

CLARIANT 

Industrial & Consumer Specialties

# CROP SOLUTIONS





Clariant has long lasting experience in producing adjuvants and inerts for the crop protection industry. Our portfolio is one of the broadest in the market covering nonionic, anionic and cationic surfactants, blends, solvents as well as polymeric dispersing agents.

Clariant understands that the consistent quality of our products is a requirement for your formulation to a success. Our deep agronomical and agrochemical understanding enables us to provide top formulation guidance, to provide an optimized adjuvant recommendation and to support you with the different regulatory inquiries involved in bringing your product to the market.

Constant innovation is the key to future success. Our ability to transform market requirements into new products and services makes us a preferred partner in the crop protection industry.

Our globally integrated production network ensures an optimized supply chain.

# ***Content***

<b>1 Adjuvant</b>	<b>3</b>
1.1 Amine ethoxylate	3
1.2 EO/PO block copolymer	3
1.3 Ether sulfate	3
1.4 Fatty alcohol ethoxylate	3
1.5 Sorbitan ester ethoxylated	5
1.6 Special adjuvant	5
1.7 Tributylphenol ethoxylate	7
<b>2 Dispersing agent</b>	<b>7</b>
2.1 Methyl oleyl taurate	7
2.2 Phosphate ester	7
2.3 Polycondensation product	9
2.4 Sulfonation product	9
2.5 Tristyrylphenol ethoxylate	9
<b>3 Emulsifier (anionic)</b>	<b>11</b>
3.1 Alkylbenzene sulfonate	11
<b>4 Emulsifier (blend)</b>	<b>13</b>
4.1 Anionic-/non-ionic blend	13
4.2 Clariant Matched Pair	13
<b>5 Emulsifier (nonionic)</b>	<b>13</b>
5.1 Castor oil ethoxylate	13
5.2 EO/PO alkoxylation product	15
5.3 EO/PO block copolymer	15
5.4 Fatty alcohol ethoxylate	15
5.5 Phosphate ester	17
5.6 Sorbitan ester ethoxylated	17
5.7 Special emulsifier	17
5.8 Tributylphenol ethoxylate	19
5.9 Tristyrylphenol ethoxylate	19
<b>6 Solvent</b>	<b>21</b>
6.1 Solvent	21
<b>7 Wetting agent</b>	<b>21</b>
7.1 Amine ethoxylate	21
7.2 EO/PO block copolymer	21
7.3 Ether sulfate	21
7.4 Fatty alcohol alkoxyate	23
7.5 Fatty alcohol ethoxylate	23
7.6 Methyl oleyl taurate	23
7.7 Olefin sulfonate	23
7.8 Sulfosuccinate	23

## CLARIANT INTERNATIONAL LTD

Clariant International Ltd.  
Industrial & Consumer Specialties  
Global Marketing Crop Solutions  
4132 MuttENZ  
Switzerland  
Phone +41 61 469 7212

Internet  
<http://www.crop-solutions.clariant.com>

E-Mail  
[crop-solutions@clariant.com](mailto:crop-solutions@clariant.com)

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Clariant makes no warranties, express or implied, as to the information's accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Clariant's products for its particular application. Nothing included in this information waives any of Clariant's General Terms and Conditions of Sale, which control unless it agrees otherwise in writing. Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Clariant products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products. For additional information, please contact Clariant.



**Clariant International Ltd**  
For sales to customers located within the United States and Canada the following applies in addition NO EXPRESS OR IMPLIED WARRANTY IS MADE OF THE MERCHANTABILITY, SUITABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE OF ANY PRODUCT OR SERVICE.

