

CHEMICAL PROFILE

VINYL CHLORIDE

June 5, 1995

PRODUCER	CAPACITY*
Borden, Geismar, La.	950
Dow, Freeport, Tex.	1,835
Dow, Plaquemine, La.	1,300
Formosa, Baton Rouge, La.	1,300
Formosa, Point Comfort, Tex.	800
Geon, LaPorte, Tex.	1,650
Georgia Gulf, Plaquemine, La.	1,260
OxyChem, Deer Park, Tex.	1,100
OxyMar, Ingleside, Tex.	1,400
PPG, Lake Charles, La.	650
Vista, Lake Charles, La.	920
Westlake, Calvert City, Ky.	1,000
Total.....	14,165

*Millions of pounds per year of vinyl chloride monomer (VCM). Borden has two facilities—an ethylene-based and an acetylene-based—at Geismar. Dow started a second 925-million-pound plant at Freeport in third quarter 1994. It boosted capacity at its other Freeport plant, and will expand at Plaquemine by mid-1995. Geon will add 800 million pounds by 1996. Georgia Gulf plans to boost its capacity to 1.6 billion pounds over the next two years by adding new reactor technology. OxyMar, a 50-50 joint venture of OxyChem and Marubeni, will increase capacity to more than 2.1 billion pounds per year by mid-1997. PPG, which formed a joint production company with Vista in 1995, will raise capacity at Lake Charles to 1.15 billion pounds by first quarter 1997. Profile last published 5/4/92; this revision 6/5/95.

DEMAND

1994: 14.5 billion pounds; **1995:** 15.2 billion pounds; **1999:** 18 billion pounds (Includes exports, which were 1.64 billion pounds in 1993, but not imports, which were 51 million pounds. In many cases, operating rates are exceeding nameplate capacities.)

GROWTH

Historical (1985-1994): 5 percent per year; **future:** 4 to 5 percent per year through 1999.

PRICE

Historical (1981-1995): High, 28c. per pound, polymer grade, tanks, f.o.b. works, list; low, 13.5c. per pound, same basis. **Current:** 26c. to 27c. per pound, same basis.

USES

Polyvinyl chloride (PVC), 98 percent; miscellaneous, including polyvinylidene chloride and chlorinated solvents, 2 percent.

STRENGTH

VCM demand is heavy due to strong production of PVC, particularly in Asia. Profitability is leading US producers to boost VCM capacity to cover rising PVC demand. Operating rates for VCM are about 6 to 7 percent higher than for PVC.

WEAKNESS

Current VCM supplies in the US are not high enough to cover worldwide demand. Ethylene dichloride (EDC) capacity is not rising as fast as VCM capacity, which could lead to a potential shortage in feedstock. Use of chlorinated solvents is declining, but inevitably won't have much effect on the overall market.

OUTLOOK

Most VCM will continue as captive material in the US. The market will continue to grow due to good profit margins for PVC. Environmental pressures, specifically for chlorine, will be the wild card in the future of the PVC chain.

n-Vinylcaprolactam

International Specialty Products Inc.

Calvert City, Kentucky

N-Vinylcarbazole

Polysciences, Inc.

Warrington, Pennsylvania

Vinyl chloride-ethylene copolymer resins (See: Ethylene-vinyl chloride copolymer resins under Plastics and Resins)**Vinyl chloride monomer**Percent of
Regional Capacity

Dow Chemical U.S.A.

21%

Formosa Plastics Corporation U.S.A.

15%

The Geon Company

12%

Oxymer

10%

Note: This table lists the companies responsible for the top fifty percent of nameplate capacity in the United States. See the same-named product below for the complete listing of producers and plant locations.

Source: SRI Consulting estimates as of January 1, 1996.

Vinyl chloride monomer (Chloroethylene) (VCM) (Ethylene chloride)Borden Chemicals and Plastics
Operating Limited Partnership

Geismar, Louisiana

CONDEA Vista Company
Olefins and Vinyl Division

Lake Charles, Louisiana

Dow Chemical U.S.A.

