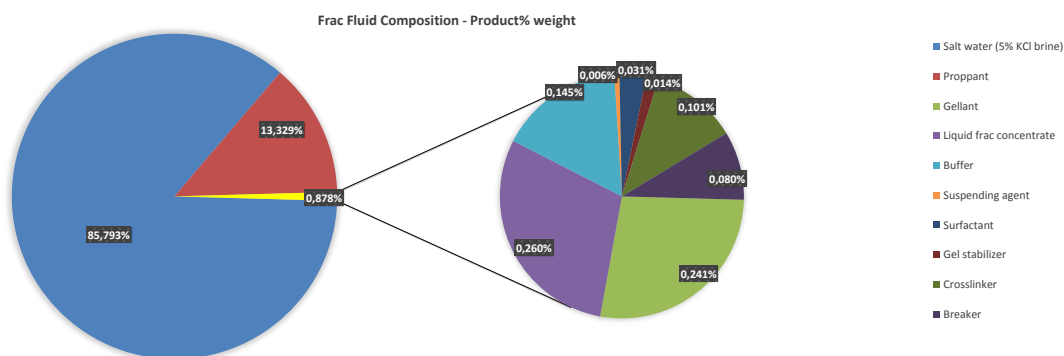
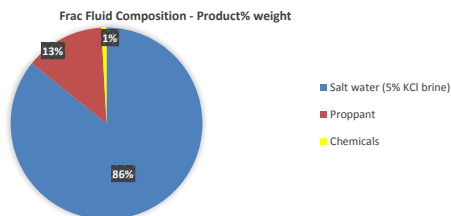


OVERVIEW USED PRODUCTS, Hardenberg (DVD-4), Jan 2016

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	782654,40	85,793	Non-hazardous ingredients		100	none
Resin coated ceramic proppant 20/40	Proppant	27265,00	2,989	Ceramic materials and wares, chemicals	66402-68-4/266-340-9	100	none
Resin coated ceramic proppant 16/20	Proppant	94327,00	10,340	Ceramic materials and wares, chemicals	66402-68-4/266-340-9	100	none
100 Mesh Sand	Proppant	0,00	0,000	Crystalline Silica Quartz	14808-60-7/238-878-4	100	H372, H350i
GW-4AFG	Gellant	2197,40	0,241	Non-hazardous ingredients		100	none
BioBase 637	Liquid frac concentrate component	2375,50	0,260	Hydrocarbons C14-C17, n-alkanes, <2% aromatics	917-828-1	100	H304, EUH066
BF-1	Buffer	82,30	0,009	Hydrocarbons C10-C14, n-alkanes, <2% aromatics	920-274-3	5	none
PSA-3	Suspending Agent	53,30	0,006	Non-hazardous ingredients		100	H350i, H373
D-4GB	Surfactant	19,90	0,002	Crystalline Silica Quartz	14808-60-7/238-878-4	5	
				Non-hazardous ingredients		100	
				Alcohols, C9-11-iso-, C-10-rich, ethoxylated	78330-20-8	100	R20/21/22, R38, R41
GS-1	Gel Stabilizer	130,00	0,014	Non-hazardous ingredients		100	none
BF-7L	Buffer	1241,30	0,136	Potassium Carbonate	584-08-7/209-529-3	60	R36/37/38
XLW-30G	Crosslinker	923,40	0,101	Non-hazardous ingredients		100	R22, R36/37/38
				Sodium Bisulphate	7681-38-1/231-665-7	0,1	
				Sodium Chloride	7647-14-5/231-598-3	0,1	
				Crystalline Silica Quartz	14808-60-7/238-878-4	0,1	
Enzyme G-I	Breaker	699,50	0,077	Non-hazardous ingredients		100	none
GBW-24	Breaker	29,00	0,003	Calcium Peroxide	1305-79-9	70	H272, H315, H318, H335
				Calcium Dihydroxide	1305-62-0	20	
				Limestone	1317-65-3	10	
Flo-Back 30	Surfactant	262,20	0,029	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N- coco acyl derivs., hydroxides, inner salts	61789-40-0/263-058-8	30	H315, H319
TOTALS		912260,2	100,000				

Summary	Product Weight (kg)	Product Weight (%)
Salt water (5% KCl brine)	782654,40	85,793
Proppant	121592,00	13,329
Chemicals	8013,80	0,878
specified below:		
Gellant	0,241	
Liquid frac concentrate	0,260	
Buffer	0,145	
Suspending agent	0,006	
Surfactant	0,031	
Gel stabilizer	0,014	
Crosslinker	0,101	
Breaker	0,080	
Total	912260,20	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), explanation about the new danger symbols and the H-sentences can be found on Wikipedia as well (https://en.wikipedia.org/wiki/GHS_hazard_statements), this frac is executed in the transition period, so both classification methods are used for this frac (depending on the available information for the chemicals from the supplier and in the permit)