\* Product and service marks protected by Clariant in many countries

TM Trademark at introductory stage

© 2010 Clariant International Ltd,  
Rothausstrasse 61, 4132 MuttENZ, Switzerland

## Adjuvant

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
Amine ethoxylate									
Genamin C 020						•			Genamin C 020 is an amine ethoxylate based on cocos fatty amine. Lower ethoxylated amine ethoxylates (2 to 5 EO) are highly compatible with the Glyphosate potassium salt and high-load formulations of Glyphosate.
Genamin C 050						•			Genamin C 050 is an amine ethoxylate based on cocos fatty amine. Lower ethoxylated amine ethoxylates (2 to 5 EO) are highly compatible with the Glyphosate potassium salt and high-load formulations of Glyphosate.
Genamin C 100						•			Genamin C 100 is an amine ethoxylate based on cocos fatty amine.
Genamin O 200						•			Genamin O 200 is a higher ethoxylated oleyl amine with a lower pour point versus the corresponding tallow amine ethoxylate.
Genamin S 080	•			•		•			Genamin S 080 is a wetting agent and can have other adjuvant functions.
Genamin S 100	•			•		•			Genamin S 100 is a wetting agent and can have other adjuvant functions.
Genamin T 050						•			Lower ethoxylated amine ethoxylates (2 to 5 EO) are highly compatible with the Glyphosate potassium salt and high-load formulations of Glyphosate.
Genamin T 100						•			Genamin T 100 is a medium EO range tallow amine ethoxylate.
Genamin T 150						•			Genamint T 150 is the standard adjuvant for Glyphosate IPA formulations. When using Genamin T 150, the addition of a solubilizer is necessary to obtain cold-temperature stability and dissolution behaviour in the spray tank.
EO/PO block copolymer									
Genapol ED 1616	•		•	•					Genapol ED 1616 is a versatile surfactant which reduces surface tension, acts as compatibilizer in EC and EW formulations and can reduce crystallization.
Ether sulfate									
Genapol LRO liq.		•				•			Genapol LRO is a standard wetting agent/adjuvant for tank-mix uses and SL formulations of water-soluble herbicides like Glufosinate. Furthermore it is used as wetting agent in SCs.
Genapol LRO paste		•				•		•	Genapol LRO is a standard wetting agent/adjuvant for tank-mix uses and SL formulations of water-soluble herbicides like Glufosinate. Furthermore it is used as wetting agent in SCs or WGs.
Fatty alcohol ethoxylate									
Genapol C 050	•	•	•	•					Besides its use as emulsifier, Genapol C 050 shows excellent adjuvant properties in EC and SC formulations by enhancing performance in foliar applications.
Genapol C 070	•	•	•	•					Besides its use as emulsifier, Genapol C 070 shows excellent adjuvant properties in EC and SC formulations by enhancing performance in foliar applications.

Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx
Cocos fatty amine with 2 EO	100%	Liquid	--	--				--	Registration required	920, 930
Cocos fatty amine with 5 EO	100%	Liquid	--	--				--	Exempted due to polymer status	920, 930
Cocos fatty amine with 10 EO	100%	Liquid	--	--				--	Exempted due to polymer status	920, 930
Oleyl amine ethoxylate	100%	Liquid	--	--				--	Exempted due to polymer status	920, 930
Stearyl fatty amine with 8 EO	100%	Liquid	--	--				--	Exempted due to polymer status	920
Stearyl fatty amine with 10 EO	100%	Liquid	--	--				--	Exempted due to polymer status	920
Tallow fatty amine with 5 EO	100%	Liquid	--	--				--	Exempted due to polymer status	920, 930
Tallow fatty amine with 10 EO	100%	Liquid	--	--				--	Exempted due to polymer status	920, 930
Tallow fatty amine with 15 EO	100%	Liquid	--	--				--	Exempted due to polymer status	920, 930
Ethylene diamine EO/PO block copolymer	100%	Liquid	max. 0,4%	ca. 73,0 (10% a.m. in water)				16	Exempted due to polymer status	960
Alkyl ether sulfate, sodium salt	26%	Liquid	ca. 70%	--				--	Registration required	910, 930
Alkyl ether sulfate, sodium salt	69%	Paste	ca. 30%	--				--	Registration required	910, 930
Coconut fatty alcohol polyglycol ether with 5 EO	100%	Liquid	--	ca. 73		•		10	Exempted due to polymer status	910, 930, 960
Coconut fatty alcohol polyglycol ether with 7 EO	100%	Liquid	--	ca. 50,5	•			12	Exempted due to polymer status	910, 930, 960

