

**Concise Encyclopedia of  
Industrial Chemical  
Additives**

# **Concise Encyclopedia of Industrial Chemical Additives**

**Compiled by  
Michael and Irene Ash**

*Contains over 18,000 entries  
for chemical trademark products  
currently sold throughout the world*

**Edward Arnold**

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## Preface

This single-volume edition of the Encyclopedia of Industrial Chemical Additives contains extensive format and data revisions. It is the most current source of data on chemical trademark products available in printed form. It is the only reference that classifies additive products by function, major chemical component, and manufacturer.

This new Encyclopedia focuses on chemicals that provide functional enhancements to the properties of various end products, e.g., absorbents, antioxidants, antistats, corrosion inhibitors, enzymes, lubricants, tackifiers, thickeners, water repellents. It features expanded definitions for product entries, identification of new CAS numbers and CTFA names, and approximately 20% new product entries. Discontinued trademark products have been deleted, and product-source names and address changes are reflected.

What makes this reference unique and especially useful for anyone doing chemical research is the inclusion of cross references to chemical component, function, and manufacturer.

The book is divided into four sections:

Part I—CHEMICAL TRADENAMES DICTIONARY contains an alphabetical listing of over 18,000 additive tradename product entries that have been gathered from over 700 manufacturer sources. Each entry references its manufacturer and contains information about its chemical composition, ionic nature, applications, color, odor, form, solubility, specific gravity, pH, active ingredients, etc.

Part II—CHEMICAL COMPONENT CROSS REFERENCE contains an alphabetical listing of the major chemicals contained within the trademark products listed in Part I. Each entry is followed by the tradename product(s) that contain this chemical. Wherever possible, the synonyms, CAS (Chemical Abstract Service Registry) numbers, RD (Recognized Disclosure) numbers, and CTFA (Cosmetic, Toiletry, and Fragrance Association) adopted names for the chemical entry are included. This provides the user with the capability of finding tradename additive products that contain specific chemical compounds. For example, by locating alphabetically the chemical *dioctyl phthalate*, the user is able to retrieve an alphabetical list of all the tradename products that contain that chemical. The user can then refer back to the first section for detailed descriptions of the specific tradename products listed here.

Part III—A FUNCTIONAL CLASSIFICATION OF TRADENAMES contains an alphabetical listing of major chemical functional categories such as antimicrobial, lubricant, solvent, tackifier, uv absorber, etc. Each heading is followed by an alphabetical listing of the tradename products that perform that function.

Part IV—CHEMICAL MANUFACTURERS' DIRECTORY contains all the manufacturers of products referenced in this work. This edition includes telephone and fax numbers where possible and an alphabetical listing of all the product lines that are attributed to each manufacturer.

This book is the culmination of many years of research. We are especially grateful to Roberta Dakan for her skill and dedication in the development and maintenance of this tradename database resource. Her talent and persistence have been instrumental in the production of this reference work.

M. & I. Ash

## NOTE

The information contained in this series is accurate to the best of our knowledge; however, no liability will be assumed by the publisher for the correctness or comprehensiveness of such information. The determination of the suitability of any of the products for prospective use is the responsibility of the user. It is herewith recommended that those who plan to use any of the products referenced seek the manufacturer's instructions for the handling of that particular chemical.

Unless otherwise specified, when the temperatures are not given for properties such as viscosity, density, solubility, etc., a standard temperature of 25 C is to be assumed.

## **OTHER BOOKS BY MICHAEL AND IRENE ASH**

**A Formulary of Paints and Other Coatings, Volumes I and II**

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**Vol. VI, What Every Chemical Technologist Wants to Know About...Polymers and Plastics**

**The Condensed Encyclopedia of Surfactants**

**Chemical Products Desk Reference**

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# ABBREVIATIONS

@	.....at
ABS	.....acrylonitrile-butadiene-styrene
absorp.	.....absorption
act.	.....active
adsorp.	.....adsorption
AEB	.....average extent of burning
agric.	.....agricultural
a.i.	.....active ingredient
anhyd.	.....anhydrous
APHA	.....American Public Health Association
applic(s).	.....application(s)
aq.	.....aqueous
ASTM	.....American Society for Testing and Materials
ATB	.....average time of burning
aux.	.....auxiliary
avail.	.....available
avg.	.....average
BHA	.....butylated hydroxyanisole
BHT	.....butylated hydroxytoluene
biodeg.	.....biodegradable
bk., blk.	.....black
BMC	.....bulk molding compound
b.p.	.....boiling point
BR	.....butadiene rubbers, polybutadienes
br., brn.	.....brown
brnsh.	.....brownish
B/S	.....butadiene-styrene
C	.....degrees Centigrade
CAB	.....cellulose acetate butyrate
cap	.....capillary
CAS	.....Chemical Abstracts Service
CC	.....closed cup
cc	.....cubic centimeter(s)
CCl <sub>4</sub>	.....carbon tetrachloride
char.	.....characteristic
cm	.....centimeter(s)
cm <sup>3</sup>	.....cubic centimeter(s)
CMC	.....carboxymethylcellulose
COC	.....Cleveland Open Cup
compd.	.....compound
compr.	.....compression
conc.	.....concentrated, concentration
cps	.....centipoise(s)
CR	.....chloroprene rubber, polychloroprene
cryst.	.....crystalline
cs or cSt	.....centistoke(s)
CTFA	.....Cosmetic, Toiletry and Fragrance Association
DEA	.....diethanolamine, diethanolamide
decomp.	.....decomposes
DEG	.....diethylene glycol
dens.	.....density



