

Uitleg bij het overzicht fracking chemicaliën 2007-2011

In de bijgevoegde lijst van fracking-chemicaliën wordt een overzicht gegeven van producten die in de afgelopen 5 jaren voor fracking-activiteiten zijn gebruikt en welke mogelijk in de toekomst voor fracking-activiteiten kunnen worden ingezet. Deze lijst geeft de stand van zaken weer op 1 december 2011. Het overzicht van producten kan in de loop van de tijd wijzigen. Er kunnen stoffen van de lijst worden verwijderd, bijvoorbeeld wanneer deze niet langer leverbaar zijn of wanneer in het licht van de infasering van chemicaliën deze niet meer aan de criteria in REACH zouden voldoen. Ook is het mogelijk dat er nieuwe producten op de markt komen die voor fracking kunnen worden gebruikt. In ieder geval is uitgangspunt dat producten die in toekomstige fracking-activiteiten worden gebruikt moeten voldoen aan de voorwaarden die in REACH of andere relevante wet- en regelgeving worden gesteld.

De informatie is gebaseerd op de informatie die op de veiligheidsinformatiebladen (VIB's) van het product is vermeld.

Hieronder volgt een korte toelichting op de diverse kolommen met informatie over de fracking chemicaliën:

Fracking chemicals – Tradename:

De handelsnaam van het product.

Composition/Information on ingredients:

Deze kolom bevat informatie over de stoffen in het product die de risico's van het product bepalen. De informatie is afkomstig van de MSDS van het product.

Function of the product:

Beschrijft de functie van het product in fracking-activiteiten.

CAS-number:

Dit is een unieke numerieke identificatie van chemische elementen en componenten. Het CAS-identificatienummer is afkomstig van de MSDS.

Classification of components:

Dit is de classificatie van de in de MSDS opgegeven componenten van een product. De classificaties worden gedefinieerd in EU Verordening 1272/2008 betreffende de indeling, etikettering en verpakking van stoffen en mengsels en het Globally Harmonized System (GHS) of Classification and Labelling of Chemicals (CLP) :

O	Oxiderend
F+	Zeer licht ontvlambaar
T+	Zeer Vergiftig
C	Bijtend
Xn	Schadelijk
Xi	Irriterend
E	Ontploffbaar - Explosief
T	Vergiftig
N	Milieugevaarlijk
F	Licht Ontvlambaar

Risk phrases components:

Dit zijn de risico-zinnen (R-zinnen) van de in het MSDS opgegeven componenten van een product. De risico-zinnen worden gedefinieerd in Bijlage III van EU Richtlijn 67/548/EEC. Gezien de lengte van de bijlage wordt hier volstaan met een verwijzing naar de website van de EU.

http://ec.europa.eu/environment/chemicals/dansub/pdfs/annex3_nl.pdf

Classification – Overall Product:

Dit is de classificatie van het totale product volgens het MSDS volgens de indeling in EU Verordening 1272/2008 betreffende de indeling, etikettering en verpakking van stoffen en mengsels en het GHS of CLP.

Risk Phrases – Overall product: Dit zijn de risico-zinnen van het totale product volgens het MSDS. De risico-zinnen worden gedefinieerd in Bijlage III van EU Richtlijn 67/548/EEC. Gezien de lengte van de bijlage wordt hier opnieuw volstaan met een verwijzing naar de hiervoor genoemde website van de EU.

