

Health effects associated with chemicals in fracking fluid*

Chemical	Percent of volume	Skin, eye & sensory organs	Respiratory	Gastrointestinal & liver	Brain & nervous system	Immune	Kidney	Cardio-vascular & blood	Carcinogen	Mutagen	Developmental	Reproductive	Endocrine disruptor	Other uses
Diammonium peroxodisulphate	29	■	■	■	■	■	■	■						bleach, laboratory cleaning
Distillates (petroleum), hydrotreated light	17	■	■	■	■							■		kerosene
Guar gum	15	■	■	■	■	■								food additive
Tetramethylammonium chloride	9	■	■	■	■			■						chemical catalyst
Vinylidene chloride/methylacrylate copolymer	6	■	■	■	■			■						plastic wrap
Methanol	5	■	■	■	■	■	■	■		■				fuel & chemical synthesis (formaldehyde)
1, 2, 3 - Propanetriol	4	■	■	■	■	■	■	■						sweetener & preservative
2,2',2"-nitrotriethanol	2	■	■	■	■	■	■	■	■					chemical manufacturing
Sorbitol	2	■	■	■	■	■	■	■						sweetener & laxative
Sodium tetraborate decahydrate	2	■	■	■	■	■	■	■						cleaning products & insecticides
Sodium borate (borax)	1	■	■	■	■	■	■	■						cleaning products & insecticides
Acrylamides-sodium 2-acrylamido-2-methyl-1-propanesulfonate	0.9	■	■	■	■	■	■	■						drilling
Ethoxylated branched C7-9, C8-rich alcohols	0.8	■	■	■	■	■	■	■						industrial cleaning
Ethoxylated branched C9-11, C10-rich alcohols	0.8	■	■	■	■	■	■	■						industrial cleaning
Sodium hydroxide (lye)	0.8	■	■	■	■	■	■	■						soap & textiles
Bis(hydrogenated tallow alkyl)dimethylammonium bentonite	0.6	■	■	■	■	■	■	■						various industrial uses
Ethoxylated propoxylated 4-nonylphenol-formaldehyde resin	0.6	■	■	■	■	■	■	■						circuit board manufacturing
Heavy aromatic naphtha	0.4	■	■	■	■	■	■	■						gasoline & paint thinner production
Ethoxylated propoxylated C13-rich, ethoxylated	0.4	■	■	■	■	■	■	■						chemical catalyst
Alcohols, C11-14-isoalcs, C13-rich, ethoxylated	0.4	■	■	■	■	■	■	■						various industrial uses
Alkylbenzyltrimethylammonium chlorides, benzyl-C10-16-	0.4	■	■	■	■	■	■	■						various industrial uses
Magnesium silicate hydrate (talc)	0.3	■	■	■	■	■	■	■						baby powder
Poly(oxy-1,2-ethanediy)	0.2	■	■	■	■	■	■	■						pesticides
Alcohols, C12-13-alkyl, ethoxylated	0.2	■	■	■	■	■	■	■						chemical catalyst
Alcohol ethoxylate C-10/16 with 6.5 EO	0.2	■	■	■	■	■	■	■						industrial cleaning
Sodium chloride	0.1	■	■	■	■	■	■	■						table salt
Tetrakis(hydroxymethyl)phosphonium sulfate	0.1	■	■	■	■	■	■	■						pesticides
Non-crystalline silica	0.1	■	■	■	■	■	■	■						electronics
Boric acid	0.0042	■	■	■	■	■	■	■						insecticides
	100.0%													

* Dependent upon degree and route of exposure.