deriv.	derivative(s)
dg	decigram(s)
diam	diameter
dielec	dielectric
disp.	dispersible, dispersion
dist.	distilled
distort.	distortion
dk	dark
DOT	Department of Transportation
EDTA	ethylene diamine tetraacetic acid
elec.	electrical
elong.	elongation
EO	ethylene oxide
EP	extreme pressure
EPDM	ethylene-propylene-diene rubbers
EPM	ethylene-propylene rubbers
equip.	equipment
ESCR	environmental stress crack resistance
esp.	especially
EVA	ethylene vinyl acetate
exc.	excellent
F	degrees Fahrenheit
FDA	Food and Drug Administration
FFA	free fatty acid
flam.	flammable, flammability
flex.	flexural
f.p.	freezing point
ft	foot, feet
F-T	Fischer-Tropsch
G	giga
g	gram(s)
G-H	Gardner-Holdt
gal	gallon(s)
gr.	gravity
gran.	granules, granular
grn.	green
GRP	glass-reinforced polyester
h	hour(s)
HAF	high abrasion furnace carbon black
HB	horizontal burning
HCl	hydrochloric acid
HDPE	high-density polyethylene
Hg	mercury
HLB	hydrophilic lipophilic balance
hyd.	hydroxyl
hydrog.	hydrogenated
i.b.p.	initial boiling point
IIR	isobutylene-isoprene rubber
in.	inch(es)
incl	including

indent.	indentation
ingred.	ingredient(s)
inj.	injection
insol.	insoluble
IPA	isopropyl alcohol, isopropanol
IPM	isopropyl myristate
IPP	isopropyl palmitate
IR	isoprene rubber (synthetic)
J	joule
k	kilo
kg	kilogram(s)
l	liter(s)
lb	pound(s)
LDPE	low-density polyethylene
liq.	liquid
LLDPE	linear low-density polyethylene
lt	light
M	mega
m	milli or meter(s)
max.	maximum
MDA	methylene dianiline
MDI	methylene diphenylene isocyanate
MEA	monoethanolamine, monoethanolamide
med.	medium
MEK	methyl ethyl ketone
mfg.	manufacture
mg	milligram(s)
MIBK	methyl isobutyl ketone
MIL	Military Specifications
min	minute(s), mineral, minimum
MIPA	monoisopropanolamine, monoisopropanolamide
misc.	miscible
mixt.	mixture(s)
ml	milliliter(s)
mm	millimeter(s)
mN	millinewton(s)
mod.	moderately
m.p.	melting point
MT	medium thermal
m.w.	molecular weight
nat.	natural
NBR	nitrile-butadiene rubber
NC	nitrocellulose
NCR	nitrile-chloroprene rubber
NF	National Formulary
no.	number
nonflam.	nonflammable
NR	isoprene rubber (natural)
NV	nonvolatiles
OC	open crucible

org.	organic
o/w	oil-in-water
Pa	Pascal
PAN	polyacrylonitrile
PC	polycarbonate
pcf	pounds per cubic foot
PEEK	polyetheretherketone
PEG	polyethylene glycol
PET	polyethylene terephthalate
petrol	petroleum
pH	hydrogen-ion concentration
phr	parts per hundred of rubber or resin
pkg.	packaging
PMCC	Pensky-Martens closed cup
PO	propylene oxide
POE	polyoxyethylene
POP	polyoxypropylene
powd.	powder
PP	polypropylene
PPG	polypropylene glycol
PPS	polyphenylene sulfide
pract.	practically
prep.	preparation(s)
prod.	product(s), production
PS	polystyrene
psi	pounds per square inch
pt	point
PTFE	polytetrafluoroethylene
PU	polyurethane
PVAc	polyvinyl acetate
PVAL	polyvinyl alcohol
PVC	polyvinyl chloride
PVDC	polyvinylidene chloride
PVDF	polyvinylidene fluoride
PVF	polyvinyl fluoride
quat.	quaternary
R&B	Ring & Ball
RD	Recognized Disclosure
rdsh.	reddish
ref	refractive
resist	resistivity
resp.	respectively
RIM	reaction injection molded/molding
rpm	revolutions per minute
R.T.	room temperature
s	second(s)
SAN	styrene-acrylonitrile
sapon	saponification
sat.	saturated
S/B	styrene/butadiene

SBR	styrene-butadiene rubber
SCR	styrene-chloroprene rubber
SE	self-emulsifying
sec.	secondary
sm.	small
SMC	sheet molding compound
soften.	softening
sol'n.	solution
sol.	soluble, solubility
solid.	solidification
solv(s)	solvent(s)
sp.	specific
spec.	specification
std.	standard
Stod.	Stoddard solvent
str.	strength
surf.	surface
SUS	Saybolt Universal Seconds
syn.	synthetic
t.	tertiary
TCC	Taggart closed cup
TDI	toluene diisocyanate
TEA	triethanolamine
tech.	technical
temp.	temperature
tens.	tension or tensile
tert.	tertiary
THF	tetrahydrofuran
thru	through
typ.	typical
UL	Underwriter's Laboratory
unsat.	unsaturated
USP	United States Pharmacopeia
uv	ultraviolet
VA	vinyl acetate
veg.	vegetable
visc.	viscous, viscosity
vol.	volume
wh.	white
w/o	water-in-oil
wt.	weight
yel.	yellow
ysh.	yellowish
#	number
%	percent
<	less than
>	greater than
≈	approximately

# A

A-1. [Monsanto] N,N'-diphenylthiourea (thiocarbamide); primary accelerator for latex and repair stocks, CR, CR latex, and EPDM sponge compds.; powd.

AA. [PMC] Anthranilic acid; antioxidant for fats, greases, lube oils, and polyamides; sludge preventative in furnace and lube oils; chelating agent and sequestant; corrosion inhibitor; stabilizer of can lacquers, oils, and lubricants; cream cryst. or powd.; m.p. 147 C min.; 0.5 g dissolves in 100 ml water, 28 g dissolves in 100 ml methanol; 99% min. purity.