Oyster Creek, Texas

Plaquemine, Louisiana

Baton Rouge, Louisiana

Point Comfort, Texas

La Porte, Texas

Plaquemine, Louisiana

The Geon Company

Georgia Gulf Corporation

Occidental Chemical Corporation

Polymers & Plastics Group

Vinyls Division

Deer Park, Texas

Ingleside, Texas

Oxymer

PPG Industries, Inc.

Chemicals Group

Lake Charles, Louisiana

Westlake Monomers Corporation

Calvert City, Kentucky

Vinyl chloroformate

Carcolabs, Inc.

Bethany, Connecticut

Vinyl cyanide (See: Acrylonitrile)**4-Vinyl-1-cyclohexene** (Butadiene dimer) (4-Ethenyl-1-cyclohexene) (1,2,3,6-Tetrahydrostyrene)Union Carbide Corporation
Specialty Chemicals Division

Institute, West Virginia

Vinyldimethylchlorosilane

Hüls America Inc.

Theodore, Alabama

Vinyl ester resins (See: Plastics and Resins)**Vinyl ethyl ether** (See: Ethyl vinyl ether)**Vinyl fluoride** (Fluoroethylene)

DuPont

DuPont Chemicals

DuPont Fluoroproducts

Louisville, Kentucky

Vinylidene chloride monomer (1,1-Dichloroethylene)

Dow Chemical U.S.A.

Freeport, Texas

PPG Industries, Inc.

Chemicals Group

Lake Charles, Louisiana

Vinylidene fluoride (See: 1,1-Difluoroethylene)**Vinyl isobutyl ether** (See: Isobutyl vinyl ether)**Vinyl magnesium bromide**

Boulder Scientific Company

Mead, Colorado

SP Fine Chemicals Inc.

Columbus, Ohio

Vinylmethyldichlorosilane

Hüls America Inc.

Theodore, Alabama

Vinyl methyl ether (See: Methyl vinyl ether)**5-Vinyl norbornene** (VBCH)Union Carbide Corporation
Specialty Chemicals Division

Institute, West Virginia

2-Vinylpyridine

Reilly Industries, Inc.

Indianapolis, Indiana

4-Vinylpyridine

Reilly Industries, Inc.

Indianapolis, Indiana

Vinyl pyridine latex (See: Styrene-butadiene-2-vinylpyridine latex under Elastomers)**1-Vinyl 2-pyrrolidinone** (See: 1-Vinyl-2-pyrrolidinone)**1-Vinyl 2-pyrrolidinone- α -olefins copolymer**

International Specialty Products Inc.

Calvert City, Kentucky

1-Vinyl-2-pyrrolidinone-styrene copolymer resins (See: Plastics and Resins)**1-Vinyl-2-pyrrolidinone-vinyl acetate copolymer**

International Specialty Products Inc.

Calvert City, Kentucky

1-Vinyl-2-pyrrolidinone (1-Vinyl 2-pyrrolidinone)

BASF Corporation

Chemicals Division

Chemical Intermediates

International Specialty Products Inc.

Geismar, Louisiana

Calvert City, Kentucky

Texas City, Texas

Vinyl resins (unspecified) (See: Plastics and Resins)**Vinyltoluene** (Methylstyrene)

Deltach Corporation

Baton Rouge, Louisiana

p-Vinyltoluene (See: p-Methylstyrene)**Vinyl toluene-acrylic copolymer resins** (See: Plastics and Resins)**Vinyl toluene copolymer resins** (See: Plastics and Resins)**Vinyltriacetoxysilane**

United Chemical Technologies, Inc.

Bristol, Pennsylvania

Vinyltriethoxysilane (Triethoxyvinylsilane)

(Triethoxyvinylsilane)

Hüls America Inc.

Theodore, Alabama