

## VELREZ HYDROCARBON RESINS

Velrez hydrocarbon resins are light-colored thermoplastic products obtained by polymerization of monomers from distillates petroleum steam-cracked raw materials. The products are designed as tackifiers for hot melt adhesives, coatings, rubber compounds, printing inks, synthetic bitumen binder and road marking paints.

The resins improve the adhesion, rheological behaviour, workability performance and have excellent compatibility with SIS, SBS, EVA, polyolefines and many rubber types.



TAKING THE STRESS, EASING THE STRAIN

### Aromatic, C9

Item	Softening Point (R&B), °C	Color Gardner	Acid Value, mg KOH/g	Ash Content, %	Application
Velrez 9Z4-100	100±5	3 - 4	< 0.1	≤ 0.05	PSA, Solvent Adhesive
Velrez 9Z4-110	110±5	3 - 4	< 0.1	≤ 0.05	PSA, Solvent Adhesive
Velrez 9Z4-120	121±3	3 - 4	< 0.1	≤ 0.05	PSA, Solvent Adhesive
Velrez 9ZE6-100	100±5	4 - 8	< 0.1	≤ 0.05	PSA, Solvent Adhesive, cost effective
Velrez 9ZE6-120	120±5	4 - 8	< 0.1	≤ 0.05	PSA, Solvent Adhesive, cost effective
Velrez 9ZE6-130	130±5	4 - 8	< 0.1	≤ 0.05	PSA, Solvent Adhesive, cost effective
Velrez 9Z11-105	105±5	11	< 0.1	≤ 0.05	Solvent Adhesive, Paint, Rubber
Velrez 9Z11-115	113±2	11	< 0.1	≤ 0.05	Paint, Printing Inks
Velrez 9Z18-105	105±5	< 18	< 0.1	≤ 0.05	Roofing, Rubber, Bitumen
Velrez 9Z18-115	113±2	< 18	< 0.1	≤ 0.05	Roofing, Rubber, Bitumen

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### Aliphatic, C5

Item	Softening Point (R&B), °C	Color Gardner	Acid Value, mg KOH/g	Viscosity @200 °C, mPas	Application
Velrez 5ZA5-100	100±5	Max. 5	Max. 0.8	Max. 250	HMA, Waterproofing, high Mw
Velrez 5ZR5-100	100±5	Max. 5	Max. 0.8	Max. 250	Rubber
Velrez 5ZP3-100	100±5	Max. 4	Max. 0.6	Max. 250	PSA, Road marking
Velrez 5L4-100	100±5	Max. 4	Max. 0.5	Max. 200	Adhesives, Rubber
Velrez 5X4-100	100±5	Max. 4	Max. 0.6	Max. 200	PSA, Road marking   lower Mw
Velrez 5H5-113	113±5	Max. 5	Max. 0.5	500	HMA, SB adhesives
Velrez 5ZL-30	Liquid	< 3	-	30000 mPa.s/ 25 °C	PSA, HMA, Resinous and polymeric coating

## Hybrid resins

### Aliphatic modified aromatic, C5/C9

Item	Softening Point (R&B), °C	Color Gardner	Acid Value, mg KOH/g	Bromine Value, Br.cg/g	Application
Velrez 9HZ3-100	100±5	2.1 - 3.0	≤0.30	≤35	EVA adhesive, Rubber , Paint
Velrez 9HZ4-110	110±5	3.1 - 4.0	≤0.30	≤35	EVA adhesive, Rubber , Paint
Velrez 9HZ4-120	120±5	3.1 - 4.0	≤0.30	≤35	EVA adhesive, Rubber , Paint
Velrez 9HZE6-100	100±5	4 - 6	≤0.30	-	PSA, Solvent Adhesive, cost effective



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### Aromatic modified aliphatic, C9/C5

Item	Softening Point (R&B), °C	Color Gardner	Acid Value, mg KOH/g	Bromine Value, Br.cg/g	Application
Velrez 5HX8-100	100±5	< 8	<0.1	≤35	EVA based adhesive, PSA, Rubber, Paint
Velrez 5HH5-100	97±5	< 5	<0.2	-	EVA based adhesive, PSA, Rubber, Paint
Velrez 5HZ5-94	94±2	< 5	<0.1	-	EVA based adhesive, PSA, Rubber, Paint

### Aromatic/cycloaliphatic (C9/DCPD)

Item	Softening Point (R&B), °C	Color Gardner	Acid Value, mg KOH/g	Bromine Value, Br.cg/g	Application
Velrez TP9Q12-105	103±2	< 12	< 0,3	-	Printing ink, Rubber, Alkyd, Paint
Velrez 9H12-125	125±5	< 12	< 0,5	-	Adhesives, bitumen modification, Rotogravure ink and paint
Velrez 9H12-135	135±5	< 12	< 0,5	-	Adhesives, bitumen modification, Rotogravure ink and paint
Velrez 9H12-145	145±5	< 12	< 0,5	-	Adhesives, bitumen modification, Rotogravure ink and paint

