

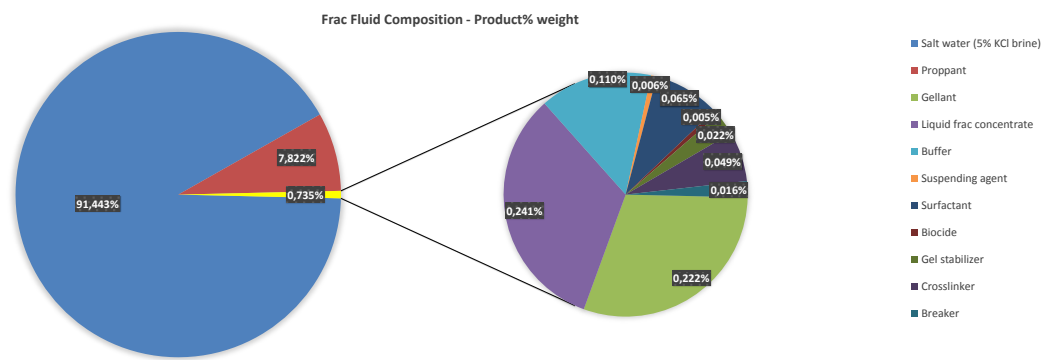
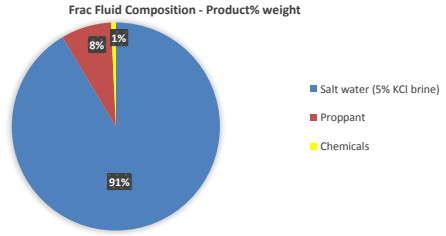
OVERVIEW USED PRODUCTS, Blija (BLF-108), 07 Sept 2012

Final list (with used products and actual weights/percentages)

Products	Use	Product Weight (kg)	Product Weight (%)	Ingredient	Ingredient CAS number	Ingredient % *	Product classification [#]
Salt water (5% KCl brine)	Carrier	729693,40	91,443				none
Optiprop G2	Proppant	62416,00	7,822	Non-hazardous ingredients		100	none
GW-4AFG	Gellant	1771,90	0,222	Non-hazardous ingredients		100	none
BioBase 637	Liquid frac concentrate component	1926,70	0,241	Guar Gum	9000-30-0/232-536-8	100	Xn;R65,R66
BF-1	Buffer	66,40	0,008	Paraffins (petroleum), normal C5-C20	64771-72-8/265-233-4	100	
PSA-3	Suspending Agent	44,30	0,006	Alkenes C>8	68411-00-7/270-095-3	5	none
D-4G	Surfactant	14,80	0,002	Non-hazardous ingredients		100	none
XC82448	Biocide	43,70	0,005	3,6,9,12,15,18,21,24-octaotetracontan-1-ol	24233-81-6	100	Xn;R22, Xi;R41
GS-1	Gel Stabilizer	172,00	0,022	Tetrakis(hydroxymethyl) Phosphonium Sulfate	55566-30-8/259-709-0	60	Rep Cat 2;R61, T;R23, Xn;R22, Xi;R41, R43,
BF-7L	Buffer	809,50	0,101	1,2-Ethanediamine, N,N,N',N'-tetramethyl-, polymer with 1,1'-oxybis(2-chloroethane)	31075-24-8	1	none
Fracal Ultra	Crosslinker	389,10	0,049	Non-hazardous ingredients		100	Xi;R36/37/38
GBW-24	Breaker	102,00	0,013	Potassium Carbonate	584-08-7/209-529-3	60	none
GBW-5	Breaker	24,00	0,003	Non-hazardous ingredients		100	O;R8, Xi;R38, R41
Flo-Back 30	Surfactant	501,40	0,063	Calcium Peroxide	1305-79-9/215-139-4	100	
				Calcium Hydroxide	1305-62-0/215-137-3	30	
				Calcium Carbonate	1317-65-3/207-439-9	10	
				Diammonium Peroxodisulphate	7727-54-0/231-786-5	100	O;R8, Xn;R22, Xi;R36/37/38, R42/43
				1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl deriv., hydroxides, inner salts	61789-40-0/263-058-8	100	Xi;R36
TOTALS		797975,2	100,000				

Contingency chemicals	Use	Contingency product Weight (kg)	Contingency product Weight (%)	Ingredient	Ingredient CAS number	Ingredient % *	Product Classification [#]
Ferrotrol 300	Iron Control contingency	0,00	0,000	Citric acid	77-92-9/201-069-1	100	Xi;R36
Xanvis LX)	Viscosifier contingency	467,80	26,699	Non-hazardous ingredients		100	none
FP-16LG	Defoamer	0,00	0,000	Ethanol	64-17-5/200-578-6	10	Xn;R65
Liquid Nitrogen	Stored nitrogen gas	1279,30	73,015	Paraffins (petroleum) normal C5-20	64771-72-8/265-233-4	100	none
HEC	Viscosifier contingency	0,00	0,000	Alkenes C>8	68411-00-7/270-095-3	5	none
Sodium Carbonate (Soda Ash)	pH control	0,00	0,000	2-(2-butoxyethoxy)ethanol	112-34-5/203-961-6	5	Xi;R36
Nitrogen Gas	Liquid lifting	5,00	0,285	Non-hazardous ingredients		30	none
				Sodium Carbonate	497-19-8/207-838-8	100	
TOTALS		1752,1	100,000				

Summary	Product Weight (kg)	Product Weight (%)
Salt water (5% KCl brine)	729693,40	91,443
Proppant	62416,00	7,822
Chemicals	5865,80	0,735
Gellant		0,222
Liquid frac concentrate		0,241
Buffer		0,110
Suspending agent		0,006
Surfactant		0,065
Biocide		0,005
Gel stabilizer		0,022
Crosslinker		0,049
Breaker		0,016
Total	797975,20	100,000



* Total percentage of composition might not equal 100% - exceedance of 100% is possible because maximum concentrations of hazardous chemicals are included if ranges are given in MSDS, totals lower than 100% are possible because non-hazardous solvents (i.e. water) are not included in the composition
[#] Classification according to Dutch law at time of execution, explanation about the danger symbols or the R-sentences can be found on Wikipedia (https://en.wikipedia.org/wiki/European_hazard_symbols resp. https://en.wikipedia.org/wiki/List_of_R-phrases)