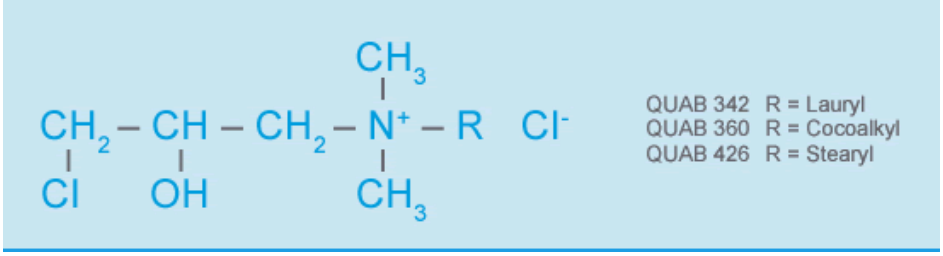
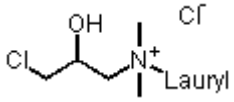
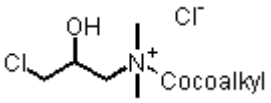
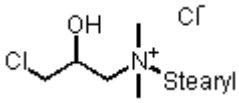
QUAB® Specialties (QUAB 342, QUAB 360 and QUAB 426)

QUAB Specialties QUAB 342, **QUAB 360** and **QUAB 426**
are the trade names for the solutions of the active substance
3-chloro-2-hydroxypropyl-alkyl-dimethylammonium chloride.

In these products, a methyl group within the quaternary ammonium group is substituted by a long-chain alkyl group (R = dodecyl-, cocoalkyl- or stearyl-). These products are delivered exclusively as chlorohydrins.



QUAB® Specialties - **Physical & Chemical data**

	QUAB 342	**QUAB 360**	**QUAB 426**
Empirical formula	$C_{17}H_{37}Cl_2NO$	$C_{13\text{-}23}H_{29\text{-}49}Cl_2NO$	$C_{17\text{-}32}H_{37\text{-}49}C_{12}NO$
Structural formula			
CAS.-No.	41892-01-7		3001-63-6
EINECS-No.	255-578-9		221-083-1
Molecular weight	approx. 342 g/mol	approx. 360 g/mol	approx. 426 g/mol
Appearance	clear liquid, colorless to light yellow		
Odor	practically odorless		
Density (20 °C)	1.0 g/cm³	1.0 g/cm³	1.0 g/cm³
Flash point (Abel-Pensky)			118 °C (244 °F)
Viscosity (20 °C)	approx. 60 mPas	approx. 80 mPas	approx. 230 mPas
Miscibility	miscible with water and polar organic solvents (e.g. methanol, ethanol, isopropanol, butanol,acetone, chlorinated hydrocarbons)		

QUAB 342 and **QUAB 360** are sold as aqueous solutions with total active weight concentrations of approx. 40 % (chlorohydrin).

QUAB 426 is sold as a solution in a 1,2-propanediol / water mixture with approx. 40 % weight concentration (chlorohydrin)

SKW QUAB Chemicals, Inc.

Park 80 West
250 Pehle Avenue, Suite 308
Saddle Brook, NJ 07663

Tel.: 201 556 0300
Fax: 201 556 0335

E-mail: info@quab.com
Internet: www.quab.com

QUAB® Specialties - **Storage**

Aqueous chlorohydrin solutions are stable and therefore storable at room temperature in a pH range of 2-6 for several years without any detectable loss of activity. At higher temperatures, the pH will be reduced over time. At storage temperatures below 20 °C (**QUAB 426**) and 10 °C (**QUAB 342** and **QUAB 360**), waxy like solids may crystallize from the solution.

QUAB® Specialties - **Materials for Transport & Storage**

Suitable Materials:

Stainless steel types, 316L and 316TI (DIN 1.4571) are basically suitable for transport containers but are recommended for storage only with restrictions. Pickling of containers and pipes with attention to welds is mandatory. These materials are subject to pitting after prolonged periods of contact and at elevated temperatures. However, since transport containers are not subject to prolonged contact, these materials may be used for **QUAB Specialties**. Plastic containers may be used in all cases.

Quab recommends a coating for storage tanks made of stainless steel types, 316L and 316TI (DIN 1.4571). Alternatively, fibre reinforced plastic tanks or other coated storage containers may be used. Suitable materials for **QUAB Specialties** include polyester, polyethylene, PVC, heat cured phenolic resins or epoxy resins, neoprene, Buna S and Buna N. Enameled containers and tanks may also be used. Any damage in the coating must be repaired.

Unsuitable Materials:

For **QUAB Specialties**, containers made of boiler plate H II, aluminum (99.5) and stainless steel types, 304L and 321 (DIN 1.4541) are unsuitable. Test samples of stainless steel types, 304L and 321 (DIN1.4541) show pitting.

QUAB® Specialties - **Packaging**

	Content	**QUAB 342**	**QUAB 360**	**QUAB 426**
PE-drums	200 kg	✓	✓	✓
IBC	1000 kg	✓	✓	—

Products listed herein are sold under applicable laws and regulations.
Sale of some products may be prohibited in certain areas.

SKW QUAB Chemicals, Inc.

Park 80 West
250 Pehle Avenue, Suite 308
Saddle Brook, NJ 07663

Tel.: 201 556 0300
Fax: 201 556 0335

E-mail: info@quab.com
Internet: www.quab.com

QUAB® Specialties - **Specifications**

	QUAB 342	QUAB 360	QUAB 426
Chlorohydrin content	≥38 %	≥38 %	≥38 %
Epoxide content	≤500 ppm	≤500 ppm	≤500 ppm
Active content* (as chlorohydrin)	≥38 %	≥38 %	≥38 %
Glycol content**	≤2.5 %	≤2.5 %	n.s.
Epichlorohydrin(ECH)	≤10 ppm	≤10 ppm	≤50 ppm
1,3-Dichloropropanol	≤100 ppm	≤100 ppm	≤1000 ppm
pH***	2 - 6	2 - 6	2.5 - 6.5
Additional information (not part of the specifications)			
Water	55 - 58 %	55 - 58 %	29 - 31 %
1,2-Propanediol	—	—	23 - 28 %

* Epoxide and chlorohydrin together amount to the active content
** QUAB-glycol is inert in cationization reactions
*** Undiluted solution
n.s. not specified

QUAB® Specialties - **Specifications**

For detailed safety, handling and toxicology information see the corresponding material safety data sheets, which are available upon request!

The substances are corrosive to the eyes and irritating to the skin. Basically the same safety measures for **QUAB 188** and **QUAB 151** apply to the **QUAB Specialties**.

QUAB 342, **QUAB 360** and **QUAB 426** are toxic to fish. Precautions must therefore be taken to prevent this product and its by-products from entering the aquatic environment.

The QUAB specialty products have not only cationic but also surface-active properties which are attributable to the long-chain alkyl groups. The dodecyl, cocoalkyl or stearyl groups lend hydrophobic (lipophilic) properties to the polymers modified by these QUAB reagents. This may cause foam formation when aqueous solutions are handled, particularly if there is strong mechanical agitation.

SKW QUAB Chemicals, Inc.

Park 80 West
250 Pehle Avenue, Suite 308
Saddle Brook, NJ 07663

Tel.: 201 556 0300
Fax: 201 556 0335

E-mail: info@quab.com
Internet: www.quab.com