Fraccing chemicals - Tradename	Composition/Information on ingredients	Function of the product	Cas number	Classification components	Risk phrases components	Classification - Overall Product	Risk Phrases - Overall Product
100 Mesh Sand	Crystalline silica, quartz	Proppant	14808-60-7	Not applicable	None	Not classified	None
AG-58L	Geen componenten opgegeven.	Acid Gellant	Niet opgegeven omdat het een enkelvoudig stof betreft	Het produkt is niet geklasseerd als gevaarlijk volgens 1999/45/EC	None	Not classified	None
AG-7	C10-16 ethoxylated alcohol - 9 moles ethoxylation 1-10%	Gelling chemical	68002-97-1	Xn, Xi, N	R22; R41; R38; R50	Xn, Xi, N	22, 38, 41, 50
B183	Phosphonium Quaternary Salt; 1-5% Quaternary Ammonium Salts; < 1%	Biocide	55566-30-8 68989-00-4	T, Rep 2, Xn, Xi, N Xn, C, N	R23/R61/R22/R41/R50/R43 R22/R34/R50	Rep 2, Xn	R61/R20/R43
B197	2-butoxyethanol; 10-25% propaan-2-ol; 10-30% ethoxylated C11 linear/branched alcohols (5eo); 10-30% dodecyl-pentadecyl alcohol ethoxylate; 10-30% ethoxylated C11 linear/branched alcohols (7eo); 10-30%	EZEFLO Surfactant	111-76-2 67-63-0 34398-01-1c 106232-83-1 34398-01-1b	Xn, Xi F, Xi Xn, Xi Xn, Xi Xn, Xi	R20/R21/R22/R36/R38 R11/R67/R36 R22/R41 R22/R41 R22/R41	Xn	R11/R67/R36/R41/R22/R36/38/R20/21/22
B232	Alkyl hydroxy ethyl benzyl ammonium chloride; 10-25% propaan-2-ol; 5-15%	Non-Emulsifying Agent	61789-68-2 67-63-0	C, Xn, F, N F, Xi	R34/R22/ R11/ R50 R11/R67/R36	C	R34/R11/R50/R22/ R67/ R36
B269	Destillaten (Aardolie) met waterstof behandelde lichte fractie; 30-55% Ethoxylated Alcohol; < 1 %	Green Guar Slurry Gel	64742-47-8	Xn Xn, Xi	R65 R22/R41	Product is non dangerous in accordance with Directive 1999/45/EC	R22/R41/R65
BA-20	Acetic Acid; 10-30% Ammonium acetate; 60-100%	Gel PH Buffer	64-19-7 631-61-8	C C	R10/R35 R34		R34
BF-1	sodium acetate 100%	pH control	00127-09-3				
BF-10L	potassium carbonate 30-50%	Well Stimulation Chemical	584-08-7	Xi, Xn	R22; R36; R38	Xi, Xn	22, 36/38
BF-10LE	acetic acid 5-10%	pH control	000064-19-7	C	R10, R35	Xi	R36
BF-7L	Kaliumcarbonaat; 40-60%	Buffer	000584-08-7	Xn, Xi	Xn:R22; Xi:R36/37/38	Xn, Xi	R22/R36/38
BF-H	sodium hydroxide 30-50%	Acidity Control Chemical	1310-73-2	C	R35		35
BF-L	mierenzuur 70-90%	Acidity Control Chemical	64-18-6	C	R35		34/35
Biobase 637	Paraffinen (aardolie), normale C5-C20; 30-60% Alkenen, C>8; 1-5%	Fraction Liquid	064771-72-8 068411-00-7	Xn Xn	R65/R66 R65	Xn	R65/R66
BR-EHT	natrium bromaat 60-80%, crystalline silica (quartz) 2.5-10%	Breaker	7789-38-0 14808-60-7	Xi, O, Carc. Act 1	R36/37, R9, R45, R48/20	Xi, Xn, O	8, 9, 20, 22, 36, 48