### Aliphatic /cycloaliphatic (C5/DCPD)

Item	Softening Point (R&B), °C	Color Gardner	Acid Value, mg KOH/g	Bromine Value, Br.cg/g	Application
Velrez 5HDZ6-100	100±5	Max. 4	Max. 0.5	Max. 200	50% C5/50% DCPD , Rubber, tires, HMA / PSA

## Hydrogenated C9

Item	Softening Point (R&B), °C	Color Gardner	Yellowness Index (YI)	Features	Application
Velrez W9Z0-100	100±5	< 1	≤ 3.5	Excellent heat stability	PSA, HMA
Velrez W9Z0-110	110±5	< 1	≤ 3.5	Waterwhite	PSA, HMA
Velrez W9Z0-120	120±5	< 1	≤ 3.5	Waterwhite	PSA, HMA
Velrez W9Z0-130	130±5	< 1	≤ 3.5	Waterwhite	Masterbatch, plastic films
Velrez W9Z0-140	140±5	< 1	≤ 3.5	Waterwhite	Masterbatch, plastic films
Velrez W9Z1-90	90±5	< 1	≤ 4.5	Waterwhite	PSA, HMA
Velrez W9Z1-100	100±5	< 1	≤ 4.5	Waterwhite	PSA, HMA
Velrez W9Z1-110	110±5	< 1	≤ 4.5	Waterwhite	PSA, HMA
Velrez W9Z1-120	120±5	< 1	≤ 4.5	Waterwhite	PSA, HMA
Velrez W9Z1-130	130±5	< 1	≤ 4.5	Waterwhite	HMA, Plastic
Velrez W9Z1-140	140±5	< 1	≤ 4.5	Waterwhite	Masterbatch, plastic
Velrez W9ZA11-100	100±5	< 1	≤ 3.5	Aromaticity 6-15%	PSA, HMA
Velrez W9ZA11-110	110±5	< 1	≤ 3.5	Aromaticity 6-15%	PSA, HMA
Velrez W9ZA8-120	120±5	< 1	≤ 3.5	Aromaticity 6-10%	PSA, HMA
Velrez W9ZR-100	100±5	< 1	≤ 3.5	Aromaticity 8-12%	Tire Rubber
Velrez W9ZL-10	Liquid	< 1	≤ 3.5	Viscosity ≤ 20000 mPa.s @30 °C	HMA, Solvent based PSA on SIS and SBS



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## Hydrogenated C5

Item	Softening Point (R&B), °C	Color Gardner	Yellowness Index (YI)	Acid vskue	Application
Velrez W5Z2-100	100±5	< 1	0 - 3	≤0.30	Hygiene, Cosmetic
Velrez W5Z4-100	100±5	< 1	3.0 -4.5	≤0.30	Hygiene
Velrez W5Z6-100	100±5	< 1	4.5 - 9.5	≤0.30	Hygiene, PSA, HMA
Velrez W5Z9-100	100±5	1 - 2	9.5 -15.5	≤0.30	PSA, Packaging
Velrez W5Z2-115	115±5	< 1	0 - 3	≤0.30	PSA, Packaging
Velrez W5Z4-115	115±5	< 1	3 -4.5	≤0.30	PSA, Packaging
Velrez W5Z2-125	125±5	< 1	0 - 3	≤0.30	PSA, Packaging
Velrez W5Z4-125	125±5	< 1	3 -4.5	≤0.30	PSA, Packaging

## Hydrogenated cycloaliphatic (DCPD)

Velrez WDZ1-100	100±5	0-1.0	≤ 3,5	≤0.10	PSA, HMA
Velrez WDZ1-110	110±5	0-1.0	≤ 3,5	≤0.10	PSA, HMA
Velrez WDZ1-120	120±5	0-1.0	≤ 3,5	≤0.10	PSA, HMA
Velrez WDZ1-130	130±5	0-1.0	≤ 3,5	≤0.10	PSA, HMA
Velrez WDZ1-140	140±5	0-1.0	≤ 4,5	≤0.10	PSA, HMA
Velrez WDL1-125	125±5	0-1.0	≤ 4.5	≤0.20	PSA, HMA



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## Aromatic, based on pure monomers, alphas-methyl styrene

Item	Softening Point (R&B), °C	Color Gardner	Yellowness Index	TG, °C	Application
Velrez Z-85	85 - 95	< 1	< 7		PSA, HMA bookbinding
Velrez Z-90	90 - 95	< 1	< 7		PSA, HMA
Velrez Z-100	95 - 105	< 1	< 7		PSA, HMA
Velrez Z-110	105 - 110	< 1	< 7		PSA, HMA
Velrez Z-115	110 - 118	< 1	< 7		PSA, HMA
Velrez Z-120	118 - 125	< 1	< 7		PSA, HMA
Velrez Z-130	125 - 135	< 1	< 7		PSA, HMA
Velrez Z-140	135 - 145	< 1	< 7		PSA, HMA
Velrez ZP-125	120 - 130	< 1	< 7		Modified plastic, TPE, lower Mw
Velrez ZP-140	136 - 146	< 1	< 7		lower aromatic content
Velrez ZR-100	95 - 105	< 1	< 7	47 - 51	Rubber Compounding, high aromatic



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