

white or cream-colored powder having an intensely bitter taste.

(b) *Free acid (as acetic acid)*. Maximum percentage 0.15 by weight when determined by the following procedure: Dissolve 1.0 gram of sample in 50 mL of neutralized ethyl alcohol (or S.D.A. No. 3-A, No. 3-C, or No. 30) and titrate with 0.1 N sodium hydroxide using phenolphthalein indicator.

Percent acid as acetic acid = $\text{mL NaOH used} \times 0.6 / \text{weight of sample}$

(c) *Insoluble matter*. 0.30 percent by weight maximum.

(d) *Melting point*. Not less than 78.0 °C.

(e) *Purity*. Sucrose octaacetate 98 percent minimum by weight when determined by the following procedure: Transfer a weighed 1.50 grams sample to a 500 mL Erlenmeyer flask containing 100 mL of neutral ethyl alcohol (or S.D.A. No. 3-A, No. 3-C, or No. 30) and exactly 50.0 mL of 0.5 N sodium hydroxide. Reflux for 1 hour on a steam bath, cool and titrate the excess sodium hydroxide with 0.5 N sulfuric acid using phenolphthalein indicator.

Percent sucrose octaacetate = $(\text{mL NaOH} - \text{mL H}_2\text{SO}_4) \times 4.2412 / \text{weight of sample}$

[T.D. ATF-133, 48 FR 24673, June 2, 1983. Redesignated by T.D. ATF-442, 66 FR 12854, Mar. 1, 2001]

§ 21.132 Toluene.

(a) *Specific Gravity at 15.56°/15.56 °C*. 0.80 to 0.90.

(b) *Boiling point (°C)*. 110.6.

(c) *Distillation range (°C)*. Not more than 1 percent by volume should distill below 109, and not less than 99 percent by volume below 112.

(d) *Odor*. Characteristic odor.

[T.D. TTB-140, 81 FR 59463, Aug. 30, 2016]

§ 21.133 Vinegar.

(a) *Vinegar, 90-grain:*

Acidity (as acetic acid). 9.0 percent by weight, minimum.

(b) *Vinegar, 60-grain:*

Acidity (as acetic acid). 6.0 percent by weight, minimum.

[T.D. ATF-133, 48 FR 24673, June 2, 1983. Redesignated by T.D. ATF-442, 66 FR 12854, Mar. 1, 2001]

Subpart F—Uses of Specially Denatured Alcohol and Specially Denatured Rum

§ 21.141 List of products and processes using specially denatured alcohol and rum, and formulas authorized therefor.

This section lists, alphabetically by product or process, formulas of specially denatured alcohol authorized for use in those products or processes, and lists the code numbers assigned thereto. Specially denatured rum, as well as specially denatured alcohol, may be used in tobacco sprays and flavors, Code No. 460, under Formula No. 4.