Fraccing chemicals - Tradename	Composition/Information on ingredients	Function of the product	Cas number	Classification components	Risk phrases components	Classification - Overall Product	Risk Phrases - Overall Product
BR-SPL	disodium peroxodisulphate >90%	Other	7775-27-1	O, Xn, Xi, Sens	R8, R22; R36/37/38, R42/43		8, 22, 36/37/38, 42/43
Carbolite	Siliciumdioxide; 10-30% Kwarts (SiO2); 5-10 %	Fracturing Proppant	7631-86-9 14808-60-7	Niet geclassificeerd Xn	R48/R20	Xn	R48/20
Caustic Soda M2	Sodium hydroxide	Well Stimulation Chemical	1310-73-2	C	R35	C	R35
Caustic Soda Solution	sodium hydroxide 33%	Acidity control chemical	001310-73-2	C	R35	C	R35
CL-28E	Borate Salts; 30-60%	Gel Crosslinker		not applicable	none		None
Clay Treat 2C	Mengsel, geen componenten opgegeven	Clay-control	Geen Cas nummer opgegeven	Het produkt is niet geklasseerd als gevaarlijk volgens 1999/45/EC		Not Classified	None
D-4G	3,6,9,12,15,18,21,24-Octaoxatetriacontan-1-ol; 60-100%	Surfactant	24233-81-6	Xn, Xi	R22/R41	Xn, Xi	R22/R41
D-4GB	2-butoxyethanol ethoxylated fatty alcohol 40-60% 20-40%	Well stimulation chemical	00111-76-2	Xn Xn	R20/21/22, R36/38 R22, R41	Xn	R20/21/22 R38 R41
DF-2	2-ethyl hexanol 10-30% 2-butoxyethanol 10-30%	Defoamer (Drilling)	104-76-7 111-76-2	Xi Xi, Xn	R36/38 R20/22; R36/38	Xi, Xn	20/21/22, 36/38
Enzyme G	Hemicellulase enzymconcentraat; 1-5%	Breaker	9025-56-3		R-42	Not Classified	None
F103	2-butoxyethanol Propan-2-ol Ethoxylated alcohol linear (1) Ethoxylated alcohol linear (2) Ethoxylated alcohol linear (3)	EZEFLO Surfactant	111-76-2 67-63-0	Xn, Xi F, Xi Xn, Xi,N Xn, Xi	R20/R21/R22/R36/R38 R11/R67/R36 R22/R36/R38/R51/R53 R22/R41 R22/R36/R38	Xn	R10,R22,R38,R41,R67, R52/53
F108	Amine derivative	EZEFLO Surfactant		Xi,N	R38-41/R50	Xi	R41,R52
F110	Methanol Alcohol, C11 linear, ethoxylated Alcohol, C9-C11, Ethoxylated	EZEFLO Surfactant	67-56-1 34398-01-1 68439-46-3	F,T Xn,Xi,N Xn,Xi	R11/R23/24/25-39/23/24/25 R22/R36/R38/R51/R53 R22/R41	T	R41,R23/24/25, R39/23/24/25,R52/53
F112	Polyethylene glycol monohexyl ether; 7-13%	Surfactant	31726-34-8	Xi	R38/R41	Xi	R41
FERCHEK ® FERRIC IRON INHIBITOR	Isoascorbic acid, sodium salt	Oxygen Scavenger	6381-77-7	Not applicable	None	Not classified	None
Ferrotrol 210C	Ascorbinezuur; 60-100%	Iron Control	000050-81-7	Het produkt is niet geklasseerd als gevaarlijk volgens 67/548/EEG		Not Classified	None

Fraccing chemicals - Tradename	Composition/Information on ingredients	Function of the product	Cas number	Classification components	Risk phrases components	Classification - Overall Product	Risk Phrases - Overall Product
FlexSand MSE	Mengsel, geen componenten opgegeven	Fracturing Proppant		Het produkt is niet geklasseerd als gevaarlijk volgens 1999/45/EC		Not Classified	None
Flo-Back 30	1-propaanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-kokos-acylderivaten, hydroxiden, inwendige zouten; 60-100%.	Surfactant	61789-40-0	Xi	R-36	Xi	R36
FP-16LG	paraffinf 60-100% olefins 5-10% diethylene glycol monobutyl ether 1-5%	Defoamer	090622-52-9 068991-52-6 000112-34-5	Xn Xn Xi	R65 R65 R65	Xn	R65
Frac Sand	Crystalline silica; quartz; 60-100%	Proppant	14808-60-7	Not applicable	None	Not classified	None
Fracal Ultra	Mengsel, geen componenten opgegeven	Crosslinker		Het produkt is niet geklasseerd als gevaarlijk volgens 1999/45/EC		Not Classified	None
GasPerm-1000	Proprietary Component; 10-30% Terpenes and Terpenoids, sweet orange-oil; 10-30% Isopropanol; 10-30%	Surfactant	listed 68647-72-3 67-63-0	Xi, Xn, N Xn, Xi, N F, Xi	R10, R38-43/R65/R50/R53 R10, R65, R38-R43, R50/R53 R11/ R36/ R67		R10/R43/R67/R36/38/R51/53
GBA-4	CalciumFluoride; 60-100% Kwarts (SiO2); 0.1-1%	Breaker	7789-75-5 14808-60-7	Het produkt is niet geklasseerd als gevaarlijk volgens 67/548/EEG Xn	R48/R20	Not Classified	None
GBW-24	Calciumperoxide; 60-100% Calciumhydroxide; 10-30%	Breaker	001305-79-9 001305-62-0	O, Xi	R8/R41/R38 R41	O, Xi	R8/R41/R38
GBW-5	Diammoniumperoxodisulphate; 60-100%	Frac Gel Braker	7727-54-0	O, Xn, Xi	R8/R22/R36/R37/R38/R42/R43	O, Xn, Xi,	R8/R22/R36/37/38/R42/43
GEL-STA Stabilizer	Sodium thiosulfate; 60-100%	Gel Stabilizer	7772-98-7	Not applicable	None	Not classified	None
GS-1	Natrium thiosulfaat, pentahydraat	Gel stabilisator	10102-17-7	Het produkt is niet geklasseerd als gevaarlijk volgens 67/548/EEG		Not Classified	None
GS-HT	not applicable	Well Stimulation Chemical					none
GW-3	Guar-Gom	Water Gellant Agent	9000-30-0	Het produkt is niet geklasseerd als gevaarlijk volgens 67/548/EEG		Not Classified	None

