Proposed MAJ8KHSM Well Hydraulic Fracturing Fluid Additives

Ingredients	Chemical Abstract Service Number (CAS #)	% of Total Usage (by Mass)
Water	7732-18-5	83.67637%
Crystalline Silica in the form of Quartz	14808-60-7	16.15272%
Hydrogen chloride	7647-01-0	0.02003%
Methyl alcohol	67-56-1	0.00025%
N,N-Dimethylformamide	68-12-2	0.00004%
Ethylene glycol	107-21-1	0.00007%
2-Butoxyethanol	111-76-2	0.00002%
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched	127087-87-0	0.00002%
Tar Bases, quinoline derivs, benzyl chloride-quat	72480-70-7	0.00002%
Cinnamaldehyde	104-55-2	0.00002%
Citric acid	77-92-9	0.00025%
Glutaraldehyde	111-30-8	0.00207%
Didecyl dimethyl ammonium chloride	7173-51-5	0.00031%
Quaternary Ammonium Compounds	68424-85-1	0.00031%
Ethanol	64-17-5	0.00016%
AA/ATBS Co-polymer	9003-05-8	0.00150%
AA/Maleic Anhydride Co-polymer	9003-04-7	0.00150%
Acrylamide-Chloride Salt of Trimethylammonio-Ethyl Acrylate Copolymer	69418-26-4	0.03613%
Alkanes, C12-26-Branched and Linear	90622-53-0	0.03613%
Ethoxylated Alcohols (C12-16)	68551-12-2	0.00452%

Prepared: May 2026

Proposed MAJ8JHSM Well Hydraulic Fracturing Fluid Additives

Ingredients	Chemical Abstract Service Number (CAS #)	% of Total Usage (by Mass)
Water	7732-18-5	83.67637%
Crystalline Silica in the form of Quartz	14808-60-7	16.15272%
Hydrogen chloride	7647-01-0	0.02003%
Methyl alcohol	67-56-1	0.00025%
N,N-Dimethylformamide	68-12-2	0.00004%
Ethylene glycol	107-21-1	0.00007%
2-Butoxyethanol	111-76-2	0.00002%
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched	127087-87-0	0.00002%
Tar Bases, quinoline derivs, benzyl chloride-quat	72480-70-7	0.00002%
Cinnamaldehyde	104-55-2	0.00002%
Citric acid	77-92-9	0.00025%
Glutaraldehyde	111-30-8	0.00207%
Didecyl dimethyl ammonium chloride	7173-51-5	0.00031%
Quaternary Ammonium Compounds	68424-85-1	0.00031%
Ethanol	64-17-5	0.00016%
AA/ATBS Co-polymer	9003-05-8	0.00150%
AA/Maleic Anhydride Co-polymer	9003-04-7	0.00150%
Acrylamide-Chloride Salt of Trimethylammonio-Ethyl Acrylate Copolymer	69418-26-4	0.03613%
Alkanes, C12-26-Branched and Linear	90622-53-0	0.03613%
Ethoxylated Alcohols (C12-16)	68551-12-2	0.00452%

Prepared: May 2026

Proposed MAJ8MHSM Well Hydraulic Fracturing Fluid Additives

Ingredients	Chemical Abstract Service Number (CAS #)	% of Total Usage (by Mass)
Water	7732-18-5	83.67637%
Crystalline Silica in the form of Quartz	14808-60-7	16.15272%
Hydrogen chloride	7647-01-0	0.02003%
Methyl alcohol	67-56-1	0.00025%
N,N-Dimethylformamide	68-12-2	0.00004%
Ethylene glycol	107-21-1	0.00007%
2-Butoxyethanol	111-76-2	0.00002%
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched	127087-87-0	0.00002%
Tar Bases, quinoline derivs, benzyl chloride-quat	72480-70-7	0.00002%
Cinnamaldehyde	104-55-2	0.00002%
Citric acid	77-92-9	0.00025%
Glutaraldehyde	111-30-8	0.00207%
Didecyl dimethyl ammonium chloride	7173-51-5	0.00031%
Quaternary Ammonium Compounds	68424-85-1	0.00031%
Ethanol	64-17-5	0.00016%
AA/ATBS Co-polymer	9003-05-8	0.00150%
AA/Maleic Anhydride Co-polymer	9003-04-7	0.00150%
Acrylamide-Chloride Salt of Trimethylammonio-Ethyl Acrylate Copolymer	69418-26-4	0.03613%
Alkanes, C12-26-Branched and Linear	90622-53-0	0.03613%
Ethoxylated Alcohols (C12-16)	68551-12-2	0.00452%

