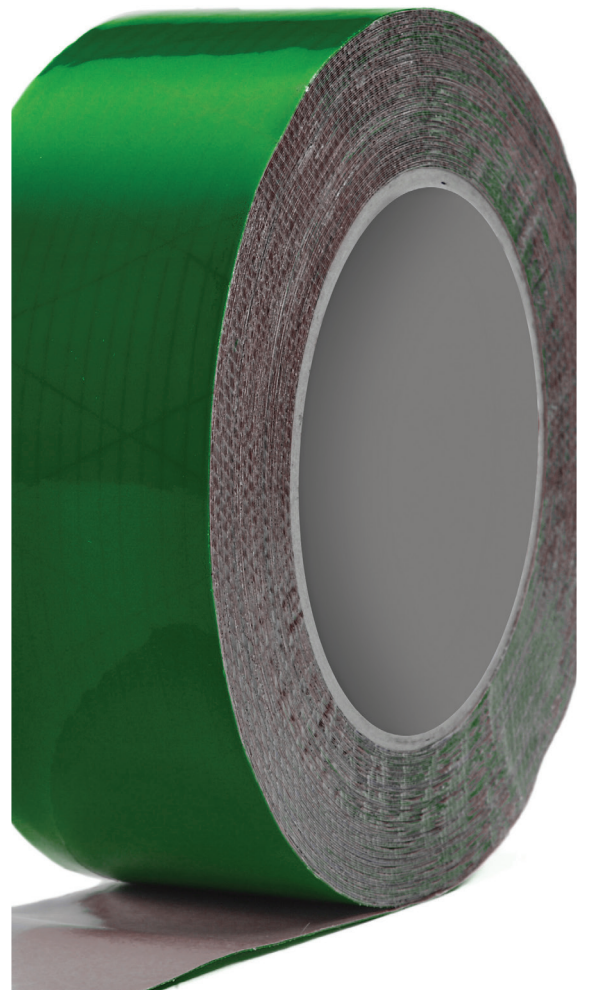


RESINS FOR ADHESIVES



NATURE IS OUR ORIGIN

Specialized in plant-based chemistry for more than 80 years, we have been using renewable raw materials extracted from pine trees: a priceless alternative to fossil resources.

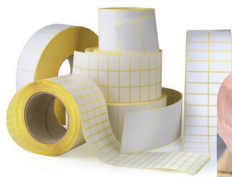
We offer to the adhesive sector one of the widest range of tackifiers based on Crude Sulfate Turpentine or Crude Tall Oil, by-products provided by the paper industries.

These sustainable resins are used in various end-markets such as packaging, non-wovens, woodworking, bookbinding, tapes & labels and construction.

With our two R&D and application laboratories, we are permanently committed to develop innovative resins in order to adhere to your needs.

DRT EXPRESSES THE BEST OF NATURE TO DEVELOP INNOVATIVE PRODUCTS FOR A RESPONSIBLE CHEMISTRY

LABELS



TAPES

BOOK BINDING



NON-WOVENS

CONSTRUCTION



PACKAGING





ROSIN ESTERS

Light colored resins, low acidity
Compatibility with EVA and SBC
Relative high polarity and low molecular weight
Good thermal stability
Excellent ratio price / performance



TERPENE PHENOLIC RESINS

Low molecular weight, high polarity
Good compatibility with EVA, SBC, SBR and NR
Improved adhesion on specific surfaces
Increased hot tack



POLYTERPENE RESINS

Excellent compatibility with SBC
Very good adhesive performances in PSA formulations
Low odor, no acidity
High thermal stability



WATERWHITE RESINS

Modified terpene based resins
Excellent compatibility with metallocene based PE
Good thermal stability
Excellent adhesive performances
Alternative to fossil based hydrocarbon resins



ROSIN DERIVATIVES

Acid rosins stabilised by polymerisation, hydrogenation, disproportionation
mainly used in solvent based adhesives
Specialty polyesters for polyurethane adhesive formulation



WATERBASED DISPERSIONS

Compatible with acrylics, NR, SBR, PCP latices
Aqueous solvent free resins
Excellent balance of adhesive and cohesive properties
Outstanding mechanical stability that enables to use them on high speed coaters