Fraccing chemicals - Tradename	Composition/Information on ingredients	Function of the product	Cas number	Classification components	Risk phrases components	Classification - Overall Product	Risk Phrases - Overall Product
GW-4 AFG	Guar-Gom; 60-100%		9000-30-0	Het produkt is niet geklasseerd als gevaarlijk volgens 67/548/EEG		Not Classified	None
High Perm CRB	Diammoniumperoxodisulphate; 60-100% Kristallijn silica kwarts; 10-30%	Frac Gel Breaker	007727-54-0 014808-60-7	O, Xn, Xi Xn	R8/R22/R36/R37/R38/R42/R43 R48/20	O, Xn, Xi,	R8/R22/R36/37/38/R42/43
HII-124F	Formic Acid; 60-100%	Gel PH Buffer	64-18-6	C- Corrosive	R35	C	R35
Hy Temp O	Mierenzuur; 60-10%	Acid Additive	000064-18-6	C	R35	C	R35
J218	Diammonium Peroxidisulphate; 60-100%	Live Breaker	7727-54-0	O, Xi, Xn	R8/R42/R43/R36/R37/R38/R22	O,Xn	R22/R8/R36/37/38/R42/43
J218	Diammonium Peroxidisulphate; 60-100%	Live Breaker	7727-54-0	O, Xi, Xn	R8/R42/R43/R36/R37/R38/R22	No information available	N/A
J353	Natriumthiosulfaat pentahydraat; 60-100%	High Temperature Stabilizer	10102-17-7			Product is non dangerous in accordance with Directive 1999/45/EC	
J450	2,2',2"-nitrilotriethanol; 60-100%	Iron Stabilizer	102-71-6	Product is non dangerous in accordance with Directive 1999/45/EC		Product is non dangerous in accordance with Directive 1999/45/EC	
J464	Sodium hydrogen carbonate; 60-100%	Buffering Agent	144-55-8			The product is non-dangerous in accordance with Directive 1999/45/EC	N/A
J475	Diammonium Peroxidisulphate; 60-100%	Breaker	7727-54-0				
J480	Zout van aliphatisch zuur; 60-100%	Crosslinker Delay Agent		Product is non dangerous in accordance with Directive 1999/45/EC		Product is non dangerous in accordance with Directive 1999/45/EC	
J481	Natriumbromaat; 60-100%	Live Breaker	7789-38-0	O, Xi, Xn	R9/R36/R38/R22	O,Xn	R9/R22/R36/38
J488	Salt of aliphatic acid	Acid Buffer				The product is non-dangerous in accordance with Directive 1999/45/EC	N/A