USES OF SPECIALLY DENATURED ALCOHOL ¹

Product or process	Code No.	Formulas authorized
Acetaldehyde	551	1, 2-B, 29.
Acetic acid	512	29, 35-A.
Adhesives and binders	036	1, 3-A, 3-C, 23-A, 30.
Aldehydes, miscellaneous.	552	1, 2-B, 29.
Alkaloids (processing) ..	344	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 32, 35-A.
Animal feed supplements.	910	35-A.
Antibiotics (processing)	343	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 32, 35-A.
Antifreeze, proprietary ..	760	1.
Antiseptic solutions, U.S.P. or N.F.	244	23-A, 37, 38-B, 38-F.
Bath preparations	142	1, 3-A, 3-C, 23-A, 30, 36, 38-B, 39-B, 39-C, 40, 40-A, 40-B, 40-C.
Bay rum	112	23-A, 37, 38-B, 39-B, 39-D, 40, 40-A, 40-B, 40-C.
Biocides, miscellaneous	410	1, 3-A, 3-C, 23-A, 23-H, 30, 37, 38-B, 39-B, 40, 40-A, 40-B, 40-C.
Blood and blood products (processing).	345	1, 3-A, 3-C, 13-A, 23-A, 30.
Brake fluids	720	1, 3-A, 3-C.
Candy glazes	015	13-A, 23-A, 35-A, 45.
Cellulose coatings	011	1, 3-A, 3-C, 23-A, 30.
Cellulose compounds (dehydration).	311	1, 2-B, 3-A, 3-C, 32.
Cellulose intermediates	034	1, 3-A, 3-C, 13-A, 19, 23-A, 32.
Chemicals (miscellaneous).	579	1, 2-B, 3-A, 3-C, 13-A, 29, 30, 32, 36.
Cleaning solutions	450	1, 3-A, 3-C, 23-A, 23-H, 30, 36, 39-B, 40, 40-A, 40-B, 40-C.
Coatings, miscellaneous	016	1, 3-A, 3-C, 23-A.
Collodions, industrial	034	1, 3-A, 3-C, 13-A, 19, 23-A, 32.
Collodion, U.S.P.	241	13-A, 19, 32.
Colognes	122	38-B, 39-B, 39-C, 40, 40-A, 40-B, 40-C.
Crude drugs (processing).	341	1, 2-B, 3-A, 3-C, 23-A, 30.
Cutting oils	730	1, 3-A, 3-C.
Dehydration products, miscellaneous.	315	1, 2-B, 3-A, 3-C.

§ 21.141

USES OF SPECIALLY DENATURED ALCOHOL ¹—
Continued

Product or process	Code No.	Formulas authorized
Dentifrices	131	31-A, 37, 38-B, 38-D.
Deodorants (body)	114	23-A, 38-B, 39-B, 39-C, 40, 40-A, 40-B, 40-C.
Detergents, household	450	1, 3-A, 3-C, 23-A, 23-H, 30, 36, 39-B, 40, 40-A, 40-B, 40-C.
Detergents, industrial ...	440	1, 3-A, 3-C, 23-A, 30.
Detonators	574	1.
Disinfectants	410	1, 3-A, 3-C, 23-A, 23-H, 30, 37, 38-B, 39-B, 40, 40-A, 40-B, 40-C.
Drugs and medicinal chemicals.	575	1, 2-B, 3-A, 3-C, 13-A, 29, 30, 32.
Drugs, miscellaneous (processing).	349	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 35-A, 38-B.
Duplicating fluids	485	1, 3-A, 3-C, 30.
Dyes and intermediates	540	1, 2-B, 3-A, 3-C, 29, 36.
Dyes and intermediates (processing).	351	1, 2-B, 3-A, 3-C.
Dye solutions, miscellaneous.	482	1, 3-A, 3-C, 23-A, 30.
Embalming fluids, etc ...	420	1, 3-A, 3-C, 23-A.
Esters, ethyl (miscellaneous).	523	1, 2-B, 13-A, 29, 32, 35-A.
Ether, ethyl	561	1, 2-B, 13-A, 29, 32.
Ethers, miscellaneous ..	562	1, 2-B, 13-A, 29, 32.
Ethyl acetate	521	1, 2-B, 29, 35-A.
Ethylamines	530	1, 2-B, 3-A, 3-C, 29, 36.
Ethyl chloride	522	1, 2-B, 29, 32.
Ethylene dibromide	571	1, 2-B, 29, 32.
Ethylene gas	572	1, 2-B, 29, 32.
Explosives	033	1, 2-B, 3-A, 3-C.
External pharmaceuticals, not U.S.P. or N.F.	210	23-A, 23-H, 36, 37, 38-B, 38-F, 39-B, 40, 40-A, 40-B, 40-C.
External pharmaceuticals, miscellaneous, U.S.P. or N.F.	249	23-A, 25, 25-A, 38-B, 40-B.
Fluid uses, miscellaneous.	750	1, 3-A, 3-C, 23-A, 30.
Food products, miscellaneous (processing).	332	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 32, 35-A.
Fuel uses, miscellaneous.	630	1, 3-A, 3-C, 28-A.
Fuels, airplane and supplementary.	612	1, 3-A, 3-C, 28-A.
Fuels, automobile and supplementary.	611	1, 3-A, 3-C, 28-A.
Fuels, proprietary heating.	620	1, 3-A, 3-C, 28-A.
Fuels, rocket and jet	613	1, 3-A, 3-C, 28-A.
Fungicides	410	1, 3-A, 3-C, 23-A, 23-H, 30, 37, 38-B, 39-B, 40, 40-A, 40-B, 40-C.
Glandular products (processing).	342	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 32, 35-A.
Hair and scalp preparations.	111	23-A, 23-H, 37, 38-B, 39-B, 39-C, 39-D, 40, 40-A, 40-B, 40-C.
Hormones (processing)	342	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 32, 35-A.
Incense	470	3-A, 3-C, 37, 38-B, 39-B, 39-C, 40, 40-A, 40-B, 40-C.
Inks	052	1, 3-A, 3-C, 13-A, 23-A, 30, 32, 35-A, 40-B.
Insecticides	410	1, 3-A, 3-C, 23-A, 23-H, 30, 37, 38-B, 39-B, 40, 40-A, 40-B, 40-C.