## Adjuvant

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
Fatty alcohol ethoxylate									
Genapol C 100	•	•	•	•					Besides its use as emulsifier, Genapol C 100 shows excellent adjuvant properties in EC and SC formulations by enhancing performance in foliar applications.
Genapol C 120	•	•	•	•					Besides its use as emulsifier, Genapol C 120 shows excellent adjuvant properties in EC and SC formulations by enhancing performance in foliar applications.
Genapol C 200	•	•	•	•					Besides its use as emulsifier, Genapol C 200 shows excellent adjuvant properties in EC and SC formulations by enhancing performance in foliar applications.
Genapol ID 060	•	•	•	•					Genapol ID 060 is a wetting agent in SC formulations and can also be used as built-in-adjuvant or as a component of tank-mix adjuvants to increase wetting of the plant surface.
Genapol ID 100	•	•	•	•		•			Genapol ID 100 is a wetting agent in SC formulations and can also be used as built-in-adjuvant or as a component of tank-mix adjuvants that is rapidly wetting the plant surface and can improve penetration.
Genapol O 100	•		•	•	•				The Genapol O types are alcohol ethoxylates based on a naturally derived fatty alcohol. Besides its use as emulsifier, Genapol O 100 shows excellent adjuvant properties in EC and SC formulations.
Genapol O 109		•		•					The Genapol O types are alcohol ethoxylates based on a naturally derived fatty alcohol. Genapol O 109 is a 90% aqueous version of Genapol O 100 for easier handling in SC formulations .
Genapol T 150	•	•	•	•					Genapol T 150 is a vegetable tallow alcohol based emulsifer and is further successfully used as adjuvant in SC formulations.
Genapol X 050	•	•	•	•					The Genapol X products combine low-foam emulsification and wetting properties which make them the first choice for many NPE-free formulations as emulsifier, wetting agent and adjuvant.
Genapol X 060	•	•		•				•	The Genapol X products combine low-foam emulsification and wetting properties which make them the first choice for many NPE-free formulations as emulsifier, wetting agent and adjuvant.
Genapol X 080	•	•	•	•					The Genapol X products combine low-foam emulsification and wetting properties which make them the first choice for many NPE-free formulations as emulsifier, wetting agent and adjuvant.
Genapol X 150	•	•	•	•					The Genapol X products combine low-foam emulsification and wetting properties which make them the first choice for many NPE-free formulations as emulsifier, wetting agent and adjuvant.
Sorbitan ester ethoxylated									
Emulsogen 4156	•	•	•	•					Excellent emulsifier based on renewable resources and with a favorable toxicological profile used as tank mix adjuvant and in various formulations
Special adjuvant									
Genamin 267						•			Genamin 267 is the standard ready-to-use adjuvant for Glyphosate 360 g/l a.e. IPA formulations with an excellent cost-performance profile. No addition of solubilizer is necessary.
Genaminox LA						•			Genaminox LA is a cost-efficient adjuvant for TAE-free Glyphosate formulations.
Synergen 9903						•			Synergen 9903 is a cost-efficient and environmentally friendly adjuvant for TAE-free Glyphosate formulations.

Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx
Coconut fatty alcohol polyglycol ether with 10 EO	100%	Pasty-wax like	--	ca. 90,5	•			14	Exempted due to polymer status	910, 930, 960
Coconut fatty alcohol polyglycol ether with 12 EO	100%	Pasty	--	ca. 67			•	14,5	Exempted due to polymer status	910, 930, 960
Coconut fatty alcohol polyglycol ether with 20 EO	100%	Pasty, wax-like	--	ca. 77			•	16,5	Exempted due to polymer status	910, 930
Iso-decyl alcohol polyglycol ether with 6 EO	100%	Liquid	max. 0,2%	ca. 43,0		•		13	Exempted due to polymer status	910, 930, 960
Iso-decyl alcohol polyglycol ether with 10 EO	100%	Liquid	--	ca. 85,0	•			14	Exempted due to polymer status	910, 930, 960
Oleyl alcohol polyglycol ether with 10 EO	100%	Pasty-wax like	--	ca. 50,0			•	12	Exempted due to polymer status	910, 930, 960
Oleyl alcohol polyglycol ether with 10 EO	90%	Liquid	ca. 10%	ca. 50,0			•	12	Exempted due to polymer status	910, 930, 960
C16/C18 fatty alcohol polyglycol ether with 15 EO	100%	Wax-like	--	ca. 72,0			•	--	Exempted due to polymer status	910, 930, 960
Iso-tridecyl alcohol polyglycol ether with 5 EO	100%	Liquid	max. 0,5%	ca. 60,5		•		10	Exempted due to polymer status	910, 930, 960
Iso-tridecyl alcohol polyglycol ether with 6 EO	100%	Liquid	max. 0,5%	ca. 65,5		•		11	Exempted due to polymer status	910, 930, 960
Iso-tridecyl alcohol polyglycol ether with 8 EO	100%	Liquid	max. 0,5%	ca. 75,5		•		13	Exempted due to polymer status	910, 930, 960
Iso-tridecyl alcohol polyglycol ether with 15 EO	100%	Wax-like	max. 0,5%	ca. 70		•		15	Exempted due to polymer status	910, 930, 960
Sorbitan monolaurate polyglycol ether with 20 EO	97%	Liquid	ca. 2,5%	--				17	Exempted due to polymer status	910, 930
Amine ethoxylate containing a solubilizer	100%	Liquid	--	--				--	Exempted due to polymer status	920, 930
Aqueous solution of an amphoteric surfactant	30%	Liquid	--	--				--	Registration required	--
Aqueous solution of an amphoteric adjuvant	32,5%	Liquid	--	--				--	Registration required	--



## Adjuvant

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
Special adjuvant									
Synergen G 480						•			Synergen G 480 is cost effective and environmentally friendly adjuvant for TAE-free, high Load MIPA Glyphosate formulations.
Synergen G2D						•			Synergen G2D is a cost-efficient and environmentally friendly adjuvant for TAE-free Glyphosate formulations.
Synergen GU						•			Synergen GU is a universal and cost-efficient adjuvant for glyphosate formulations.
Tributylphenol ethoxylate									
Sapogenat T 080	•		•	•	•				Sapogenat T products are the best-performing NPE alternatives: Besides excellent emulsification power, these surfactants are also good wetters, increasing pesticide efficacy in foliar application.
Sapogenat T 110	•	•	•	•					Sapogenat T products are the best-performing NPE alternatives: Besides excellent emulsification power, these surfactants are also good wetters, increasing pesticide efficacy in foliar application.
Sapogenat T 130	•	•	•	•					Sapogenat T products are the best-performing NPE alternatives: Besides excellent emulsification power, these surfactants are also good wetters, increasing pesticide efficacy in foliar application.
Sapogenat T 180	•	•	•	•					Sapogenat T products are the best-performing NPE alternatives: Besides excellent emulsification power, these surfactants are also good wetters, increasing pesticide efficacy in foliar application.

## Dispersing agent

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
Methyl oleyl taurate									
Hostapon TPHC		●						●	Hostapon TPHC shows both wetting and dispersing properties which makes it a versatile inert ingredient for many liquid and solid formulations with an excellent toxicological and ecotoxicological profile.
Phosphate ester									

Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx

--	--	--	--	--	--	--	--	--	--	--

Aqueous solution of surfactants and glycols	50%	Liquid	--	--				--	Registration required	--
Aqueous solution of an amphoteric adjuvant	30%	Liquid	--	--				--	Registration required	--
Aqueous solution of surfactants and glycols	35%	Liquid	--	--				--	Registration required	--

--	--	--	--	--	--	--	--	--	--	--

Tri-sec-butylphenol polyglycol ether with 8 EO	100%	Liquid	--	ca. 67,0		•		11	Exempted due to polymer status	--
Tri-sec-butylphenol polyglycol ether with 11 EO	100%	Liquid	max. 0,5%	ca. 43,0	•			13	Exempted due to polymer status	--
Tri-sec-butylphenol polyglycol ether with 13 EO	100%	Liquid-pasty	--	ca. 63,0	•			14	Exempted due to polymer status	--
Tri-sec-butylphenol polyglycol ether with 18 EO	100%	Wax-like	--	ca. 62,5			•	15	Exempted due to polymer status	--