Fracking chemicals - Tradename	Composition/Information on ingredients	Function of the product	Cas number	Classification components	Risk phrases components	Classification - Overall Product	Risk Phrases - Overall Product
J488	Salt of aliphatic acid	ACID BUFFER				The product is non-dangerous in accordance with Directive 1999/45/EC	N/A
J490	Natriumbromaat; 60-100%	Encapsulated Breaker	7789-38-0	O, Xi, Xn	R9/R36/R38/R22	O,Xn	R9/R22/R36/38
J510	Destillaten (Aardolie) met waterstof behandelde lichte fractie; 60-100%	Fluid Loss Additive	64742-47-8	Xn	R65	Xn	R65
J517M/L	Boric acid	Crosslinker	10043-35-3			T	R60,R61
J561	Guar gum; 60-100%	Environmental Slurriable Guar	9000-30-0			The product is non-dangerous in accordance with Directive 1999/45/EC	N/A
J562	Polysaccharide derivative; 60-100%	Environmental Slurriable CMHPG		N/A	N/A	The product is non-dangerous in accordance with Directive 1999/45/EC	N/A
J562	Polysaccharide derivative; 60-100%	Environmental Slurriable CMHPG				The product is non-dangerous in accordance with Directive 1999/45/EC	N/A
J564 Environmental Guar Slurry	2-butoxyethanol	Green Guar Slurry Gel	111-76-2	Xi, Xn	R36/38; R20/21/22	Xn	R20/21/22, R36/38
J569	Diammonium peroxidisulphate; 60-100%	EB-Clean MT Breaker	7727-54-0	O;Xn, Xi	R8/R22/R36/R37/R38/R42/R43	Xn, O	R8,R22,R36/37/38,R42/43
J580	Carbonhydrated Polymer	Water Gelling Agent				No information available	N/A
J596	2,2',2"-nitrilotriethanol; <30% Sodium tetraborate; 3-7% Zirconium dichloride oxide; 3-7%	High Temperature Crosslinker	102-71-6 1330-43-4 7699-43-6	Repr. Cat. 2 C	R60/R61 R34/R52	T	R60; R61
J596	2,2',2"-nitrilotriethanol Sodium tetraborate Zirconium dichloride oxide	ThermaFRAC High Temperature Crosslinker	102-71-6 1330-43-4 7699-43-6	Repr.Cat.2 C	R60-61 R34/R52	T	R60,R61

Fracking chemicals - Tradename	Composition/Information on ingredients	Function of the product	Cas number	Classification components	Risk phrases components	Classification - Overall Product	Risk Phrases - Overall Product
J598	Quaternary ammonium chloride Aromatic ammonium compound Amine derivative Ethanol	ThermaFRAC Multi Functional Additive	64-17-5	T, C,Xn,N Xi,N F	R21-25/36/R37/R38 R34/R22/R50 R38-41/R50 R11	Xn	R22,R41,R37/38
J599	Tetraethylenepentamine	ThermaFRAC Stabilizer	112-57-2	Xn,C,N	R21/R22/R34/R43/R51-53	C, N	R43,R34,R21/22,R51/53
K-38	Disodium octaborate tetrahydrate; 60-100%	Gel Crosslinker	12008-41-2	Repr. Cat2	R60/R6	Xn	R60/R61
KCl	Potassium chloride; 60-100%	Salt (Clay Control)	7447-40-7	Not classified	None	Not classified	None
KCL-B	not applicable	Well Stimulation Chemical					none
L010	Boorzuur; 60-100%	Crosslinker	10043-35-3	Evaluated as not required to be labelled.		Evaluated as not required to be labelled.	
L064	Tetramethylammonium chloride	Temporary Clay Stabilizer	75-57-0	T,Xi	R21-25/36/R37/R38/R50	T, N	R21,R25,R50,R36/37/38
L071	Cholinium chloride; 70-75%	Temporary Clay Stabilizer	67-48-1	N/A	N/A	The product is non-dangerous in accordance with Directive 1999/45/EC	N/A
LFC-5G Contains :	Paraffinen (aardolie), normale Alkenen, C>8; 1-5% C5-C20; 30-60%	Gellant Agent	064771-72-8 068411-00-7	Xn Xn	R65/R66 R65	Xn	R65/R66
LGC-H-M3	alkanes C10-14 alkenes C>8 1-10% 30-50%	Gelling Chemical	93924-07-3 98526-58-9	Xn Xn	R65 R65	Xn	65
LGC-IIM	Potassium chloride; 10-30%	Liquid Gel Concentrate	7447-40-7	Not classified	None	Not classified	None
LGC-IM	Guar Gum derivative; 5-10% Potassiumchloride; 10-30%	Liquid Gel Concentrate	7447-40-7	Not applicable Not applicable	None None		None
LOSURF-400	Isopropanol; 10-30%	Surfactant	67-63-0	F, Xi	R11/R36/R67		R10/R34/R67/R50/R53
M002	Sodium hydroxide	Caustic Soda	1310-73-2	C	R35	No information available	N/A
M117	Potassiumchloride	Clay Control Agent	7447-40-7	Product is non dangerous in accordance with Directive 1999/45/EC		Product is non dangerous in accordance with Directive 1999/45/EC	None
Magnacide 575	tetrakis(hydroxymethyl)fosfoniumsulfaat 60-100%	Biocide	055566-30-8	Xn	R22, R41, R43, R50, R63	Xn, N	R22, R41, R43, R50, R63