RESINS FOR ADHESIVES

	TYPE	Softening Point	Tg (mid)	Gardner Colour	Acid Value	Mz
		°C	°C	50R/50T	mg KOH / g	
ROSIN ESTERS					Acid Value	
DEXTOLINE DEG 2	Diethyleneglycol ester of rosin	37*	-7	4	20	650
GRANOLITE TEG	Triethyleneglycol ester of rosin	liquid	-26	6	10	1100
DEXTOLINE G2L	Glycerol ester of TOR	87	39	1.5	6	900
DEXTOLINE PLS	Pentaerythritol ester of TOR	97	50	2.5	8	1200
WESTREZ 5101 P	Pentaerythritol ester of TOR	97	50	2.5	8	1200
DEXTOLINE P 105	Pentaerythritol ester of TOR	105	55	2.5	12	2500
DEXTOLINE P 110	Pentaerythritol ester of TOR	110	62	4	10	3300
GRANOLITE P 118	Pentaerythritol ester of GR	118	74	5	18	3300
DEXTOPOLINE G	Glycerol ester of polymerised rosin	117	70	6	14	2000
DEXTOPOLINE P 125	Pentaerythritol ester of polymerised rosin	128	80	6.5	12	2800
HYDROGRAL G	Glycerol ester of hydrogenated rosin	85	39	7	9	1400
HYDROGRAL P	Pentaerythritol ester of hydrogenated rosin	97	48	8	11	1450
TERPENE PHENOLIC RESINS					Hydroxyl Value	
DEXTOPHENE T	Terpene phenolic resin	95	40	4	30-50	1000
DEXTOPHENE T 105	Terpene phenolic resin	105	55	4	20-60	1100
DEXTOPHENE T 115	Terpene phenolic resin	120	70	5	45-65	1100
DEXTOPHENE H 150	Terpene phenolic resin	118	70	5	135-150	900
POLYTERPENE RESINS					Acid Value	
DERCOLYTE LTG	Polyterpene resin	20*	-20	3	-	1000
DERCOLYTE A 115	Polyterpene resin	115	69	3	-	1650
DERCOLYTE S 115	Polyterpene resin	115	70	2	-	5500
DERCOLYTE TS 95	Modified terpene resin	95	49	< 1	-	3500
DERCOLYTE TS 105	Modified terpene resin	105	59	< 1	-	2200
WATERWHITE RESINS					Acid Value	
CRYSTAZENE 110	Modified terpene resin	110	68	50 Hazen	-	2250
ROSIN DERIVATIVES					Acid Value	
GRESINOX H	Modified, uncrystallisable rosin	65		7	146	
HYDROGRAL	Hydrogenated rosin	79	39	5	163	420
POLYGRAL 95	Polymerised rosin	95		6	155	
ZINCOGRAL Z	Zinc resinat	160			5	
REAGEM 5006	Hydroxylated polyester	liquid		6	5	7000