AA-81C. [Dover] Tetrachlorobutyl alcohol; reactive flame retardant for highly resilient and rigid PUF for pour-in-place applic.; Gardner 18 liq.; sp.gr. 1.51; visc. 30 cps; 65% chlorine.

AA Standard. [CasChem] Castor oil; emollient for industrial applics. where lt. color, high purity, and low acidity are desirable; sol. in alcohols, esters, ethers, ketone, and aromatic solvs.

AA USP. [CasChem] Castor oil; emollient for cosmetic and pharmaceutical purposes; sol. see AA Standard.

Aastar. [Am. Cyanamid/Ag] Phorate (15.00%) and flucythrinate (0.75%); soil and systemic insecticide for corn; restricted use.

AB. [Angus] 2-Amino-1-butanol; pigment dispersant, neutralizing amine, corrosion inhibitor, acid-salt catalyst, pH buffer, chemical and pharmaceutical intermediate, solubilizer; m.w. 89.1; water-sol.; m.p. -2 C; b.p. 178 C; flash pt. 193 F (TCC); pH 11.1 (0.1M aq. sol'n.).

Abate® 1-SG, 2-CG, 4-E, 5CG. [Am. Cyanamid/Ag] Temephos; gran. and emulsifiable conc. herbicide for control of mosquito larvae in standing water, ponds, etc.; 1, 2, 44.6, and 5% act. resp.

Abil® 10-10000. [Goldschmidt] Polydimethyl siloxanes; nonionic; conditioner for skin and hair care, sunscreens, tanning creams, or lotions; aftershave, aerosol preparations; liq.; 100% act.

Abil® AV 20-1000, AV 8853. [Goldschmidt] Phenylmethyl polysiloxanes; nonionic; conditioner for skin and hair care, sunscreen, tanning creams or lotions; aftershave, aerosol preparations; liq.; 100% act.

Abil® B 8. [Goldschmidt] Polysiloxane polyether copolymer; nonionic; surfactant, conditioner used in hair care prods., deodorants, antiperspirants, creams, and lotions; liq.; water-sol.

Abil® B 8839. [Goldschmidt] Decamethyl cyclopentasiloxane; nonionic; conditioner for hair care prods., aerosols, sticks, shaving preparations, deodorants,

antiperspirants; liq.; 100% act.

Abil® B 8842, B 8843, B 8851, B 8852, B 8863, B 8873. [Goldschmidt] Dimethicone copolyol; nonionic; surfactant, conditioner used in personal care prods.; emollient for hair and skin care prods., aerosol shaving lather, perfumes and colognes; liq.; water-sol.; 100% conc.

Abil® B 9800, B 9801. [Goldschmidt] Polysiloxane polyalkylene copolymer; nonionic; emollient in cosmetic creams and lotions; spreading agent; used in pigmented prods. and nonaq. systems; liq.; oil-sol. (B 9800); 100% conc.

Abil® B 9905, B 9907, B 9908, B 9909. [Goldschmidt] Polysiloxane polydimethyl dimethylammonium acetate copolymer; cationic; conditioner used in hair and skin prods.; liq.; 30% conc.

Abil® B 9806. [Goldschmidt] Cetyl dimethicone copolyol; surfactant, emollient for creams and lotions; emulsifier for cyclomethicone.

Abil® B 9950. [Goldschmidt] Dimethicone propyl PG-betaine; amphoteric; silicone surfactant, conditioner; used in hair and skin care prods.; liq.; 30% conc.

Abil® B 88183. [Goldschmidt] Dimethicone copolyol; nonionic surfactant used as foam formers and providing lubricating and gloss properties; refatting agent for skin prods.; increases slip in shaving creams; also for shampoos, shower gels, hand cleaners, aerosols, antiperspirants; lt. yel. liq.; sol. in water, alcohol, 1,2-propylene glycol; sp.gr. 1.024; visc.  $95 \pm 15 \text{ mm}^2 \text{ s}^{-1}$ ; cloud pt.  $71 \pm 3 \text{ C}$  (4% aq.); ref. index 1.375; surf. tens.  $34.5 \text{ mN} \cdot \text{m}^{-1}$  (1% aq.); 35% act.

Abil® K 4. [Goldschmidt] Octamethyl cyclotetrasiloxane; nonionic; emollient, conditioner used in hair care prods., aerosols, shaving preparations, deodorants, antiperspirants; liq.; 100% act.

Abil® Quat 3270, 3272. [Goldschmidt] Quaternium-80; cationic; conditioner, antistat for shampoos and hair rinses; also refatting agent for skin cleansers; amber clear liqs.; sol. in water, alcohol, 1,2-propylene glycol, glycerol; sp.gr. 1.014 and 1.008 resp.; visc.  $400 \pm 100$  and  $1000 \pm 200 \text{ mm}^2 \text{ s}^{-1}$  resp.; flash pt. 90 C; ref. index 1.443 and 1.429 resp.; pH  $7.2 \pm 1$  (30% aq.); surf. tens.  $31.5 \pm 2$  and  $44 \pm 2 \text{ g/cm}^2$  resp.;  $50 \pm 1\%$  act.

Abil® S201, S255. [Goldschmidt] Dimethicone thio-sulfate; conditioner and setting lotion; improves gloss and sheen of shampoos and conditioners.

