

R.T. Vanderbilt Company, Inc. manufactures a variety of additives, antioxidants, and mineral fillers that are widely used by the Plastics Industry.

This brochure provides general information about these products. If more detailed information is required, please contact R.T. Vanderbilt Company's Rubber & Plastics Department.

ANTIOXIDANTS

VANOX® antioxidants are best known for their superior performance in polyethylene, polypropylene, polyvinyl chloride, polyurethane, nylon, ABS, EPDM, EPR and other resin systems.

VANOX GT Powder is a high molecular weight hindered phenol which provides exceptionally cost-effective protection to polyethylene, EPDM, and filled and unfilled polypropylene systems, especially when used with synergistic phosphites and thiodipropionates. **VANOX GT** Powder complies with 21 CFR 178.2010 (FDA) and can therefore be used in PE, PP and EPDM articles intended for food packaging.

VANOX ZMTI is a nondiscoloring and nonstaining antioxidant which is synergistic when used with other antioxidants in synthetic rubbers, particularly EPR and EPDM, and is finding increased use in plastics applications such as EVA.

VANOX 854 is used in polyethylene applications. It is an excellent processing stabilizer and a highly efficient antioxidant for long term heat aging applications.

VANOX 898 is specifically intended for use in talc-filled polypropylene formulations. It substantially diminishes the tendency of appearance grades of talc to discolor during processing. **VANOX 898** also controls melt flow and improves long-term heat aging characteristics.

VANOX 1001 is a general purpose liquid antioxidant composed of a mixture of alkylated diphenylamines. It is recommended for use in a wide variety of resin systems where moderate staining and discoloration are not critical.

VANOX 1030A is a one-package system combining primary and secondary antioxidants, which provides good long-term heat aging characteristics in polyethylene and polypropylene compounds.

VANOX 1081 is a specially purified granular aromatic amine antioxidant for many nonstaining and non-discoloring applications in adhesives, high performance hot-melt urethanes, and components of urethane polyol inhibitor packages. **VANOX 1081** complies with 21 CFR 177.2600 and 175.105 (FDA).

VANOX 1290 is a crystalline hindered phenol recommended as a BHT substitute in polyethylene, polypropylene, polystyrene, polyurethanes, PVC, ABS or EVA applications requiring a less volatile antioxidant. **VANOX 1290** complies with 21 CFR 178.2010 and 175.105 (FDA).

SCORCH INHIBITORS

VANOX 830 is a patented liquid antioxidant system specifically designed to replace conventional multi-component solid systems normally used in urethane polyols to reduce scorch. There is no need to heat the polyols since **VANOX 830** is quite miscible.

VANOX 945 is a patented nonvolatile, highly effective antioxidant system designed specifically for use by polyurethane polyol manufacturers as their anti-scorch system. It is significantly less fugitive in foams than systems containing BHT.

BACTERICIDE/FUNGICIDE

VANCIDE® biocides protect polymers against bacterial and fungal attack. They are highly effective in vinyl, polyethylene, polyurethane, etc.

VANCIDE 89 N-trichloromethylthio-4-cyclohexene-1,2-dicarboximide is a technical grade of captan used in vinyl, polyethylene and urethane. It also works well in outdoor wallpaper adhesive applications.

CONDUCTIVE CARBON BLACKS

ENSACO® carbon blacks provide high conductivity to originally insulating polymers at a very low loading. The unique combination of *high structure* and *low surface area*, produced in an ultra-clean production process, gives conductive carbon blacks with low grit, ash, sulfur and metal contents, excellent dispersion for smooth surface finishes, and a good balance of electrical and mechanical properties.

Grade	Surface Area BET Nitrogen m ² /g	Structure DBP Oil bsorption ml/100g	Conductivity
150 G&P*	50 (low)	165 (med.)	++
250 G	65 (low)	190 (high)	+++
260 G	70 (low)	190 (high)	++++
350 G	770 (v. high)	320 (v. high)	+++++

* G = Granules, P = Powder

MINERAL FILLERS

Wollastonite

VANSIL® wollastonite is a high brightness calcium silicate mineral used as a filler and reinforcing agent in thermoplastic and thermoset resins. The high aspect ratio grades contribute to increased mechanical strength and dimensional stability. Surface-treated wollastonite products are available under the **VANCOTE®** trade name.

	Median Particle Size	Oil Abs.	Aspect Ratio
Low Aspect Ratio Grades			
VANSIL W-40	6 µm	26	<5:1
VANSIL W-50	3 µm	30	<5:1
High Aspect Ratio Grades			
VANSIL WG	20 µm	40	15:1
VANSIL HR-2000	14 µm	44	14:1
VANSIL HR 1500	9 µm	44	14:1
VANSIL HR-325	2 µm	40	12:1

Talc

VANTALC® talc, available in a range of particle sizes, is used to reinforce polyolefins as well as other plastic, rubber and adhesive compounds.

	Median	Oil
	Particle Size	Absorption
VANTALC® 2500	19 µm	26
VANTALC 2000	10 µm	36
VANTALC 3500	9 µm	38
VANTALC 3100	8 µm	36
VANTALC 3000	7 µm	42
VANTALC 4500	4 µm	44
VANTALC 4000	4 µm	52
VANTALC F2504	4 µm	42
VANTALC R	3 µm	48
VANTALC PC	2 µm	37
VANTALC 6H	2 µm	55
VANTALC 6H-II	1 µm	55

Kaolin Clay

DIXIE CLAY® and McNAMEE® CLAY are air-floated kaolin clay fillers for plastics, rubber and adhesives.

	Median	Oil
	Particle Size	Absorption
DIXIE CLAY	0.2 µm	41
McNAMEE CLAY	1.2 µm	35

Pyrophyllite

PYRAX® pyrophyllite is an inexpensive filler used in resins, including vinyl and polypropylene.

	Median	Oil
	Particle Size	Absorption
PYRAX B	10 µm	26
PYRAX WA	14 µm	24
PYRAX ABB	11 µm	24

Polymer Stabilizers

Available in the **SONGWON BROCHURE** at www.rtvanderbilt.com/SongwonBooklet.pdf

Please contact us for further information on the Vanderbilt products described in this folder. Samples and Technical Data Sheets are available on request.

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VANOX® Antioxidant, VANCIDE® Fungicide and Bactericide VANSIL® Wollastonite, VANCOTE® Wollastonite, VANTALC® Mineral Filler, DIXIE CLAY® Clay, McNAMEE® Clay and PYRAX® Pyrophyllite are registered trademarks of R.T. Vanderbilt Company, Inc.

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