27 CFR Ch. I (4-1-22 Edition)

USES OF SPECIALLY DENATURED ALCOHOL ¹—
Continued

Product or process	Code No.	Formulas authorized
Iodine solutions (including U.S.P. and N.F. tinctures).	230	25, 25-A.
Laboratory reagents (for sale).	811	3-A, 3-C, 30.
Laboratory uses, general (own use only).	810	3-A, 3-C, 30.
Lacquer thinners	042	1, 23-A.
Liniments, U.S.P. or N.F.	243	38-B.
Lotions and creams (body, face, and hand).	113	23-A, 23-H, 31-A, 37, 38-B, 39-B, 39-C, 40, 40-A, 40-B, 40-C.
Medicinal chemicals (processing).	344	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 32, 35-A.
Miscellaneous chemicals (processing).	358	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 35-A.
Miscellaneous products (processing).	359	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 35-A.
Mouth washes	132	37, 38-B, 38-D, 38-F.
Organo-silicone products.	576	2-B, 3-A, 3-C, 30.
Pectin (processing)	331	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 35-A.
Perfume materials (processing).	352	1, 2-B, 3-A, 3-C, 13-A, 30.
Perfumes and perfume tinctures.	121	38-B, 39-B, 39-C, 40, 40-A, 40-B, 40-C.
Petroleum products	320	1, 2-B, 3-A, 3-C.
Photoengraving dyes and solutions.	481	1, 3-A, 3-C, 13-A, 30, 32.
Photographic chemicals (processing).	353	1, 2-B, 3-A, 3-C, 13-A, 30.
Photographic film and emulsions.	031	1, 2-B, 3-A, 3-C, 13-A, 19, 30, 32.
Pill and tablet manufacture.	349	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 35-A, 38-B.
Plastics, cellulose	021	1, 2-B, 3-A, 3-C, 13-A, 30.
Plastics, non-cellulose (including resins).	022	1, 2-B, 3-A, 3-C, 13-A, 30.
Polishes	051	1, 3-A, 3-C, 30.
Preserving solutions	430	1, 3-A, 3-C, 13-A, 23-A, 30, 32, 37, 38-B, 44.
Product development and pilot plant (own use only).	812	All formulas.
Proprietary solvents	041	1, 3-A.
Refrigerating uses	740	1, 3-A, 3-C, 23-A, 30.
Resin coatings, natural	014	1, 23-A.
Resin coatings, synthetic.	012	1, 3-A, 3-C, 23-A, 30.
Resins, synthetic	590	3-A, 3-C, 29, 30, 35-A.
Room deodorants	470	3-A, 3-C, 37, 38-B, 39-B, 39-C, 40, 40-A, 40-B, 40-C.
Rosin (processing)	354	1, 3-A, 3-C.
Rotogravure dyes and solutions.	481	1, 3-A, 3-C, 13-A, 30, 32.
Rubber (latex) (processing).	355	1, 3-A, 3-C.
Rubber, synthetic	580	29, 32.
Rubbing alcohol	220	23-H.
Scientific instruments ...	710	1, 3-A, 3-C.
Shampoos	141	1, 3-A, 3-C, 23-A, 31-A, 36, 38-B, 39-B, 40, 40-A, 40-B, 40-C.
Shellac coatings	013	1, 23-A.
Soaps, industrial	440	1, 3-A, 3-C, 23-A, 30.