--	--	--	--	--	--	--	--	--	--	--

Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx

--	--	--	--	--	--	--	--	--	--	--

Fatty acid methyl tauride sodium salt	60-65%	Powder	max. 1,0%	--				--	Registration required	910, 930
---------------------------------------	--------	--------	-----------	----	--	--	--	----	-----------------------	----------

--	--	--	--	--	--	--	--	--	--	--

## Dispersing agent

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
Phosphate ester									
Dispersogen TP 160	●	●			●				Dispersogen TP 160 is an excellent surfactant based dispersing agent or can be used as anionic emulsifier.
Emulsogen 3475	●	●			●				Emulsogen 3475 is an excellent surfactant based dispersing agent highly stable in the presence of electrolytes and improved emulsification properties.
Hostaphat 1306	●	●	●		●				Hostaphat 1306 is a phosphate ester based on iso-tridecanol ethoxylate and is mainly used in EC and SC formulations as anionic emulsifier and dispersing agent.
Polycondensation product									
Dispersogen ACP 120		●	●						Dispersogen ACP 120 is an anionic comb-shaped polymer dispersing agent which is highly effective at low concentrations and can e.g. be used to formulate highly stable SC formulations in high electrolyte containing environments like Glyphosate salts.
Dispersogen PG		●	●						Dispersogen PG is a unique polymeric dispersing agent based on Clariant's polyglycerol ester platform. It combines the functionality of a wetting as well a dispersing agent and adjuvant properties in one product.
Dispersogen PSL 100		●	●		●				Dispersogen PSL 100 is a non-ionic comb-shaped polyacrylate based polymeric dispersing agent which is highly effective at low concentrations. It is provided in easy-to-handle liquid form.
Sulfonation product									
Dispersogen 1494 liq.		●						●	Dispersogen 1494 liq. is an anionic sulfonated dispersing agent with no eye-irritancy for SC and WG formulations. It is provided as an aqueous solution for easier handling.
Dispersogen SI		●						●	Dispersogen SI is a ready to use and optimized combination of dispersing and wetting agents for various SC and WG formulations.
Tristyrylphenol ethoxylate									
Emulsogen TS 200	●	●	●	●					The Emulsogen TS types are well established replacements for NPEs in many formulations. Emulsogen TS 200 is also used as dispersing agent.

Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx
2,4,6-Tri-(1-phenylethyl)-phenol polyglycol ether phosphoric ester	97,5%	Viscous liquid	max. 2,5%	--				--	Exempted due to polymer status	920
2,4,6-Tri-(1-phenylethyl)-phenol polyglycol ether phosphoric ester, triethanolamine salt	96%	Viscous Liquid	max. 4.5%	--				--	Exempted due to polymer status	--
Alcohol ethoxylate, phosphated	100%	Viscous liquid	--	--				--	Exempted due to polymer status	910, 920, 930
Polyacrylate graft copolymer, anionic	40%	Liquid	ca. 60%	--				--	Exempted due to polymer status	960
Copolymer of glycerol, esterified	70%	Liquid	ca. 30%	--				--	Exempted due to polymer status	910
Polyacrylate graft copolymer, non-ionic	100%	Viscous liquid	--	--				--	Exempted due to polymer status	960
Sodium salt of a cresol-formaldehyde condensation product	35%	Liquid	--	--				--	Exempted due to polymer status	--
Combination of anionic surfactants mixed with carrier	62%	Powder	max. 13,0%	--				--	Exempted due to polymer status	910, 920
2,4,6-Tri(1-phenylethyl)-phenol polyglycol ether with 20 EO	100%	Liquid-pasty	max. 0,5%	ca. 57,5			●	13,5	Exempted due to polymer status	910, 920