Abil® Wax 2434. [Goldschmidt] Stearoyl dimethicone; nonionic; wax improving applic. and skin care

- properties of emulsions; spreading and emollient properties for protection against aq. media; water barrier for creams and lotions; pale yel. liq. > 40 C; waxy < 10 C; sol. in cyclomethicone, min. oil, IPM, sunflower seed oil; sp.gr. 0.88 (35 C); m.p. 25 C; pour pt. 20–30 C; flash pt. > 100 C; 100% act.
- Ablil®-Wax 2440.** [Goldschmidt] Behenoxy dimethicone; nonionic; wax improving applic. and skin care properties of emulsions; spreading and emollient properties for protection against aq. media; reduces whitening during applic. of creams and lotions; pigment solubilizer; pale yel. waxy solid; disp. in min. oil, IPM, sunflower seed oil; sp.gr. 0.90 (50 FC); m.p. 35 C; pour pt. 30–35 C; flash pt. > 100 C; 100% act.
- Ablil®-Wax 9800.** [Goldschmidt] Stearyl dimethicone; nonionic; wax improving color, luster, and spreadability of pigmented prods.; spreading, penetrating, and emollient properties for skin care prods.; wh. waxy liq.; sol. in min. oil, IPM, sunflower seed oil; sp.gr. 0.86 (35 C); pour pt. 20 C; flash pt. > 40 C; 100% act.
- Ablil®-Wax 9801.** [Goldschmidt] Cetyl dimethicone; nonionic; wax providing emolliency and applic. benefits for antiperspirants; pigment solubilizer; also for skin care prods.; pale yel. liq. wax; sol. in cyclomethicone, min. oil, IPM, sunflower seed oil; sp.gr. 0.86; pour pt. 10 C; flash pt. 40 C; 100% act.
- Ablil®-Wax 9809.** [Goldschmidt] Stearyl methicone; wax providing water barrier for night creams and protective lotions; sol. in min. oil; m.p. 40 C.
- Ablil®-Wax 9810.** [Goldschmidt] C24–28 alkyl methicone; high m.w. wax used as thickening agent for min. oils and cosmetic esters; water barrier for night creams and protective lotions; provides gloss and smoothness for lipsticks; gels min. oil; m.p. 60 C.
- Ablil® ZP 2434.** [Goldschmidt] Polysiloxane polyalkyl copolymer; nonionic; emollient used in cosmetic creams and lotions, pigmented prods. and nonaq. systems; liq.; 100% conc.
- Ablol.** [Tri-K] Imidazolidinyl urea NF; preservative.
- Abltol®.** [Hercules] Dihydroabietyl alcohol; resinous plasticizer and tackifier in plastics, lacquers, inks, and adhesives; chemical intermediate; colorless visc. liq.; low odor; sol. in alcohols, esters, ketones, chlorinated solvs., and in aliphatic, aromatic, or terpene hydrocarbons; insol. in water; sp.gr. 1.008; dens. 8.4 lb/gal; visc. 400 poises (40 C); acid no. 0.83; sapon. no. 15; ref. index 1.5262; flash pt. (COC) 185 C; 100% liq. or 90% solids toluene or xylene sol'n.
- Ablumine 230.** [Taiwan] N-alkyl dimethyl ammonium chloride; cationic; algicide for industrial cooling towers and swimming pools; liq.; 50% act.
- Ablumine 280.** [Taiwan] Stearyl dimethyl benzyl ammonium chloride; antistat and hair conditioner; water-disp.
- Ablumine PN.** [Taiwan] Complex alkyl dimethyl benzyl chloride; cationic; retarder for acrylic fiber; prevents unlevel dyeing.
- Ablunol 200ML, 400ML, 600ML.** [Taiwan] PEG 200, 400, 600 laurate resp.; nonionic; emulsifiers, lubricants, dispersing and leveling agents used in cosmetic, textile, paint and other industrial uses; liq.; HLB 9.5, 13.1, 14.8; 100% conc.
- Ablunol 200MO, 400MO, 600MO, 1000MO.** [Taiwan] PEG 200, 400, 600, 1000 oleate resp.; nonionic; see Ablunol 200ML; liq.; HLB 7.9, 11.5, 13.5, 15.2 resp.; 100% conc.
- Ablunol 200MS, 400MS, 600MS, 1000MS.** [Taiwan] PEG 200, 400, 600, 1000 stearate resp.; nonionic; see Ablunol 200ML; solid; HLB 8.0, 11.6, 13.6, 15.2 resp.; 100% conc.
- Ablunol 6000DS.** [Taiwan] PEG 6000 distearate; thickener for cosmetic, pigment preparations; flake.
- Ablunol CO5, CO10, CO15, CO30, CO45.** [Taiwan] Castor oil, ethoxylated; nonionic; emulsifier, lubricant, antistat; liq.; HLB 4.0, 6.4, 8.5, 11.8, 13.6 resp.
- Ablunol NP4.** [Taiwan] Nonoxynol-4; nonionic; detergent and dispersant for use in petrol. oils; intermediate for mfg. of surfactants and antistatic agents; co-emulsifier for fats, oils and waxes; liq.; oil-sol.; HLB 8.8; 100% conc.
- Ablunol NP6.** [Taiwan] Nonoxynol-6; nonionic; emulsifier or coemulsifier; coupling agent; intermediate for mfg. of surfactants; emulsifier for silicone and min. oil; liq.; HLB 10.8.
- Ablunol S-60.** [Taiwan] Sorbitan stearate; nonionic; preparation of silicone defoamer emulsions; textile process lubricant; solid; HLB 4.7; 100% conc.
- Abluphat LP.** [Taiwan] Phosphate ester sodium salt; antistat for syn. fibers; liq. 30% act.
- Abluphat LPP, LPI, LPX.** [Taiwan] Phosphate ester free acid; see Abluphat LP; liq.; 100% act.
- Ablupol SAE.** [Taiwan] Silicone compd.; anti-foamer; liq.; water-disp.
- Ablusoft A.** [Taiwan] Aliphatic quat. ammonium compd.; cationic; softener for textile prods.; flake; 100% conc.
- Ablusoft ND.** [Taiwan] Polyamide; nonionic; softener, antistatic properties in resin finishing of cotton; flake; 100% conc.
- Ablusoft SN, SNC.** [Taiwan] Silicone, amine-modified; cationic; softener for fabrics.
- Ablusol ML.** [Taiwan] Sodium naphthalene sulfonate formaldehyde condensate; plasticizer and water reducing agent used in pourable and high strength concrete; liq.
- Ablusol NL.** [Taiwan] Sodium naphthalene sulfonate formaldehyde condensate; anionic; dye dispersant and antiagglomerant; used in the process of polyester and acetate fabrics; liq.; 40% conc.
- Abluton CMN.** [Taiwan] Alkyl naphthalene; anionic; dye carrier for polyester fiber and its blends; liq.; 100% conc.
- Abluton CTP.** [Taiwan] Chlorinated solvs.; carrier for bleaching polyester fiber and its blends; emulsifiable.
- A.B.S. 87%.** [Triantaphyllou] Alkylbenzene sulfonic acid; detergent intermediate; liq.; 87% conc.
- ABT-2500.** [Pfizer] Talc; antiblocking agent for polyolefin films; 2.3  $\mu$  avg. particle size; dry brightness 88  $\pm$  2 dB; sp.gr. 2.7; bulk dens. 13 lb/ft<sup>3</sup> (loose), 37 lb/ft<sup>3</sup> (tapped); 60% SiO<sub>2</sub>, 33% MgO.
- Accelerator 399.** [Texaco] Epoxy curing promoter