Alcohol and Tobacco Tax and Trade Bureau, Treasury

§21.151

USES OF SPECIALLY DENATURED ALCOHOL ¹— Continued

Product or process	Code No.	Formulas authorized
Soaps, toilet	142	1, 3-A, 3-C, 23-A, 30, 36, 38-B, 39-B, 39-C, 40, 40-A, 40-B, 40-C.
Sodium ethylate, anhydrous (restricted).	524	2-B.
Sodium hydrosulfite (dehydration).	312	1, 2-B, 3-A, 3-C.
Soldering flux	035	1, 3-A, 3-C, 23-A, 30.
Solutions, miscellaneous.	485	1, 3-A, 3-C, 13-A, 23-A, 30, 32, 35-A, 40-B, 40-C.
Solvents and thinners (other than proprietary solvents or special industrial solvents).	042	1, 23-A, 30.
Solvents, special (restricted sale).	043	1, 3-A, 3-C.
Stains (wood)	053	1, 3-A, 3-C, 23-A, 30.
Sterilizing solutions	430	1, 3-A, 3-C, 13-A, 23-A, 30, 32, 37, 38-B, 44.
Theater sprays	470	3-A, 3-C, 37, 38-B, 39-B, 39-C, 40, 40-A, 40-B, 40-C.
Tobacco sprays and flavors.	460	4.
Toilet waters	122	38-B, 39-B, 39-C, 40, 40-A, 40-B, 40-C.
Transparent sheetings ..	032	1, 2-B, 3-A, 3-C, 13-A, 23-A.
Unclassified uses ²	900	1, 3-A, 3-C.
Vaccine (processing)	343	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 32, 35-A.
Vinegar	511	18, 29, 35-A.
Vitamins (processing) ...	342	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 32, 35-A.
Xanthates	573	1, 2-B, 29.
Yeast (processing)	342	1, 2-B, 3-A, 3-C, 13-A, 23-A, 30, 32, 35-A.

¹Other products or processes may be authorized under §21.31(c).

²Persons desiring other formulas for this use should indicate the fact in the space provided for this purpose on TTB Form 5150.19.

[T.D. ATF-133, 48 FR 24673, June 2, 1983, as amended by T.D. ATF-199, 50 FR 9183, Mar. 6, 1985; T.D. ATF-435, 66 FR 5475, Jan. 19, 2001; T.D. ATF-442, 66 FR 11854, Mar. 1, 2001; T.D. TTB-140, 81 FR 59463, Aug. 30, 2016]

Subpart G—Denaturants Authorized for Denatured Spirits

§21.151 List of denaturants authorized for denatured spirits.

Following is an alphabetical listing of denaturants authorized for use in denatured spirits:

DENATURANTS AUTHORIZED FOR COMPLETELY DENATURED ALCOHOL (C.D.A.), SPECIALLY DENATURED ALCOHOL (S.D.A.), AND SPECIALLY DENATURED RUM (S.D.R.)

Acetaldehyde S.D.A. 29.

