SHOWA
DENKO

Chlorinated Polyethylene

ELASLEN ™

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1. Introduction

ELASLEN is a developed chlorinated rubber, the result of advances Showa Denko's chlorinated elastomer technologies and extensively remodeling of its plants. Ideal for a wide range of applications, ELASLEN possesses excellent color stability, heat aging resistance, oil resistance, and weatherability. The color stability of ELASLEN exceeds that of Chlorosulfonated polyethylene (CSM), enabling rich coloring. ELASLE's heat aging resistance and oil resistance are equivalent to Epichlorohydrin rubber (CHR) and Acrylic rubber (ACM).

2. Features

1) Manufacturing process involves no materials, such as carbon tetrachloride, that are harmful to the environment.

2) Provides excellent color stability, oil resistance, and ozone resistance as same as CSM.

3) Provides excellent heat resistance, compression set resistance, and weatherability.

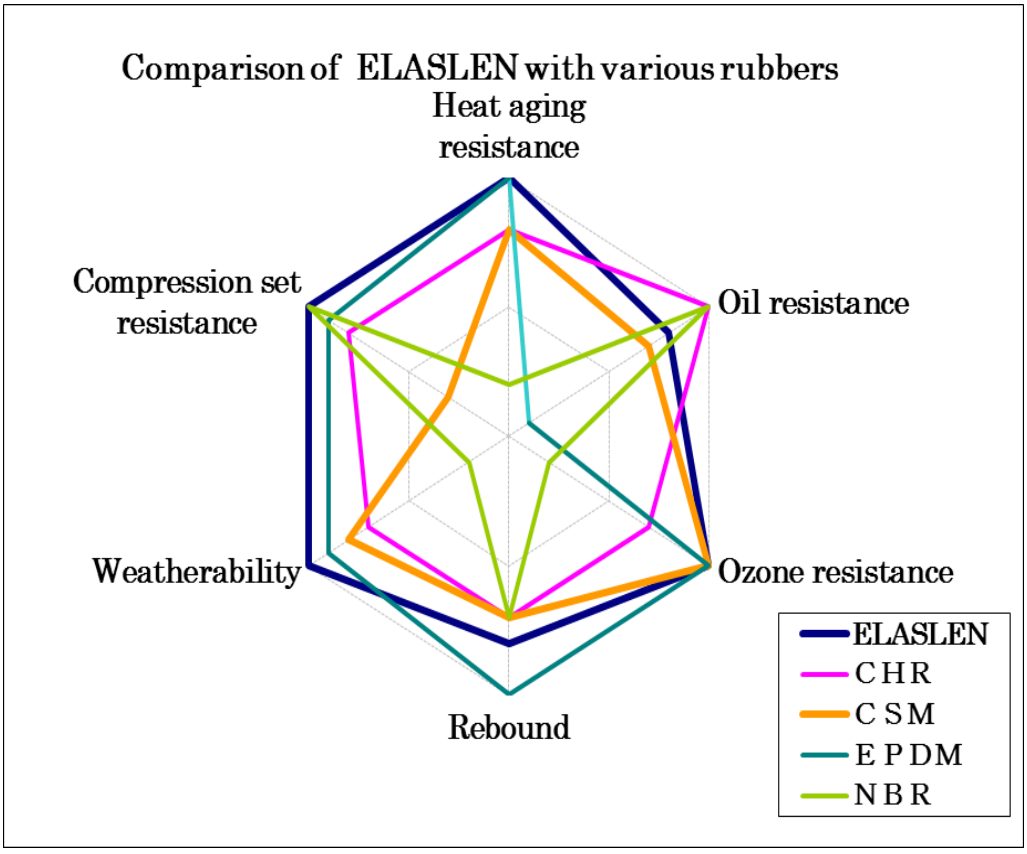
4) Bright color combinations (color product) are available.

5) Offers better ozone resistance than CHR.