for use with amine hardeners; clear pale yel. liq. sp.gr. 1.089; visc. 880 cps; pour pt. 5 F; flash pt. (PM) 180 F.

**Accelerator BZ.** [Akrochem] Zinc dibutyl dithiocarbamate; nondiscoloring, nonstaining accelerator for EPDM, NR and SR latexes; stabilizer and antioxidant in uncured rubber; off-wh. to cream powd. or pellets; sol. in acetone; sp.gr. 1.25; m.p. 104 C; 95% min. purity.

**Accelerator D.** [Anchor] Cyclo amine blended with organo metallic salt; accelerator recommended for use in lt.-colored compds., esp. shoe soling industry; wh. to beige nondusting powd.

**Accelerator EZ.** [Akrochem] Zinc diethyl dithiocarbamate; nondiscoloring, nonstaining accelerator for NR and SR latexes; off-wh. powd.; sp.gr. 1.5; m.p. 172 C min.; 98% min. purity.

**Accelerator MF.** [Akrochem] 2-Benzothiazyl-N-morpholine disulfide; accelerator in natural and syn. rubbers, e.g., tire and mech. goods; yel.-br. powd.; sp.gr. 1.48; m.p. 125 C.

**Accelerator MZ.** [Akrochem] Zinc dimethyl dithiocarbamate; nondiscoloring, nonstaining accelerator for NR, IR, BR, SBR, IIR, and EPDM rubbers and NR latex; off-wh. powd. or pellets; sp.gr. 1.70; m.p. 240 C min.; 98% min. purity.

**Accelerator P.P.D.** [Akrochem] Piperidinium pentamethylene dithiocarbamate; accelerator for latex; in rubber cements, compds. containing wh. factice and for tank linings; peptizing agent; nondiscoloring and nonstaining; creamy wh. powd.; sol. in hot water, aromatic hydrocarbons; sp.gr. 1.2; m.p. 168 C min.; 98% min. purity.

**Accelerator Z.B.E.D.** [Akrochem] Zinc dibenzyl dithiocarbamate; accelerator; nondiscoloring and nonstaining; creamy wh. powd.; sp.gr. 1.41; m.p. 180-188 C; 95% min. purity.

**Accelerator Z.P.D.** [Akrochem] Zinc cyclopentamethylene dithiocarbamate; ultra-accelerator for dry, natural rubber, esp. footwear; nonpigmenting and nonstaining; off-wh. powd.; sp.gr. 1.6; m.p. 225 C min.; 98% min. purity.

**Accobetaine CL.** [Capital City] Complex coco betaine; detergent, wetting agent, emulsifier, high foaming agent, solubilizer, household and cosmetic uses; yel. liq.; pleasant odor; water-sol.; f.p. 0 C; 35% act.

**Accomeen C2, C5, C10, C15.** [Capital City] PEG-2, -5, -10, -15 cocamine resp.; nonionic; emulsifier, antistat, surfactant; Gardner 4-6 liq., amine odor; sol. in org. solv.; C5, C10 sol. in water; dens. 7.25, 8.15, 8.3, and 8.7 lb/gal resp.; sp.gr. 0.87, 0.98, 1.0; and 1.04 resp.; 99% act.

**Accomeen S2, S5, S10.** [Capital City] PEG-2, -5, -10 soyamine resp.; nonionic; emulsifier, antistat, surfactant; Gardner 5-10 liq.; amine odor; sol. in org. solv.; S5 water-disp., S10 water-sol.; dens. 7.6, 7.9, 8.5 lb/gal resp.; sp.gr. 0.91, 0.95, and 1.02 resp.; surf. tens. 31.3 (0.1%, S2); 99% act.

**Accomeen T2, T5, T15.** [Capital City] PEG-2, -5, -15 tallow amine; nonionic; emulsifier, antistat, surfactant, dispersant; Gardner 3-5 liq. to paste; amine

odor; sol. in org. solv., insol. in water; dens. 7.7 and 8.1 lb/gal (T2, T15); sp.gr. 0.92 and 0.97 (T2, T15); 99% act.

**Accomid C.** [Capital City] Cocamide DEA; nonionic; detergent, stabilizer, visc. improver, foam booster for shampoos and dishwashes; Gardner 4 liq.; mild odor; water-sol.; dens. 8.3 lb/gal; sp.gr. 0.99; 98% act.

**Accomid PK.** [Capital City] Palm kernelamide DEA (1:1); nonionic; visc. builder, foam booster/stabilizer, emulsifier for shampoos, liq. soaps, dish detergents, bubble bath prods.; Gardner 5 liq.; pH 9-10.6 (10% aq.).