Prepared: May 2026

Proposed MAJ8LHSM Well Hydraulic Fracturing Fluid Additives

Ingredients	Chemical Abstract Service Number (CAS #)	% of Total Usage (by Mass)
Water	7732-18-5	83.67637%
Crystalline Silica in the form of Quartz	14808-60-7	16.15272%
Hydrogen chloride	7647-01-0	0.02003%
Methyl alcohol	67-56-1	0.00025%
N,N-Dimethylformamide	68-12-2	0.00004%
Ethylene glycol	107-21-1	0.00007%
2-Butoxyethanol	111-76-2	0.00002%
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched	127087-87-0	0.00002%
Tar Bases, quinoline derivs, benzyl chloride-quat	72480-70-7	0.00002%
Cinnamaldehyde	104-55-2	0.00002%
Citric acid	77-92-9	0.00025%
Glutaraldehyde	111-30-8	0.00207%
Didecyl dimethyl ammonium chloride	7173-51-5	0.00031%
Quaternary Ammonium Compounds	68424-85-1	0.00031%
Ethanol	64-17-5	0.00016%
AA/ATBS Co-polymer	9003-05-8	0.00150%
AA/Maleic Anhydride Co-polymer	9003-04-7	0.00150%
Acrylamide-Chloride Salt of Trimethylammonio-Ethyl Acrylate Copolymer	69418-26-4	0.03613%
Alkanes, C12-26-Branched and Linear	90622-53-0	0.03613%
Ethoxylated Alcohols (C12-16)	68551-12-2	0.00452%

Prepared: May 2026

Proposed MAJ8BHSM Well Hydraulic Fracturing Fluid Additives

Ingredients	Chemical Abstract Service Number (CAS #)	% of Total Usage (by Mass)
Water	7732-18-5	83.67637%
Crystalline Silica in the form of Quartz	14808-60-7	16.15272%
Hydrogen chloride	7647-01-0	0.02003%
Methyl alcohol	67-56-1	0.00025%
N,N-Dimethylformamide	68-12-2	0.00004%
Ethylene glycol	107-21-1	0.00007%
2-Butoxyethanol	111-76-2	0.00002%
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched	127087-87-0	0.00002%
Tar Bases, quinoline derivs, benzyl chloride-quat	72480-70-7	0.00002%
Cinnamaldehyde	104-55-2	0.00002%
Citric acid	77-92-9	0.00025%
Glutaraldehyde	111-30-8	0.00207%
Didecyl dimethyl ammonium chloride	7173-51-5	0.00031%
Quaternary Ammonium Compounds	68424-85-1	0.00031%
Ethanol	64-17-5	0.00016%
AA/ATBS Co-polymer	9003-05-8	0.00150%
AA/Maleic Anhydride Co-polymer	9003-04-7	0.00150%
Acrylamide-Chloride Salt of Trimethylammonio-Ethyl Acrylate Copolymer	69418-26-4	0.03613%
Alkanes, C12-26-Branched and Linear	90622-53-0	0.03613%
Ethoxylated Alcohols (C12-16)	68551-12-2	0.00452%

Prepared: May 2026

Proposed MAJ8CHSM Well Hydraulic Fracturing Fluid Additives

Ingredients	Chemical Abstract Service Number (CAS #)	% of Total Usage (by Mass)
Water	7732-18-5	87.99555%
Crystalline Silica in the form of Quartz	14808-60-7	11.82987%
Hydrogen chloride	7647-01-0	0.02106%
Methyl alcohol	67-56-1	0.00026%
N,N-Dimethylformamide	68-12-2	0.00004%
Ethylene glycol	107-21-1	0.00007%
2-Butoxyethanol	111-76-2	0.00002%
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched	127087-87-0	0.00002%
Tar Bases, quinoline derivs, benzyl chloride-quat	72480-70-7	0.00002%
Cinnamaldehyde	104-55-2	0.00002%
Citric acid	77-92-9	0.00026%
Glutaraldehyde	111-30-8	0.00217%
Didecyl dimethyl ammonium chloride	7173-51-5	0.00033%
Quaternary Ammonium Compounds	68424-85-1	0.00033%
Ethanol	64-17-5	0.00016%
AA/ATBS Co-polymer	9003-05-8	0.00158%
AA/Maleic Anhydride Co-polymer	9003-04-7	0.00158%
Acrylamide-Chloride Salt of Trimethylammonio-Ethyl Acrylate Copolymer	69418-26-4	0.03799%
Alkanes, C12-26-Branched and Linear	90622-53-0	0.03799%
Ethoxylated Alcohols (C12-16)	68551-12-2	0.00475%