DENATURANTS AUTHORIZED FOR COMPLETELY DENATURED ALCOHOL (C.D.A.), SPECIALLY DENATURED ALCOHOL (S.D.A.), AND SPECIALLY DENATURED RUM (S.D.R.)—Continued

Acetone, U.S.P	S.D.A. 23-A, 23-H.
Acetaldol	C.D.A. 18.
Alkylate	C.D.A. 20.
Almond oil, bitter, N.F.X	S.D.A. 38-B.
Alpha Terpineol	S.D.A. 38-B.
Ammonia, aqueous	S.D.A. 36.
Ammonia solution, strong, N.F. ...	S.D.A. 36.
Anethole, N.F	S.D.A. 38-B.
Anise oil, N.F	S.D.A. 38-B.
Bay oil (myrcia oil), N.F.XI	S.D.A. 38-B, 39-D.
Benzaldehyde, N.F	S.D.A. 38-B.
Bergamot oil, N.F.XI	S.D.A. 38-B.
Boric acid, N.F	S.D.A. 38-F.
Brucine alkaloid	S.D.A. 40.
Brucine sulfate, N.F.IX	S.D.A. 40.
<i>n</i> -Butyl alcohol	S.D.A. 44.
<i>tert</i> -Butyl alcohol	S.D.A. 39-B, 40, 40-A, 40-B, 40-C.
Camphor, U.S.P	S.D.A. 38-B.
Caustic soda, liquid	S.D.A. 36.
Cedar leaf oil, U.S.P.XIII	S.D.A. 38-B.
Chlorothymol, N.F.XII	S.D.A. 38-B, 38-F.
Cinnamic aldehyde (cinnamaldehyde), N.F.IX.	S.D.A. 38-B.
Cinnamon oil, N.F	S.D.A. 38-B.
Citronella oil, natural	S.D.A. 38-B.
Clove oil, N.F	S.D.A. 38-B.
Coal tar, U.S.P	S.D.A. 38-B.
Corrmint oil	S.D.A. 38-B.
Cyclohexane	S.D.A. 3-A.
Denatonium benzoate, N.F.	S.D.A. 1, 40-B.
Diethyl phthalate	S.D.A. 39-B, 39-C.
Distilled lime oil	S.D.A. 38-B.
Ethyl acetate	C.D.A. 35; S.D.A. 29, 35-A.
Ethyl ether	S.D.A. 13-A, 19, 32.
Ethyl tertiary butyl ether	C.D.A. 20.
Eucalyptol, N.F.XII	S.D.A. 37, 38-B.
Eucalyptus oil, N.F	S.D.A. 38-B.
Eugenol, U.S.P	S.D.A. 38-B.
Formaldehyde solution, U.S.P.	S.D.A. 38-D.
Gasoline	C.D.A. 18, 19; S.D.A. 28-A.
Gasoline, unleaded	C.D.A. 18, 19, 20; S.D.A. 28-A.
Glycerin (Glycerol), U.S.P	S.D.A. 31-A.
Green soap, U.S.P	S.D.A.
Guaiacol, N.F.X	S.D.A. 38-B.
Heptane	C.D.A. 18, 19; S.D.A. 2-B, 28-A.
Hexane	S.D.A. 2-B.
<i>n</i> -Hexane	S.D.A. 2-B.
High octane denaturant blend	C.D.A. 20.
Hydrochloric acid, N.F	S.D.A. 38-F.
Iodine, U.S.P	S.D.A. 25, 25-A.
Isopropyl alcohol	S.D.A. 3-C.
Kerosene	C.D.A. 18, 19, 20.
Kerosene (deodorized)	C.D.A. 18, 19, 20.
L(-)-Carvone	S.D.A. 38-B.
Lavender oil, N.F	S.D.A. 38-B.
Lemon oil	S.D.A. 38-B.
Menthol, U.S.P	S.D.A. 37, 38-B, 38-D, 38-F.
Methyl alcohol	S.D.A. 1, 3-A, 30.
Methylene blue, U.S.P	S.D.A. 4; S.D.R. 4.
Methyl isobutyl ketone	C.D.A. 18, 19; S.D.A. 1, 23-H.
Methyl <i>n</i> -butyl ketone	C.D.A. 18, 19; S.D.A. 1.
Methyl salicylate, N.F	S.D.A. 38-B.
Methyl tertiary butyl ether	C.D.A. 20.