**Acconon 200-DL.** [Capital City] PEG-4 dilaurate; nonionic surfactant used as emulsifier, dispersant, solubilizer, visc. control agent for cosmetics, pharmaceuticals, and industrial applics.

**Acconon 200-MS.** [Capital City] PEG-4 stearate; nonionic surfactant used as emulsifier, dispersant, solubilizer, visc. control agent for cosmetics, pharmaceuticals, and industrial applics.; Gardner 4 max. solid; HLB 8;  $\eta$  5.5-6.5.

**Acconon 300-MO.** [Capital City] PEG 300 oleate; nonionic; emulsifier, lubricant, chemical intermediate; for cosmetics, food, agriculture, plastics; Gardner 6 liq.; sol. in org. solv.; dens. 8.3 lb/gal resp.; sp.gr. 0.99; m.p. < -5 C; 99% act.

**Acconon 400-DO.** [Capital City] PEG-8 dioleate; nonionic surfactant used as emulsifier, dispersant, solubilizer, visc. control agent for cosmetics, pharmaceuticals, and industrial applics.

**Acconon 400-ML.** [Capital City] PEG-8 laurate; nonionic surfactant used as emulsifier, dispersant, solubilizer, visc. control agent for cosmetics, pharmaceuticals, and industrial applics.

**Acconon 400-MO.** [Capital City] PEG-8 oleate; nonionic; emulsifier, dispersant, lubricant, chemical intermediate, solubilizer, visc. control agent; for cosmetics, pharmaceuticals, food, agric., plastics; Gardner 4 max. liq.; sol. in org. solv.; water-disp.; dens. 8.4 lb/gal; sp.gr. 1.01; HLB 12; m.p. < 10 C; pH 5.5-6.5; 99% act.

**Acconon 400-MS.** [Capital City] PEG-8 stearate; nonionic surfactant used as emulsifier, dispersant, solubilizer, visc. control agent for cosmetics, pharmaceuticals, and industrial applics.; Gardner 4 max. solid; HLB 12; pH 5.5-6.5.

**Acconon 1300.** [Capital City] PPG-3 laureth-9; nonionic surfactant used as emulsifier, dispersant, solubilizer, visc. control agent for cosmetics, pharmaceuticals, and industrial applics.; Gardner 3 max. liq.; sp.gr. 1.016-1.019; dens. 8.35-8.45 lb/gal; HLB 11; cloud pt. 135-145 F; pH 6.0-7.0.

**Acconon CA-5.** [Capital City] PEG-5 castor oil; nonionic surfactant used as emulsifier, dispersant, solubilizer, visc. control agent for cosmetics, pharmaceuticals, and industrial applics.; Gardner 3 max. liq.; HLB 16; pH 6.0-7.0.

**Acconon CA-8.** [Capital City] PEG-8 castor oil; nonionic surfactant used as emulsifier, dispersant, solubilizer, visc. control agent for cosmetics, pharmaceuticals, and industrial applics.; Gardner 3 max. liq.; HLB 8; pH 6.0-7.0.

**Acconon CA-9.** [Capital City] PEG-9 castor oil, nonionic surfactant used as emulsifier, lubricant, dispersant, solubilizer, visc. control agent for cosmetics, pharmaceuticals, and industrial applics.; water-disp.

**Acconon CA-15.** [Capital City] PEG-15 castor oil; nonionic surfactant used as emulsifier, lubricant, dispersant, solubilizer, visc. control agent for cosmetics, pharmaceuticals, and industrial applics.; Gardner 3 max. liq.; water-disp.; HLB 16; pH 6.0-7.0.

**Acconon CA-25.** [Capital City] PEG-25 castor oil; lubricant, dispersant, emulsifier for cosmetics; water-disp.

**Acconon CON.** [Capital City] PEG-10 propylene glycol glyceryl laurate; nonionic surfactant used as emulsifier, dispersant, solubilizer, visc. control agent for cosmetics, pharmaceuticals, and industrial applics.; Gardner 2 max. liq.; HLB 10; pH 6.0-7.0.

**Acconon E.** [Capital City] PPG-15 stearyl ether; nonionic surfactant used as emulsifier, dispersant, solubilizer, visc. control agent for cosmetics, pharmaceuticals, and industrial applics.; Gardner 3 max. liq.; HLB 16; pH 6.0-7.0.

**Acconon ETG.** [Capital City] Glycereth-26; humectant; lubricant for skin care prods., creams, lotions; Gardner 3 max. liq.; sol. in water, alcohol, ketones, esters; HLB 15; pH 5.5-6.5.

**Acconon GTO.** [Capital City] Glyceryl trioleate; lubricant for textile processing used in cosmetics; sol. in oils, org. solvs.

**Acconon TGH.** [Capital City] PEG-20-PPG-10 glyceryl stearate; nonionic surfactant used as emulsifier, dispersant, solubilizer, visc. control agent, wetting and foaming agent for cosmetics, pharmaceuticals, and industrial applics.; Gardner 3 max. liq., mild odor; HLB 16; pH 6.0-7.0; 100% conc.

**Acconon W-230.** [Capital City] Ceteareth-20; nonionic surfactant used as emulsifier, dispersant, solubilizer, visc. control agent for cosmetics, pharmaceuticals, and industrial applics.; Gardner 3 max. solid; HLB 15; pH 6.5-7.5.

**A-C® Copolymer 400A.** [Allied-Signal] Low m.w. EVA copolymer; pigment dispersant; PS color concs.; powd.

**A-C® Copolymer 540A.** [Allied-Signal] Low m.w. ethylene-acrylic acid copolymer; plastics lubricant and processing aid, pigment dispersant; internal lubricant PVC, nylon 6, nylon color concs.; powd.

