Application Note

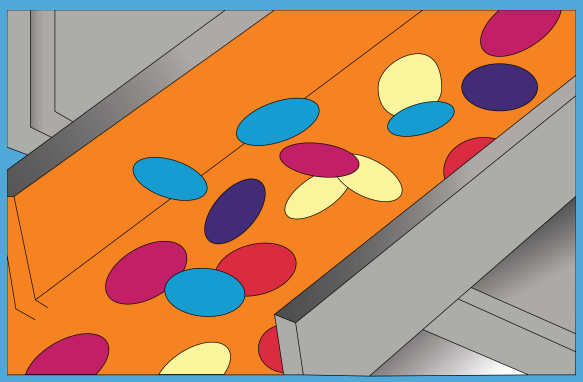
DeWAL® Pressure Sensitive Tapes for Roller Wrap and Tooling Protection

Features:

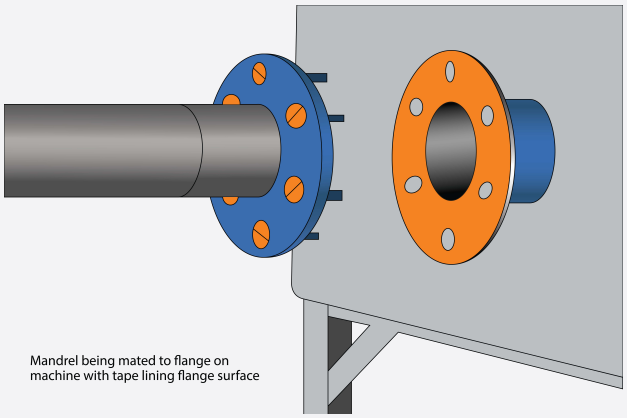
- Temperature range up to 260°C (500°F)
- Good insulation
- Low friction coefficient
- UL-Certified component for flame retardant and cold resistant properties
  - File No. E179854 (DW204-2HD,DW204-3HD, and DW205HD)

Benefits:

- Outstanding mold release properties
- Tensilized PTFE enhances strength and durability for extended use during manufacturing process
- Excellent cycling performance
- Chemical inertness
- Superior cold and heat resistance
- Clean adhesive surface, with residue-free removal
- No air bubbles within tape component



Pellet shaped material flowing through tape lined chute

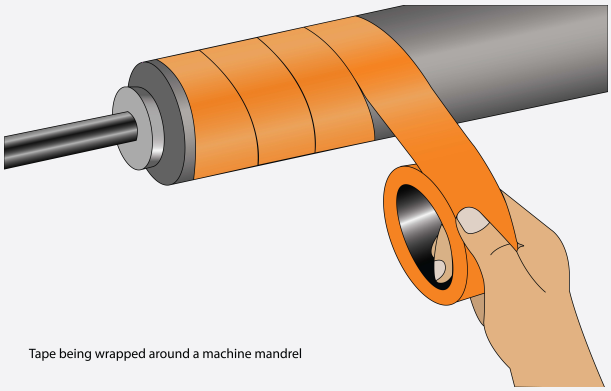


Mandrel being mated to flange on machine with tape lining flange surface

Constructed of highly tensilized PTFE film coated with high-temperature silicone adhesives, DeWAL® Pressure Sensitive Tapes have enhanced performance characteristics similar to those of PTFE tape.

The most popular high-density PTFE tapes are DW204-2HD, DW204-3HD, DW204-5HD, DW662, and DW664 which are used for wrapping the nip roller to prevent sticking. These products also support tooling protection and hot knife applications.

These high modulus tapes are suited for roll wrapping in the production of polyethylene laminates. They are suitable for laminating thicker sheets like cloth for long-run continuous lamination operations. The superior tensile strength of DeWAL Pressure Sensitive Tapes makes one-piece removal possible.



Tape being wrapped around a machine mandrel

ROGERS CORPORATION

www.rogerscorp.com

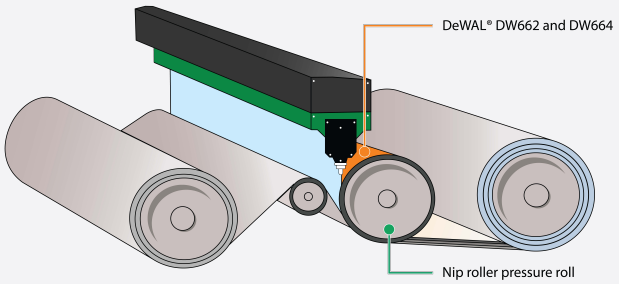
Application Note

DeWAL® Pressure Sensitive Tapes for Roller Wrap and Tooling Protection

Extruded PTFE film tapes are often used in roller wrap applications as they offer high durability and strength in high-speed operations, such as 750 RPM and higher, where continuous runs are needed.

Skived PTFE film tapes are a cost-effective option that provide excellent surface smoothness to reduce friction and ensure precise material thickness control while remaining conformable. While capable of handling more demanding application requirements, tapes like DW662 and DW664 perform excellently in lower-speed operations between 300-400 RPM. At higher speeds, the skived PTFE film backing will wear out faster than extruded PTFE film backings.

Where DeWAL Pressure Sensitive Tapes can be used:



Overall roller wrap application on machine

PRODUCT	BACKING SUBSTRATE	COLOR	BACKING THICKNESS	ADHESIVE	ADHESION, Typical [ASTM-D 1000]	TENSILE STRENGTH, Typical [ASTM-D 3759]	ELONGATION, Typical [ASTM-D 3759]	Gov't Specification
			mm (in)	mm (in)	g/cm (oz./in)	MPa (psi)	%	
DW FST	Skived PTFE Film	Purple	0.0635 ± 0.00762 (0.0025 ± 0.0003)	0.0381 ± 0.0127 (0.0015 ± 0.0005)	390 (35)	129 (18,769)	140	-
DW204-2HD		Brown	0.0508 ± 0.00762 (0.002 ± 0.0003)	0.0381 ± 0.00762 (0.0015 ± 0.0003)	390 (35)	121 (17,535)	147	Mil-A-A59474 Type 1, Class 1
DW204-3HD			0.0762 ± 0.00762 (0.003 ± 0.0003)		424 (38)	125 (18,132)	159	Mil-A-A59474 Type 1, Class 2
DW204-5HD			0.127 ± 00127 (0.005 ± 0.0005)		480 (43)	101 (14,627)	215	Mil-A-A59474 Type 1, Class 4
DW662		Blue	0.0635 ± 0.00762 (0.0025 ± 0.0003)		335 (30)	107 (15,486)	204	-
DW664		Orange	0.1016 ± 0.0127 (0.004 ± 0.0005)		446 (40)	71 (10,319)	211	-

All tapes within the DW204 series, DW662, and DW664 are coated with proprietary **silicone adhesives.**

Typical values shown are from testing at date of manufacture and should not be used for specification limits. All metric conversions are approximate.