* Dropping Point

C : Compatible

PC : Partially compatible

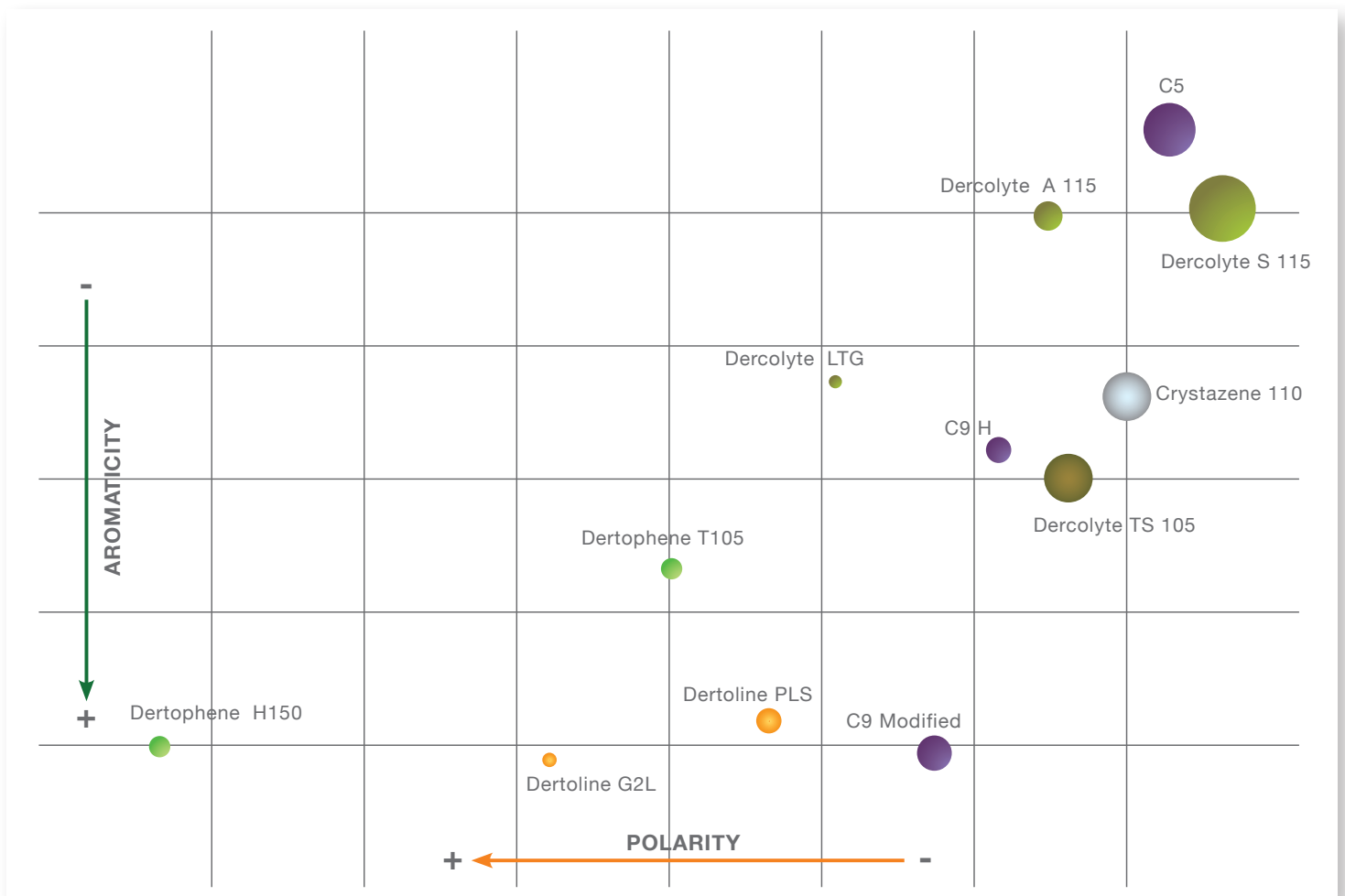
I : Incompatible

POLYMER COMPATIBILITY							APPLICATIONS					
SIS	SBS	SEBS	PE	EVA	SBR	ACRY	PSA	PACKAGING	BOOKBINDING	HYGIENICS	CONSTRUCTION	ASSEMBLY
	C		I	C			✓	✓		✓	✓	
C	C	PC	I	C	C	C	✓				✓	
C	C	PC	I	C	C	C	✓	✓	✓	✓	✓	✓
C	C	PC	I	C	C	C	✓	✓	✓	✓		
C	C	PC	I	C	C	C	✓	✓	✓	✓		
C	C	PC	I	C	C	C	✓	✓	✓			
C	C	PC	I	C	C	C	✓	✓	✓			
C	C	PC	I	C	C	C		✓	✓			
							✓	✓				✓
			I	C			✓	✓				✓
Compatibility with polymers in hot melt form is not relevant. These resins are mainly used in solvent based systems.							✓				✓	✓
							✓				✓	✓
C	C	C	C	C		C	✓	✓	✓		✓	✓
C	C	C	C	C		C	✓	✓	✓		✓	✓
C	C	C	C	C		C	✓	✓			✓	
I	I	I	I	C	I	C	✓	✓	✓			
C	C	C	C	C	I	I	✓	✓		✓		
C	C	C	PC	C	I	I	✓			✓		✓
PC	C	PC	C	C	I	I	✓	✓		✓		✓
C	C	C	PC	C	C	C	✓	✓		✓		
C	C	C	PC	C			✓	✓		✓		
			C	C			✓	✓	✓	✓		✓
Compatibility with polymers in hot melt form is not relevant. These resins are mainly used in solvent based systems.							✓				✓	✓
							✓				✓	✓
							✓				✓	✓
											✓	✓
												✓



HOT MELT TECHNOLOGY

Hot melt adhesives are solvent free adhesives used in many end-markets : packaging, tapes & labels, non-wovens, woodworking, assembly or DIY. Depending on the surfaces that must be bonded, the first criteria is the selection of the most suitable elastomer and the choice of the tackifying resin. Aromaticity, aliphaticity and molecular weight are key parameters in selecting the appropriate resin. These parameters are excellent indicators to determine the compatibility with polymers. You will discover that our wide range of resins offers numerous possibilities in the formulation of hot melt adhesives.



Circles size corresponds to molecular weight

- Terpene phenolic resin
- Rosin ester
- Polyterpene resin
- Hydrocarbon resin
- Terpene styrenated resin
- Waterwhite resin

DRT offers a wide range of solvent free tackifier dispersions to the adhesive industry. Based on various chemistries, our resins are compatible with many polymers and improve the adhesive performance of the formulations that can be found in different markets such as tapes & labels, construction, packaging, automotive or general assembly. Dermulsenes are particularly recommended for Pressure Sensitive Adhesives. Their unique formulations and their outstanding mechanical stability allow them to run on coaters at very high speeds.