**Accoquat 2C-75.** [Capital City] Dicocondimonium chloride; cationic; emulsifier, coupling agent; used for car spray waxes, dust control oil, spot removal; amber liq., mild odor; dens. 7.2 lb/gal; sp. gr. 0.86; flam.; 75% act. in IPA.

**Accoquat 2C-75H.** [Capital City] Dicocondimonium chloride; cationic; emulsifier, coupling agent; amber liq., mild odor; 75% act. in hexylene glycol.

**Accosoft 440-75.** [Capital City] Methyl bis (hydrog. tallowamidoethyl) 2-hydroxyethyl ammonium methyl sulfate; fabric softener quat. for textile industry; cream colored semisolid; IPA odor; m.p. 118 F; pH 5.0-6.5 (10% IPA/water); 74.0-75.5% solids in

IPA

**Accosoft 540.** [Capital City] Methyl bis (modified tallowamidoethyl) 2-hydroxyethyl ammonium methyl sulfate; fabric softener quat. offering improved softening and good hand without a greasy feel; yel. opaque semisolid; mild odor; visc. 700 cps (6.5% disp.); m.p. 38.5 C; pH 5.5-6.5 (10% IPA/water); 87.0-89.0% solids in IPA.

**Accosoft 550-90 HHV.** [Capital City] Methyl bis (tallowamidoethyl) 2-hydroxyethyl ammonium methyl sulfate; cationic; fabric softener and antistat for laundry prods.; yel. opaque semisolid; mild odor; readily dispersible in water; visc. 50-150 cps (6.5% disp.); pH 5.5-6.5 (10% IPA/water); 89.0-90.5% solids in IPA.

**Accosoft 550L-90.** [Capital City] Methyl bis (tallowamidoethyl) 2-hydroxyethyl ammonium methyl sulfate; fabric softener quat. for household laundry prods.; yel. visc. liq.; mild odor; visc. 40-140 cps (6.5% disp.); pour pt. 52 F; pH 5.0-6.0 (10% IPA/water); 86.5-88.0% solids in IPA.

**Accosoft 620-90.** [Capital City] Methyl bis (tallowamidoethyl) 2-hydroxypropyl ammonium methyl sulfate; cationic; fabric softener and antistat for household prods.; U.S. patent #3,933,871; yel. visc. liq.; mild odor; readily dispersible in water; visc. 40-100 cps (6.5% disp.); pH 5.0-6.5 (10% IPA/water); 89.0-90.5% solids in IPA.

**Accosoft 707.** [Capital City] Quaternium-18; cationic surfactant used in household and industrial fabric softener, fabric antistat; Gardner 3 paste; sol. in IPA; flam.; dens. 7.3; sp. gr. 8.7; 75% act.

**Accosoft 748.** [Capital City] Quaternium-18 methosulfate; cationic surfactant used in household and industrial fabric softener or antistat esp. suited to dryer use; Gardner 4 paste, solid; m.p. 125-135 C; biodeg.; flam.; 90% act. in IPA.

**Accosoft 750.** [Capital City] Methyl bis (oleylamidoethyl) 2-hydroxyethyl ammonium methyl sulfate; fabric softener quat. for heavy duty liq. laundry detergents; amber liq.; IPA odor; pour pt. < 32 F; pH 5.0-6.5 (10% IPA/water); 89.0-90.5% solids in IPA.

**Accosoft 808HT-75.** [Capital City] Methyl-1-hydrog. tallowamidoethyl-2-hydrog. tallow imidazolinium-methyl sulfate; fabric softener, and antistat mainly for dryer applics.; also for rinse cycle applics.; cream-colored solid @ 77 F, lt. yel. liq. @ 120 F; IPA odor; pH 4.6-7.0 (10% IPA/water); 74.0-76.0% solids in IPA.

**Accosoft 870.** [Capital City] Hydrog. tallow imidazolinium quat. ammonium compd. and nonionic ethoxylate blend; softener, antistat for coating substrates for the dryer addition of laundry softening compds.; cream-colored solid; m.p. 122 F; pH 4.0-8.5 (10% IPA/water); 92.0-95.0% solids in IPA; 67.5-70.0% quat. act.

**Accosoft A-155.** [Capital City] Tallow amide amine quat. compd.; cationic surfactant, household fabric softener base, dispersion, antistat agent; Gardner 7 gel; biodeg.; 75 or 95% act.

**Accosoft M 1154.** [Capital City] Tallow amine quat. deriv.; cationic; fabric softener for detergent softener



systems; liq.; 98% conc.

**Accosperse 20.** [Capital City] Polysorbate 20; non-ionic; emulsifier, solubilizer; liq.; 100% conc.

**Accosperse 60.** [Capital City] Polysorbate 60; non-ionic; emulsifier, solubilizer; amber liq.; sp.gr. 1.1; visc. 500–600 cps; HLB 14.9–15.0; sapon. no. 45–55; 98% act.

**Accosperse 80.** [Capital City] Polysorbate 80; non-ionic; emulsifier, solubilizer; amber liq.; sp.gr. 1.1; visc. 400–450 cps; HLB 15.0; sapon. no. 45–55; 98% act.

**Acetamin 24.** [KAO SA] Cocamine acetate; cationic; surface coating agent for pigments, anticaking agent for fertilizer; emulsifier, dispersant, and softening agent for textiles; min. flotation reagent; solid; 100% conc.

**Acetamin 86.** [KAO SA] Stearamine acetate; see Acetamine 24; flake; 100% conc.

**Acetamin C.** [KAO SA] n-Cocamine acetate; cationic; flotation of mins., anticaking agents, emulsifier bactericide; paste, solid; 100% conc.

