THAN THE ONES LISTED ABOVE IN ITALICS?

There's still a possibility that I can dispose of the rags and wipes I use as non-hazardous waste, but it gets a little more complicated. I need to determine what characteristics the wipes exhibit after being used with these other solvents. If they DO exhibit ignitability, but DO NOT exhibit toxicity, corrosivity, or reactivity, then they CAN be disposed of as non-hazardous waste. If they DO exhibit either toxicity, corrosivity, or reactivity (even just one of the three), then they MUST be disposed of as hazardous waste. Wipes/rags that contain trichloroethylene will always need to be disposed of as hazardous waste.



HERE'S WHAT I HAVE TO DO:

1 Store the used wipes in closed, non-leaking containers: a liquid proof container with a tight fitting lid.

2 Label those containers clearly on the outside of the container as “excluded solvent-contaminated wipes.”

3 Only put used rags or wipes in these containers that do not contain any free liquids (i.e. not dripping with solvent). The containers themselves may not contain free liquid solvent.

4 Within 180 days from when the very first wiper is placed inside the container, these rags/wipes must be disposed. Disposal options include:

- A municipal landfill “regulated under 40 CFR part 258 (incl. 258.40)” or “hazardous waste landfill regulated under 40 CFR parts 264 & 265.”
- A combustor “regulated under section 129 of the Clean Air Act” or “hazardous waste combustor, boiler or industrial furnace regulated under 40 CFR parts 264, 265 or subpart H.”

5 Keep simple records in house showing how I've managed my solvent-contaminated wipes. These records should include the following information:

- Name and address of the disposal facility where the wipes are sent.
- Waste collection dates to assure that the wipes are not being accumulated for longer than the 180 day limit.
- A description of the process that I'm using to meet the “no free liquids” requirement.

FINALLY, WHY SHOULD I GO TO ALL OF THIS TROUBLE?

If I meet the criteria described above, disposing of my rags / wipes as non-hazardous waste should save me a lot of money. If I am an SQG* facility (Small Quantity Generator), I could save an average of over \$4,000 per year. If I am an LQG* facility (Large Quantity Generator), I could save an average of over \$30,000 per year. *see the EPA web site for definitions



For more information on any of the above, ask your SMART member partner to share additional information from SMART's “Wiper Rule” Toolkit, which includes appropriate links to the EPA web site. To check whether your state has adopted “The Wiper Rule,” please visit this link to the appropriate section of the EPA web site: http://www.epa.gov/epawaste/hazard/wastetypes/wasteid/solvents/wipes_fnl_effctv.htm

"The Wiper Rule" Would Benefit Connecticut Businesses

- Rectifies unnecessary over-regulation in existing hazardous waste rules
- Brings clarity and certainty to the covered community by creating a uniform, national regime
- Gives Connecticut workplaces a choice where the decision to use laundered shop towels is solely based on disposal regulation and cost, rather than product performance, cost in use or worker safety
- Provides job security for MDI's employees and growth opportunities for our organization which in turn impacts the Connecticut based distributors, end users, sales organizations and logistics companies with whom we conduct business

How Do We Implement “The Wiper Rule” in CT?

We have no idea...
we just make wipers!

Let's talk it over.

To the DEEP, HWAC and Today's Audience:

Thank You

We want to especially thank the DEEP for listening to MDI's concerns and giving us an opportunity to present to the Committee.