Fraccing chemicals - Tradename	Composition/Information on ingredients	Function of the product	Cas number	Classification components	Risk phrases components	Classification - Overall Product	Risk Phrases - Overall Product
MO-67	Sodium hydroxide; 10-30 %	Gel PH Buffer	1310-73-2	C	R35		R35
NE-2	modified quarternary ammonium compound 10-30% propan-2-ol 10-30%	Demulsifier	proprietary 67-63-0	Xn, C, F, N F, Xi	R22, R34, R11, R50, R10 R11, R36, R67	Xi, F	34, 22, 37, 11, 10, 50, 67, 36
NF-6	Aluminum stearate; 1-5 % Vegetable oil; 60 - 100%	Defoamer	637-12-7	Not applicable Not applicable			None
OptiFlo-III	Crystalline silica; quartz; 10-30% Ammonium persulfate; 60-100%	Gel Breaker	14808-60-7 7727-54-0	not applicable O, Xn, Xi	R8/R22/R36/R37/R38/R42/R43		R8/R22/R36/37/38/R42/43
Optiprop G2 coated CarboProp	aluminium oxide 30-50% mullite p/f novolac hars/hexamethylenetetramine complex 1-10%	Proppant	1344-28-1 1302-93-8	Xi Xn	R36/38 - R20/22	Xi, Xn	36/38, 20/22
Optiprop G2 Coated Carbo proppant	Silicon Dioxide (Silica Sand) P/F Novolac Resin Hexamethylenetetramine Epichlorohydrin	Proppant	14808-60-7 9003-35-4 1009-7-0 025085-99-8	-	-	Not classified	None
OptiProp G2/Carboprop	Calcined bauxite	Proppant	66402-68-4			Product is non dangerous in accordance with Directive 1999/45/EC	None
PGA-H	not applicable	Gelling Chemical					none
PSA-1	crystalline silica, quartz 0.0-1%	Stabilizing agent	014808-60-7	Xn	R22, R36		
PSA-3	Mengsel, geen componenten opgegeven	Suspension Additive	Geen Cas nummer opgegeven	Het produkt is niet geklasseerd als gevaarlijk volgens 1999/45/EC		Not Classified	None
Resin Coated Sand	Crystalline Silica (quartz); 94-97% Phenol-Formaldehyde Novolak Resin; 2-5%	Resin Coated Sand/ Ceramic Proppant	14808-60-7 9003-35-4	Not applicable	None	Not applicable	None
Resin Coated Silica	Phenol, polymer met formaldehyde Kwarts (SiO2); 0.1-1%	Proppant	9003-35-4 14808-60-7	Xn Xn	R20/R22 R48/R20	Not Classified	None
Sand	crystalline silica, quartz > 98%	Stabilizing agent	014808-60-7	Xn	R22, R36	Xn, Carc cat 3	R40, R48/20