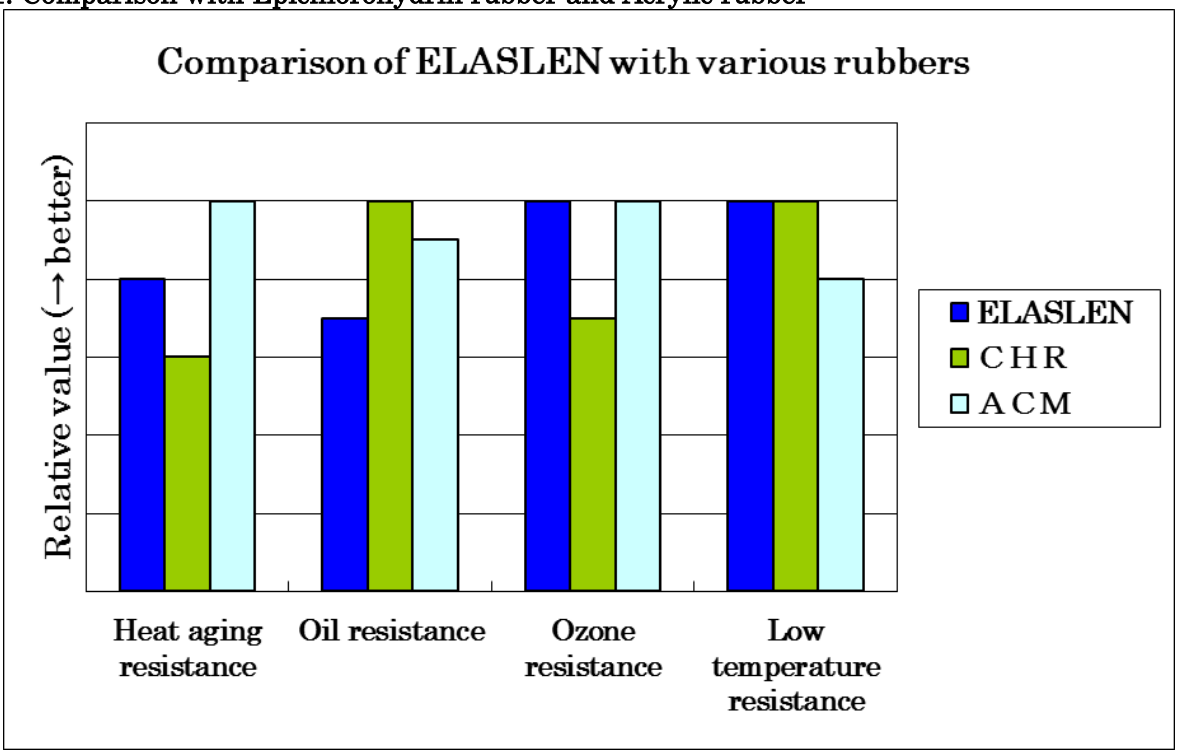
6) Can be vulcanized by either peroxides (better heat resistance and compression set resistance) or sulfur vulcanizing systems (steam vulcanization, good tear resistance at elevated temperature.)

7) Characteristics permit a variety of processing capability and easy handling.

8) Offers higher cost performance than CSM and CHR.



3-1. Comparison with Epichlorohydrin rubber and Acrylic rubber



ELASLEN offers better heat aging resistance and ozone resistance than Epichlorohydrin rubber (CHR) while offering a balance of characteristics similar to Acrylic rubber (ACM).

3-2. Comparison with Chlorosulfonated polyethylene (CSM)

- ELASLEN exhibits better heat aging resistance and compression set resistance.(Unlike heat-resistant CSM formulations, ELASLEN requires no lead stabilizer.)

- ELASLEN offers easy handling and improves processing efficiency.

- ELASLEN can be applied by peroxide cross-linking for excellent heat resistance.

