

**VEESICOL CHEMICAL CORPORATION**  
**ADMEX® POLYMERIC PLASTICIZERS**

- IMPROVED PERMANENCE ● SUPERIOR MIGRATION
- RESISTANCE ● EXTENDED LIFE OF FLEXIBLE ARTICLES
- EXPANDED PRODUCT APPLICABILITY ● SUPERIOR
- OUTDOOR WEATHERING PERFORMANCE ● SUPERIOR
- EXTRACTION RESISTANCE ● EXTREMELY LOW
- VOLATILITY ● IMPROVED PERMANENCE ● SUPERIOR
- MIGRATION RESISTANCE ● EXTENDED LIFE OF
- FLEXIBLE ARTICLES ● EXPANDED PRODUCT
- APPLICABILITY ● SUPERIOR OUTDOOR WEATHERING
- PERFORMANCE ● SUPERIOR EXTRACTION RESISTANCE

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60 S. Seiberling Street • Akron, Ohio 44305

# VELSICOL CHEMICAL CORPORATION

*Velsicol is a growing, global corporation focused on producing high performance specialty chemicals based on benzoic acid and cyclopentadiene that serve a variety of niche markets.*

*Top-selling products include a full line of specialty plasticizers ranging from innovative benzoate esters to high performance polymeric and monomeric. With such a broad line, we are able to serve the adhesives, caulks, sealants, coatings and PVC resins markets.*

*Velsicol also is proud to be the world's largest marketer of refined benzoic acid and derivatives. Our investments in this area ensure that you can expect only the highest quality derivatives and continual development of new products from Velsicol.*

*Cyclopentadiene is the basis for the third line of chemicals we manufacture. These derivatives are used in the production of flame retardants and agricultural pesticides.*

# Admex® Polymeric Plasticizers

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Admex® is a registered trademark of Velsicol Chemical Corporation.

## *Admex<sup>®</sup> Polymeric Plasticizers*

Velsicol's Admex<sup>®</sup> polymeric plasticizers offer permanence and migration resistance to PVC compound applications. Admex polymeric extend the life of flexible articles and expand product applicability into high performance environments. Because of their excellent migration resistance, Admex products are well-suited for applications such as vinyl electrical tape, appliance gaskets, labels, decals, vinyl foam and electrical wire insulation. Superior outdoor weathering performance is demonstrated by their wide use in automotive decorative decals. Admex polymeric's resistance to solvent extraction is employed in fuel lines, industrial mats and clothes, and printing rollers.

Chemically, Admex products range from aromatic to aliphatic and from branched to linear. In addition to their chemically varied performance attributes, the high molecular weight attained through polymerization dramatically increases their permanence. Admex polymeric plasticizers provide superior resistance to migration, volatilization and extraction and are available in molecular weights from 900 to 6,400.

### **Admex<sup>®</sup> 334F**

**Admex<sup>®</sup> 334F** is a polyester-type permanent plasticizer well-suited for critical uses where the PVC compound must be approved for food and food contact applications. It has been qualified and regulated by the Food and Drug Administration (FDA) under the indirect food additive section 21CFR 178.3740, 21CFR 175.300 and 21CFR 175.320.

Admex 334F is recommended for food packaging uses such as film, closures and cap liners. Admex 334F has extraction and migration resistance superior to monomeric plasticizers suitable for these applications.



# *Admex<sup>®</sup> Polymeric Plasticizers*

## **Admex<sup>®</sup> 409**

**Admex<sup>®</sup> 409** is a medium molecular weight polymeric plasticizer widely used in polyvinyl chloride and rubber formulations. It offers a good balance of plasticizing properties suitable for many applications and maintains excellent permanence of these properties in the finished goods. Admex 409 is an excellent plasticizer for wire and cable coatings offering good electrical properties, low odor, easy processing and good humidity stability. For film, tape and coated fabrics, Admex 409 offers compatibility, migration resistance to rubber, excellent oil and hexane resistance, and low volatility.