Fraccing chemicals - Tradename	Composition/Information on ingredients	Function of the product	Cas number	Classification components	Risk phrases components	Classification - Overall Product	Risk Phrases - Overall Product
Santrol Optiprop G2 Coated Carbolite	aluminum oxide 16-30% aluminum silicate 60-74% silicon dioxide <10% iron oxide 4-11% titanium oxide 3-5% P/F Novolac resin/hexamethylenetetramine complex epoxy adduct <0.5%	Proppant	1344-28-1 1304-76-7 60676-86-0 1309-37-1 13463-67-7	Xi Xn	R36/38 R20/22	Xi, Xn	R36/38, R20/22
Silica Sand	100% silica sand	Proppant					20, 48/20
Sodiumhypochlorite	Sodiumhypochlorite	Biocide; Bleach, Tank Cleaning	231-668-3	C	R31/R34		R31/R34
SP-Breaker	Sodium persulfate; 60-100%	Gel Breaker	7775-27-1	O; Xn	R8/22/36/37/38/42/43.	O, Xn	R8/R22/R36/37/38/R42/43
Starcide	N, -Methylene bis (5-methyloxazolidine); 90 - 100%	Biocide	66204-44-2	C, Xn	R34/R21/R22;	C	R34/R21/22
U028	Natrium hydroxide; 30%	Gelling Agent	1310-73-2	C	R35	C	R35
U066	2-Butoxyethanol; 60-100%	Mutual Solvent	111-76-2	Xn, Xi	R20/R21/R22/R36/R38	No information available	N/A
U066	2-Butoxyethanol; 60-100%	Mutual Solvent	111-76-2	Xn, Xi	R20/R21/R22/R36/R38	No information available	N/A
VICON NF BREAKER	Chlorous acid, sodium salt; 8-10% Sodium chloride; 10-30%	Gel Breaker	7758-19-2 7647-14-5	T,O,C	R22/R23/R24/R9/R34/R32 Not applicable		R32/R34
W054	Heavy Aromatic Naphtha Polyquaternary Methanol Oxyalkylated Benzyl C10-16 Alkyldimethyl Ammonium Chlorid Oxyalkylated alkyl Alcohol Ethoxylated Naphthalene 1,2,4-Trimethylbenzene	Surfactant	64742-94-5 67-56-1 68989-00-4 91-20-3 95-63-6	Xn, N F, T Xi, N C, N Xi, N Xi Xn, N	R51/53, R65, R66, R67 R52/53 R11, R23/24/25, R39/23/24/25 R38, R41, R51/53 R22, R34, R50 R38, R41, R50/53 R38, R41 R22, R40, R50/53 R10, R20, R36/37/38, R51/53	F, T	R11, R23/24/25, R38, R39/23/24/25, R41, R51/53
Xanvis L (X)	glycerin 5-7% ethanol 5-8%	Viscosifier	200-289-5 64-17-5	Not classified F	R11		not assigned
XC 80102	Glutaaraldehyde; 10-30%	Biocide	111-30-8	T, C,N	R23/R25/R34/R42/R43/R50	Xn, C	R20/22/R34/R42/43
XC 82448	tetrakis(hydroxymethyl)fosfoniumsulfaat(2:1) 1,2-Ethanediamine, N,N,N',N'-tetramethyl-polymer with 1,1'-oxybis(2-chloroethane)	Biocide	55566-30-8 31075-24-8	Repr. Cat2, T,Xn,N N	R61/R23/R22/R41/R43/R50	Repr. Cat2, T,Xn,N	R61/R23/R22/R41/R43/R50
XLA-2	Aluminiumchloride; 5-10%	Crosslinker	007446-70-0	C	R34	Xi	R36/38

Fracking chemicals - Tradename	Composition/Information on ingredients	Function of the product	Cas number	Classification components	Risk phrases components	Classification - Overall Product	Risk Phrases - Overall Product
XLB-D	not applicable	Crosslinking Chemical			not applicable		22, 34, 60/61
XLB-I	not applicable	Crosslinking Chemical			not applicable		not assigned
XLD-2	l-(+)-melkzuur; 60-100%	Crosslinker Delay	79-33-4	Xi	R41/ R38	Xi	R41/R38
XLW-2L	Mengsel, geen componenten opgegeven	Crosslinker	Geen Cas nummer opgegeven	Het produkt is niet geklasseerd als gevaarlijk volgens 67/548/EEG		Not Classified	None
XLW-56	Glyoxal; 10-30% Dinatriumtetraboraatecahydraat 5-10%	Crosslinker	107-22-2 1303-96-4	Muta.Cat. 3; Xn, Xi Repr. Cat2	R68/ R20/ R36/R38/R43 R60/R61	Muta.Cat. 3; Repr. Cat2, Xn, Xi	R68/R60/R61/R20/R36/38/R43