



# Vanderbilt Chemicals, LLC

A Wholly Owned Subsidiary of R.T. Vanderbilt Holding Company, Inc.

## SCORCH INHIBITORS



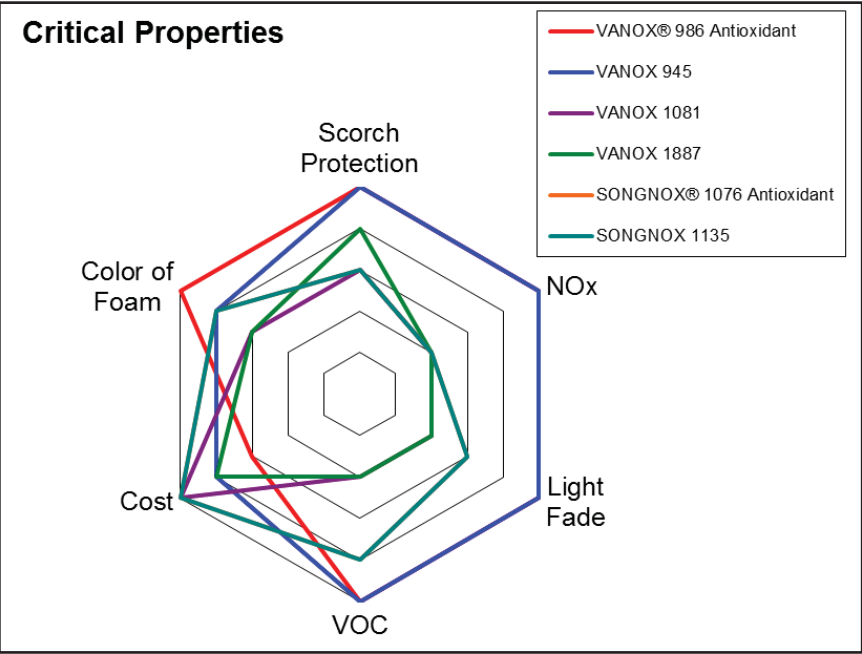
MORE TOOLS FOR  
YOUR TOOL BOX

Scorch Inhibitors for Polyurethane Foam

Vanderbilt Chemicals, LLC prides itself on being an industry leader in polyurethane scorch inhibitors. These materials, a class of antioxidants, reduce the degradation observed during polyurethane slab stock foam production.

Vanderbilt's liquid scorch inhibitors can often be added directly to the polyol co-polymer. These materials measurably decrease color deterioration and assists in the control of potential temperature runaway.

Vanderbilt also supplies a number of materials that can be used to ‘boost’ PU stabilization packages, especially during the hot and humid summer months.



Please contact Vanderbilt Chemicals, LLC for additional information on the products listed in this brochure.

Samples and technical information are available on request.

For a complete listing of Vanderbilt products, please visit [vanderbiltchemicals.com](http://vanderbiltchemicals.com).

**VANOX** is a registered trademark of R.T. Vanderbilt Holding Company, Inc. or its respective wholly owned subsidiaries.  
**SONGNOX** is a registered trademark of Songwon Industrial Co., Ltd.

	PLATINUM	GOLD	SILVER		BRONZE	
	VANOX® 986 Antioxidant	VANOX 945 Antioxidant	VANOX 1081 Antioxidant	VANOX 1887 Antioxidant	SONGNOX® 1076 Antioxidant	SONGNOX 1135 Antioxidant
Composition	antioxidant blend	antioxidant blend	p,p-diocetyl-di-phenylamine	mixed alkylated diphenylamines	octadecyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate	iso-octyl-3-(3,5-di-tert-butyl-4-hydroxyphe-nyl) propionate
Physical State	liquid	liquid	powder	liquid	powder	liquid
Color	clear amber	clear gold	off-white	clear	white	clear yellow
Density at 25°C, Mg/m³	0.97 - 1.01	0.97 - 1.01	1.01	0.96 - 1.00	1.01 - 1.03	0.97
Melting Temperature, °C	---	---	95 - 100	---	49.0	---
Critical Properties						
Scorch Protection	✓	✓	■	✓	■	■
NOx	✓	✓			■	■
Light Fade	✓	✓			■	■
Volatility	✓	✓	✓		✓	✓
Cost	■	✓	✓	✓	✓	✓
Color	✓	■			■	■
✓ Highly Effective ■ Recommended	VANOX 986 is a patent-pending, PTZ-free, superior scorch inhibitor for use in polyurethane slab stock foam production. The elimination of PTZ greatly decreases the risk of pink foam problems by eliminating potential chemical interactions and increasing light stability. Like other Vanderbilt liquid scorch inhibitors, <b>VANOX 986</b> is a process-friendly blend designed for easy transfer into polyol tanks.	VANOX 945 offers superior scorch protection when used in polyol, which allows for greater compound flexibility. It can be used to boost existing polyol inhibitor packages, especially during hot and humid summer months when scorch is a more prevelant issue. <b>VANOX 945</b> is less volatile than competitive products, which may improve air quality and fogging test results. <b>VANOX 945</b> is better at retarding color development when exposed to NOx, which results in less discoloration of foams, especially during long-term storage.	VANOX 1081 is a specially purified granular, aromatic amine antioxidant for nonstaining and non-discoloring applications, including high performance hot-melt urethanes and polyurethane polyol inhibitor packages.	VANOX 1887 is an effective supplemental liquid amine antioxidant recommended for use in flexible polyurethane foam formulations where scorch is an issue. It also is recommended as an economical replacement for conventional solid diphenylamine based antioxidants. This product typically is used in conjunction with hindered phenols by polyol manufacturers as their basic scorch inhibitor package.	SONGNOX 1076 is a primary antioxidant that inhibits scorch in polyurethane polyol. It provides long-term heat stability by protecting physical properties during storage and use of the end-product. This material can be used to boost existing polyol inhibitor packages, especially during hot and humid summer months when scorch is a more prevalent issue.	SONGNOX 1135 is a sterically hindered phenol that is a liquid at room temperature. It is a primary antioxidant that can be used in a wide range of polymers, including polyurethane polyols. It is an effective, non-discoloring stabilizer that provides excellent long-term stability.



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Vanderbilt Chemicals, LLC  
30 Winfield Street, P.O. Box 5150  
Norwalk, CT 06856-5150  
(203) 853-1400 Fax: (203) 838-6368  
E-Mail: [plastics@vanderbiltchemicals.com](mailto:plastics@vanderbiltchemicals.com)

Vanderbilt Chemicals, LLC  
6281 Beach Boulevard, Suite 204  
Buena Park, California 90621  
(714) 670-8084 Fax: (714) 739-1488  
E-Mail: [westcoastoffice@vanderbiltchemicals.com](mailto:westcoastoffice@vanderbiltchemicals.com)

[vanderbiltchemicals.com](http://vanderbiltchemicals.com)



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