		ELASLEN™	CSM
Rubber properties	Weatherability	○	△
	Vivid colors	○	○
	Heat resistance	○	△
	Low temperature resistance	○	△
	Oil resistance	○	○
	Compression set resistance	○	×
	Chemicals resistance	○	△
Processing properties	Tackiness	○	×
	Fast vulcanization	○	○
	Extrusion surface	○	△
	Scorch	○1)	△

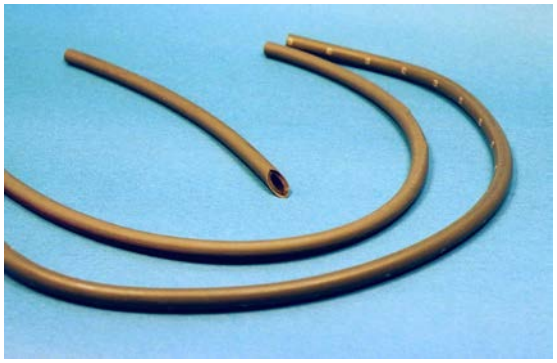
Vulcanization methods	Peroxide cross-linking 1)	○	△
	Organic sulfur vulcanization 2)	○	×
	Sulfur vulcanization	×	○

1) peroxide cross-linking
2) with a triazine derivative and an amine accelerator

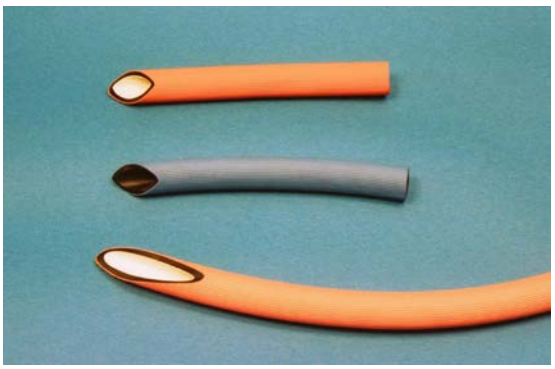
4. Applications and corresponding products

Field	Examples of applications	Corresponding products
Automotive hoses	Power steering hoses, Fuel tubes, Brake hoses	301AS,351AYS, 302NAC,402NA
Industrial hoses	LPG hoses, Chemicals resistant hoses	351AYS,401AY, 302NAC,402NA
Gaskets	Joint gaskets, Structure gaskets	401AY,402NA, 351AYS
Hand-rails	Vivid color hand-rails	351AYS
Seals	Various boots	EH689-DE
Rolls	Chemicals resistant rolls, OA rolls	301MA,301AS, 351AYS,401AY

Power steering hoses



Fuel tubes

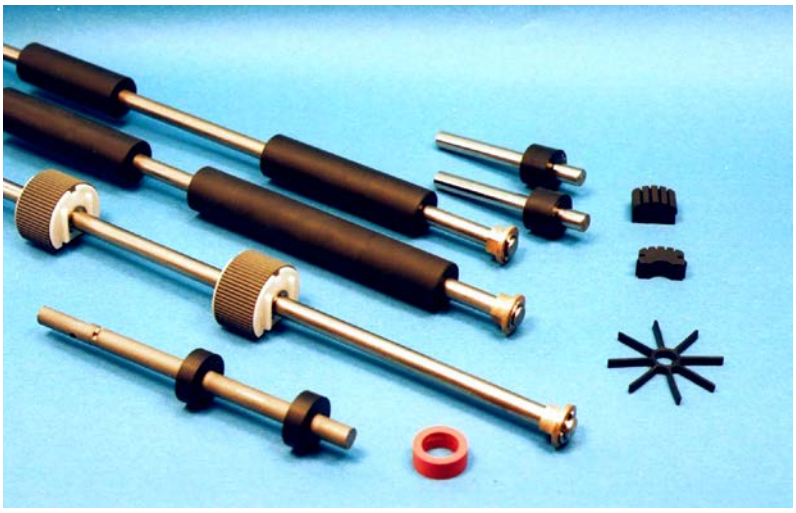


LPG hoses

Joint gaskets

Structure gaskets

Boots for automotives



OA rolls

5. Product forms

- Powder and Sheeted polymer

6. For more information:

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