Prepared: May 2026

Proposed MAJ8DHSM Well Hydraulic Fracturing Fluid Additives

Ingredients	Chemical Abstract Service Number (CAS #)	% of Total Usage (by Mass)
Water	7732-18-5	86.93549%
Crystalline Silica in the form of Quartz	14808-60-7	12.84059%
Hydrogen chloride	7647-01-0	0.02082%
Methyl alcohol	67-56-1	0.00026%
N,N-Dimethylformamide	68-12-2	0.00004%
Ethylene glycol	107-21-1	0.00007%
2-Butoxyethanol	111-76-2	0.00002%
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched	127087-87-0	0.00002%
Tar Bases, quinoline derivs, benzyl chloride-quat	72480-70-7	0.00002%
Cinnamaldehyde	104-55-2	0.00002%
Citric acid	77-92-9	0.00026%
Glutaraldehyde	111-30-8	0.00215%
Didecyl dimethyl ammonium chloride	7173-51-5	0.00032%
Quaternary Ammonium Compounds	68424-85-1	0.00032%
Ethanol	64-17-5	0.00016%
AA/ATBS Co-polymer	9003-05-8	0.00156%
AA/Maleic Anhydride Co-polymer	9003-04-7	0.00156%
Acrylamide-Chloride Salt of Trimethylammonio-Ethyl Acrylate Copolymer	69418-26-4	0.03756%
Alkanes, C12-26-Branched and Linear	90622-53-0	0.03756%
Ethoxylated Alcohols (C12-16)	68551-12-2	0.00469%

Prepared: May 2026

Proposed MAJ8EHSM Well Hydraulic Fracturing Fluid Additives

Ingredients	Chemical Abstract Service Number (CAS #)	% of Total Usage (by Mass)
Water	7732-18-5	89.01564%
Crystalline Silica in the form of Quartz	14808-60-7	10.80891%
Hydrogen chloride	7647-01-0	0.02131%
Methyl alcohol	67-56-1	0.00026%
N,N-Dimethylformamide	68-12-2	0.00004%
Ethylene glycol	107-21-1	0.00008%
2-Butoxyethanol	111-76-2	0.00002%
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched	127087-87-0	0.00002%
Tar Bases, quinoline derivs, benzyl chloride-quat	72480-70-7	0.00002%
Cinnamaldehyde	104-55-2	0.00002%
Citric acid	77-92-9	0.00027%
Glutaraldehyde	111-30-8	0.00220%
Didecyl dimethyl ammonium chloride	7173-51-5	0.00033%
Quaternary Ammonium Compounds	68424-85-1	0.00033%
Ethanol	64-17-5	0.00016%
AA/ATBS Co-polymer	9003-05-8	0.00160%
AA/Maleic Anhydride Co-polymer	9003-04-7	0.00160%
Acrylamide-Chloride Salt of Trimethylammonio-Ethyl Acrylate Copolymer	69418-26-4	0.03843%
Alkanes, C12-26-Branched and Linear	90622-53-0	0.03843%
Ethoxylated Alcohols (C12-16)	68551-12-2	0.00480%

Prepared: May 2026

Proposed MAJ8FHSM Well Hydraulic Fracturing Fluid Additives

Ingredients	Chemical Abstract Service Number (CAS #)	% of Total Usage (by Mass)
Water	7732-18-5	88.35634%
Crystalline Silica in the form of Quartz	14808-60-7	11.46878%
Hydrogen chloride	7647-01-0	0.02115%
Methyl alcohol	67-56-1	0.00026%
N,N-Dimethylformamide	68-12-2	0.00004%
Ethylene glycol	107-21-1	0.00008%
2-Butoxyethanol	111-76-2	0.00002%
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched	127087-87-0	0.00002%
Tar Bases, quinoline derivs, benzyl chloride-quat	72480-70-7	0.00002%
Cinnamaldehyde	104-55-2	0.00002%
Citric acid	77-92-9	0.00026%
Glutaraldehyde	111-30-8	0.00218%
Didecyl dimethyl ammonium chloride	7173-51-5	0.00033%
Quaternary Ammonium Compounds	68424-85-1	0.00033%
Ethanol	64-17-5	0.00016%
AA/ATBS Co-polymer	9003-05-8	0.00158%
AA/Maleic Anhydride Co-polymer	9003-04-7	0.00158%
Acrylamide-Chloride Salt of Trimethylammonio-Ethyl Acrylate Copolymer	69418-26-4	0.03815%
Alkanes, C12-26-Branched and Linear	90622-53-0	0.03815%
Ethoxylated Alcohols (C12-16)	68551-12-2	0.00477%