	TYPE	Solid Content	Softening Point	pH	Viscosity	COMPATIBILITY					
						%	(base resin) °C	mPa.s, at 20°C	ACRYLICS	SBR	NR
DERMULSENE RA 502	Rosin acid	50	63	7,5	800	C	C	I	I	C	I
DERMULSENE A 7510	Rosin acid	57	75	7.8	600	C	C	I	I	C	C
DERMULSENE RE 802	Rosin ester	52	70	7,5	500	C	C	C	C	C	C
DERMULSENE DEG	Rosin ester	50	40	8,5	200	C	C	C	I	C	C
DERMULSENE 222	Modified rosin ester	54	45	8,5	450	C	C	C	C	C	C
DERMULSENE HBR 509	Modified rosin ester	53	70	8	300	C	C	C	C	C	C
DERMULSENE TR 602	Terpene phenolic resin	55	96	8,5	800	C	C	C	C	C	C

C : Compatible **PC** : Partially compatible **I** : Incompatible

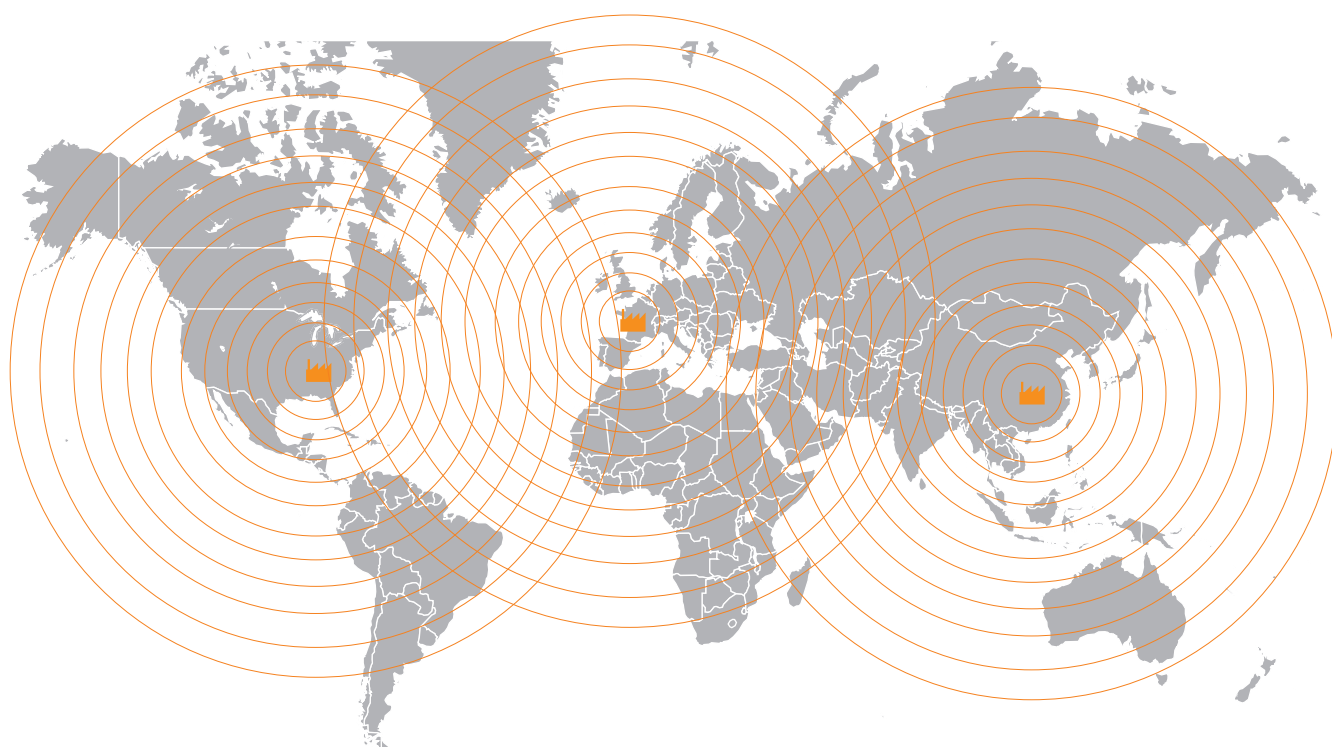
EFFICIENT PRODUCTS WORLDWIDE

DRT supplies markets worldwide with the most efficient resins.

Resins have become an essential element in many formulations today. As one of the pine chemistry industry leaders, we constantly adapt our products to meet the new industrial, technical and economic needs of our customers. Our technical expertise in working with raw materials allows for greater performances in the development of highly diversified products.

Our three manufacturing facilities (two in France, one in China), our logistic platforms and our strategic alliance with our US partner MWV ensure a reliable supply chain worldwide.

With this international network, we are able to deliver the best of nature to our customers everywhere.



www.drt.fr

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