## **Admex<sup>®</sup> 429**

**Admex<sup>®</sup> 429** is a medium-to-high molecular weight polyester plasticizer. The product has low odor, processes easily and offers permanence; good low-temperature flexibility; excellent electrical properties; and outstanding migration resistance, humidity stability and resistance to oil and solvent extraction. Admex 429 fuses readily, even at temperatures below other polymeric.

Admex 429 shows excellent resistance to migration from PVC compositions to various rubbers and polystyrene copolymers, a property valuable in electrical insulation and refrigerator gasketing. This product also is an excellent plasticizer for making oil resistant, high temperature PVC wire and cable compounds. Admex 429 also is useful for plasticizing ethyl cellulose, nitrocellulose, acrylic caulking compounds, and adhesive systems based on polyvinyl acetate, styrene-butadiene and acrylic lattices.

## **Admex<sup>®</sup> 523**

**Admex<sup>®</sup> 523** is a low molecular weight polymeric plasticizer that is characterized by a mild ester odor and very light color. It imparts excellent processability to PVC compositions and is compatible with a wide variety of other polymers. Admex 523 provides good adhesion in metal coatings and imparts processability to engineering thermoplastics. It also has high gel strength in plastisols and low fusion temperatures.

## **Admex<sup>®</sup> 760**

**Admex<sup>®</sup> 760** is an ultra-high molecular weight, polymeric adipate. It is characterized by a mild ester odor and light color. It possesses maximum resistance to extraction, migration and volatility. Admex 760's high molecular weight makes it well-suited for solvent resistance in print rollers.

# Admex® Polymeric Plasticizers

## Admex® 770

Admex® 770 is a medium-to-high molecular weight polymeric based on a blend of adipic and phthalic acid. It is characterized by a mild ester odor and light color. It possesses excellent extraction resistance and weatherability which make it well-suited for exterior graphics. Its low migration into adhesives and extremely low volatility make it a superior product for decorative decals and for use in automotive instrument panels. Admex 770 also is compatible with nitrile rubber.

## Admex® 910-001

Admex® 910-001 is a medium molecular weight polymeric adipate that is characterized by a mild ester odor and light color. It possesses high permanence and low contribution to odor and taste in vinyl compounds. Combined with low migration to appliance coatings, resistance to hydrolysis and soapy water extraction, these properties make it a perfect candidate for refrigerator and dishwasher gaskets.

## Admex® 1723

Admex® 1723 is a medium-to-low molecular weight polymeric adipate. It is characterized by a mild ester odor and light color. It possesses outstanding processability in calendaring operations, allowing the production of high gloss sheeting. With its excellent permanence and printability, it is suitable for use in decorative graphics. It gives high permanence in single-ply roofing and is flexible in vehicle and furniture upholstery.

## Admex® 2632

Admex® 2632 is a medium-to-low molecular weight polymeric adipate that is characterized by a mild ester odor and light color. Additionally, Admex 2632 is non-extractable by lipids and is washable in plastics sheeting. It is highly permanent in tubing and equipment coatings.

Admex 2632 has been qualified and regulated by the FDA under the indirect food additive sections 21CFR 178.3740, 21CFR 175.300 and 21CFR 175.320.

## Admex® 6187

Admex® 6187 is a high molecular weight polymeric adipate characterized by a mild ester odor and very light color. It possesses excellent permanence, particularly to oil extraction, and is capable of producing vinyl compounds competitive with nitrile rubber for oil resistance. Admex 6187 has excellent extraction, oil and solvent resistance that make it ideal for applications such as gasoline hose and tubing, oil resistant electrical cable insulation, industrial boots, gloves and aprons. It is highly permanent and washable in wall and shelf coverings.