Prepared: May 2026

Proposed MAJ8GHSM Well Hydraulic Fracturing Fluid Additives

Ingredients	Chemical Abstract Service Number (CAS #)	% of Total Usage (by Mass)
Water	7732-18-5	83.67637%
Crystalline Silica in the form of Quartz	14808-60-7	16.15272%
Hydrogen chloride	7647-01-0	0.02003%
Methyl alcohol	67-56-1	0.00025%
N,N-Dimethylformamide	68-12-2	0.00004%
Ethylene glycol	107-21-1	0.00007%
2-Butoxyethanol	111-76-2	0.00002%
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched	127087-87-0	0.00002%
Tar Bases, quinoline derivs, benzyl chloride-quat	72480-70-7	0.00002%
Cinnamaldehyde	104-55-2	0.00002%
Citric acid	77-92-9	0.00025%
Glutaraldehyde	111-30-8	0.00207%
Didecyl dimethyl ammonium chloride	7173-51-5	0.00031%
Quaternary Ammonium Compounds	68424-85-1	0.00031%
Ethanol	64-17-5	0.00016%
AA/ATBS Co-polymer	9003-05-8	0.00150%
AA/Maleic Anhydride Co-polymer	9003-04-7	0.00150%
Acrylamide-Chloride Salt of Trimethylammonio-Ethyl Acrylate Copolymer	69418-26-4	0.03613%
Alkanes, C12-26-Branched and Linear	90622-53-0	0.03613%
Ethoxylated Alcohols (C12-16)	68551-12-2	0.00452%

Prepared: May 2026

Proposed MAJ8HHSM Well Hydraulic Fracturing Fluid Additives

Ingredients	Chemical Abstract Service Number (CAS #)	% of Total Usage (by Mass)
Water	7732-18-5	87.40965%
Crystalline Silica in the form of Quartz	14808-60-7	12.41626%
Hydrogen chloride	7647-01-0	0.02092%
Methyl alcohol	67-56-1	0.00026%
N,N-Dimethylformamide	68-12-2	0.00004%
Ethylene glycol	107-21-1	0.00007%
2-Butoxyethanol	111-76-2	0.00002%
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched	127087-87-0	0.00002%
Tar Bases, quinoline derivs, benzyl chloride-quat	72480-70-7	0.00002%
Cinnamaldehyde	104-55-2	0.00002%
Citric acid	77-92-9	0.00026%
Glutaraldehyde	111-30-8	0.00216%
Didecyl dimethyl ammonium chloride	7173-51-5	0.00032%
Quaternary Ammonium Compounds	68424-85-1	0.00032%
Ethanol	64-17-5	0.00016%
AA/ATBS Co-polymer	9003-05-8	0.00157%
AA/Maleic Anhydride Co-polymer	9003-04-7	0.00157%
Acrylamide-Chloride Salt of Trimethylammonio-Ethyl Acrylate Copolymer	69418-26-4	0.03774%
Alkanes, C12-26-Branched and Linear	90622-53-0	0.03774%
Ethoxylated Alcohols (C12-16)	68551-12-2	0.00472%

Prepared: May 2026

Proposed MAJ8NHSM Well Hydraulic Fracturing Fluid Additives

Ingredients	Chemical Abstract Service Number (CAS #)	% of Total Usage (by Mass)
Water	7732-18-5	83.67637%
Crystalline Silica in the form of Quartz	14808-60-7	16.15271%
Hydrogen chloride	7647-01-0	0.02003%
Methyl alcohol	67-56-1	0.00025%
N,N-Dimethylformamide	68-12-2	0.00004%
Ethylene glycol	107-21-1	0.00007%
2-Butoxyethanol	111-76-2	0.00002%
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched	127087-87-0	0.00002%
Tar Bases, quinoline derivs, benzyl chloride-quat	72480-70-7	0.00002%
Cinnamaldehyde	104-55-2	0.00002%
Citric acid	77-92-9	0.00025%
Glutaraldehyde	111-30-8	0.00207%
Didecyl dimethyl ammonium chloride	7173-51-5	0.00031%
Quaternary Ammonium Compounds	68424-85-1	0.00031%
Ethanol	64-17-5	0.00016%
AA/ATBS Co-polymer	9003-05-8	0.00150%
AA/Maleic Anhydride Co-polymer	9003-04-7	0.00150%
Acrylamide-Chloride Salt of Trimethylammonio-Ethyl Acrylate Copolymer	69418-26-4	0.03613%
Alkanes, C12-26-Branched and Linear	90622-53-0	0.03613%
Ethoxylated Alcohols (C12-16)	68551-12-2	0.00452%

Prepared: May 2026