**Acetamin HT.** [KAO SA] n-Hyd. tallow amine acetate; cationic; see Acetamin C; solid.

**Acetamin T.** [KAO SA] n-Tallow amine acetate; cationic; see Acetamin C; solid.

**Acetol 1706.** [Henkel/Emery] Cetyl acetate, acetylated lanolin alcohols; water repellent; strongly hydrophobic emollient, penetrant, and cosolv. use in suntan preparations and baby prods.; sol. in IPM, min., castor, and olive oil; water-insol.

**Acetoquat CPB.** [Aceto] Cetyl pyridinium bromide; cationic; germicide, sanitizing agent; powd.; 95% act.

**Acetoquat CPC.** [Aceto] Cetyl pyridinium chloride; cationic; germicide, sanitizing agent; powd.; 100% act.

**Acetoquat CTAB.** [Aceto] Cetyl trimethyl ammonium bromide; cationic; germicide, sanitizing agent; powd.; 95% act.

**Acetulan®.** [Amerchol] Cetyl acetate/acetylated lanolin alcohol; binder for pressed powds.; emollient, plasticizer, cosolv., NV and sebum solv. for personal care prods.; lubricant for clay, talc, and starch; stabilizer for lanolin; solubilizer in aerosols; penetrant and spreading agent; pale yel. thin oily liq.; odorless; sol. in ethanol, min., castor and veg. oil, IPM, IPP, IPA, silicone, butyl stearate, sulfonated castor oil, ethyl acetate, and org. solv.; insol. in water; sp.gr. 0.850–0.880; visc. 10 cps; acid no. 1.0 max.; sapon. no. 180–200; hyd. 8.0 max.; pH neutral.

**Acetyl Peroxide-IB25.** [Atochem] Acetyl peroxide; initiator for bulk, sol'n., and suspension polymerization, high-temp. and R.T. curing of polyester resins; sol'n.; 25% act.; 3.12–3.39% act. oxygen.

**Acid Thickener.** [Exxon] Cationic surfactant, visc. builder, corrosion inhibitor for acid-based cleaners; amber paste; sp.gr. 0.91; dens. 7.6 lb/gal; visc. 5000 cps (9.5% HCl with 3% Acid Thickener); pour pt. 80 F; flash pt. > 200 F.

**Acilb A9.** [ICI Australia] Amine deriv.; controls corrosion in HCl, sulfuric, phosphoric, and other acids; acid restrainer; liq.; sol. in acidic media, org.

solvs.

**ACL 56.** [Monsanto] Sodium dichloroisocyanurate dihydrate; bleaching compd., sanitizer, disinfectant; 56% avail. chlorine.

**ACL 59.** [Monsanto] Potassium dichloroisocyanurate; bleaching compd., sanitizer disinfectant, oxidizer in dishwashing compds.; 59% avail. chlorine.

**ACL 60.** [Monsanto] Sodium dichloroisocyanurate; bleaching compd., sanitizer, disinfectant, oxidizer in dishwashing compds.; 63% avail. chlorine.

**ACL 66.** [Monsanto] (Monotrichloro) tetra (monopotassium dichloro) pentaisocyanurate; bleaching compd., sanitizer, detergent; 66.5% avail. chlorine.

**ACL 85.** [Monsanto] Trichloroisocyanuric acid; bleaching compd., sanitizer, disinfectant, detergent; 90% avail. chlorine.

**Acolor.** [Reichhold] Dist. tall oil fatty acids; latex stabilizer, dispersant (as soap) for pigments and fillers; Gardner 3 color; sp.gr. 0.903; flash pt. 400 C (COC).

**A-C® Polyethylene 6, 6A, 8A, 9A, 8, 9.** [Allied-Signal] Polyethylene wax; processing lubricant, melt index modifier, pigment dispersant, mold release aid; external lubricant PVC, color concs., polyolefin flow modifiers; thickener for cosmetic and pharmaceutical gels; powd. (A grades), others prilled or diced; sol. in hot min. oil and fatty esters.

**A-C® Polyethylene 400.** [Allied-Signal] EVA copolymer; thickener for cosmetic gels; sol. in hot ternary systems; low m.w.

**A-C® Polyethylene 617, 617A.** [Allied-Signal] Polyethylene; see A-C Polyethylene 6; prilled/diced and powd. resp.; sol. in hot min. oil and fatty esters.

**A-C® Polyethylene 629A.** [Allied-Signal] Oxidized low m.w. polyethylene; processing lubricant, mold release aid; PVC lubricant; powd.

**Acralen AFR.** [Bayer] Acrylic acid ester, acrylonitrile; self-crosslinking binder for nonwoven fabrics, textile finishing, lamination; yel. transparent film; dens. 1.03 g/cc; pH 6.5–7.0; hardness (Shore A) 30; 49.5–50.5% solids.

**Acralen ATR.** [Bayer] Acrylic acid ester, styrene latex; self-crosslinking binder for nonwoven fabrics, lamination; colorless, transparent film; dens. 1.03 g/cc; pH 4.7–5.2; hardness (Shore A) 50; 47.5–48.5% solids.

**Acralen BS.** [Bayer] Butadiene, styrene, acrylonitrile latex; self-crosslinking binder for nonwoven fabrics, tech. fabrics; yel. transparent film; dens. 1.02 g/cc; pH 7.5–8.5; hardness (Shore A) 93; 39.5–40.5% solids.

**Acrax® C.** [Lonza] N,N'-ethylene distearamide; internal and surf. lubricant in resins and plastics; processing aid; plasticizer for resin; flow improver, pigment dispersant; used in hot-melt adhesives and coatings; powd. grade used as lubricant, processing aid, detachifier, mold release, and antiblocking agent; cream hard waxy solid; 10% max. on 10 mesh (beads); 2% max. on 40 mesh (prilled); 1% max. on 100 mesh (powd.); 0.1% max. on 325 mesh (atomized); insol. in water; sp.gr. 0.97; m.p. 140–145 C; acid no. 8 max.; flash pt. 285 C.