# *Admex<sup>®</sup> Polymeric Plasticizers*

## **Admex<sup>®</sup> 6985**

**Admex<sup>®</sup> 6985** is the standard against which all other polymeric plasticizers are compared. It is a high molecular weight polymeric adipate characterized by a mild ester odor and light color. It offers very low extractability, volatility and migration. Admex 6985 is chemically stable and extraction resistant in tank liners, highly permanent and printable in decorative decals; non-extractable from floor coverings; and non-volatile in automotive headrests.

## **Admex<sup>®</sup> 6996**

**Admex<sup>®</sup> 6996** is a low molecular weight polymeric adipate that is characterized by a mild ester odor and light color. It features excellent processability, low migration to pressure sensitive adhesives, printability and outstanding low temperature flexibility for a polymeric plasticizer. Admex 6996 also is non-volatile, flexible and non-migratory in electrical tape. Additionally, it is highly permanent in high temperature electrical environments. Its low viscosity makes it suitable for paper coatings and its high plasticizing efficiency gives soft, flexible fabric coatings.

## **Admex<sup>®</sup> P-27**

**Admex<sup>®</sup> P-27** is an intermediate molecular weight polymeric plasticizer intended for use in PVC compounds requiring excellent performance and durability. It is a high purity product intended for applications that require its excellent resistance to migration, high humidity compatibility, high dielectric properties, and non-fogging characteristics.



# Application Guide

## Admex® Polymeric Plasticizer Application Guide

	Admex 334F	Admex 409	Admex 429*	Admex 523	Admex 760	Admex 770	Admex 910-001	Admex 1723	Admex 2632	Admex 6187	Admex 6985	Admex 6996	Admex P-27
<b>Flexible PVC</b>													
Electrical Tape			◆		◆						◆	◆	◆
Plastisols	◆	◆	◆	◆						◆	◆	◆	
Sealants						◆		◆		◆	◆		
Inks										◆		◆	
Film & Sheeting	◆	◆	◆			◆		◆	◆	◆	◆		◆
Wire & Cable	◆	◆			◆						◆		
Foam				◆	◆								
Decals						◆		◆			◆		
Tubing & Hoses	◆	◆			◆				◆	◆			◆
FDA Approvals	◆								◆	◆			
Molding & Extrusions							◆				◆		
<b>Non-PVC</b>													
Rubber		◆				◆						◆	

\*Admex 429 is useful in other non-PVC applications including plasticizing ethyl cellulose, nitrocellulose, acrylic caulking compounds, and adhesive systems based on polyvinyl acetate, styrenebutadiene and acrylic lattices.



## *FDA Status*

Admex® 334F and Admex 2632 have been qualified and regulated by the FDA under the indirect food additive sections 21CFR 178.3740, 21CFR 175.300 and 21CFR 175.320.

*Additional regulatory information can be found in the Product Information Bulletin available for each Velsicol product.*

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VELSICOL CHEMICAL CORPORATION  
ADMEX® POLYMERIC PLASTICIZERS

*Velsicol has developed guidelines to help ensure the safe handling, storage and transportation of its products. Information is available through Storage and Handling guidelines and Material Safety Data Sheets. Should there be any questions or concerns about the use or handling of Velsicol products, contact the worldwide headquarters at (800) 843-7759 or fax to (847) 298-9014.*

*The information in this brochure is, to the best of our knowledge, true and accurate. The representations about the products are based on test results achieved under laboratory practices supervised and controlled by Velsicol Chemical Corporation. Since preparation or conditions of use of their formulations may vary, Velsicol is unable to guarantee the same performance as indicated. Nothing contained herein shall constitute a guarantee or warranty with respect to the products or its formulations' uses, nor does Velsicol assume any liability therefore. The user is responsible for determination of suitability of any material or practice for a specific purpose and for adoption of such safety precautions as may be necessary. Material Safety Data Sheets are available for Velsicol products mentioned in this brochure. Users of these products are urged to study and use the information in the Material Safety Data Sheets. Velsicol does not warrant against infringement of any patent which might arise by the use of Velsicol's products in any combination with other products or arising in the operation of any process.*

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