## Emulsifier (anionic)

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
Alkylbenzene sulfonate									
Calsogen 4814	•			•	•				Calsogen 4814 is a multi-purpose anionic emulsifer based on the better degradable linear CaDDBS in an aromatic-free solvent (2-ethylhexanol) with a high flash point of > 60°C for safer handling.
Calsogen AR 100	•			•	•				Calsogen AR 100 is a CaDDBS in a high-flash solvent with a flash point of > 100°C for safer handling. (Solvesso® is a registered trademark from Exxon)
Calsogen AR 100 ND	•			•	•				Calsogen AR 100 ND is a CaDDBS in a naphthalene depleted high-flash solvent with a flash point of > 100°C for safer handling. (Solvesso® is a registered trademark from Exxon)
Calsogen ARL 100 ND	•			•	•				Calsogen ARL 100 ND combines a safe choice of solvent with a high flash point (> 100°C) naphthalene depleted solvent and is based on the more environmentally friendly linear CaDDBS. (Solvesso® is a registered trademark from Exxon)
Calsogen EH	•			•	•				Calsogen EH is a multi-purpose anionic emulsifer in an aromatic-free solvent (2-ethylhexanol) with a high flash point of > 60°C for safer handling.
Phenylsulfonat CA	•			•					Phenylsulfonat CA has been "the" standard anionic emulsifier component in uncountable EC formulations for years.
Phenylsulfonat CAL	•			•					Phenylsulfonat CAL is based on a linear CaDDBS and shows improved bio-degradation versus the branched Ca salts and has therefore become the environmentally friendlier alternative.



Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx
n-C12 alkyl benzene sulfonate calcium salt	58% (in 2-ethylhexanol)	Viscous liquid	max. 0,5%	--				--	Registration required	910, 920, 930
iso-C12 alkyl benzene sulfonate calcium salt	40% + 10% (in Solvesso® 200)	Liquid	max. 0,5%	--				--	Registration required	--
iso-C12 alkyl benzene sulfonate calcium salt	40% + 10% (in Solvesso® 200 ND)	Liquid	max. 0,5%	--				--	Registration required	910
n-C12 alkyl benzene sulfonate calcium salt	40% + 10% (in Solvesso® 200 ND)	Liquid	max. 0,5%	--				--	Registration required	910
iso-C12 alkyl benzene sulfonate calcium salt	58% (in 2-ethylhexanol)	Viscous liquid	max. 0,5%	--				--	Registration required	910, 920, 930
iso-C12 alkyl benzene sulfonate calcium salt	70% (in iso-butanol)	Viscous liquid	max. 0,5%	--				--	Registration required	920
n-C12 alkyl benzene sulfonate calcium salt	70% (in iso-butanol)	Viscous liquid	max. 0,5%	--				--	Registration required	920

Emulsifier (blend)

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
Anionic-/non-ionic blend									
Emulsogen T	•								Emulsogen T is an established emulsifier for oils which does not require a hazardous labeling.
Clariant Matched Pair									
Emulsogen MP 1	•								Clariant Matched Pairs comprise different emulsifier blends based on NPE-free products. By combining them in variable ratios, a broad range of EC formulations can be formulated with a small number of raw materials only.
Emulsogen MP 2	•								Clariant Matched Pairs comprise different emulsifier blends based on NPE-free products. By combining them in variable ratios, a broad range of EC formulations can be formulated with a small number of raw materials only.

Emulsifier (nonionic)

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
Castor oil ethoxylate									
Emulsogen EL 200	●		●	●	●				Emulsogen EL products are standard NPE-free emulsifiers in various EC formulations. The products show excellent emulsification characteristics for many solvents and are not eye-irritating.
Emulsogen EL 300 LM	●		●	●	●				Emulsogen EL products are standard NPE-free emulsifiers in various EC formulations. The products show excellent emulsification characteristics for many solvents and are not eye-irritating.
Emulsogen EL 360	●		●	●	●				Emulsogen EL products are standard NPE-free emulsifiers in various EC formulations. The products show excellent emulsification characteristics for many solvents and are not eye-irritating.
Emulsogen EL 400	●		●	●	●				Emulsogen EL products are standard NPE-free emulsifiers in various EC formulations. The products show excellent emulsification characteristics for many solvents and are not eye-irritating.
Emulsogen EL 540	●		●	●	●				Emulsogen EL products are standard NPE-free emulsifiers in various EC formulations. The products show excellent emulsification characteristics for many solvents and are not eye-irritating.

Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx
Blend on anionic and nonionic surfactants	100%	Liquid	--	--				--	Registration required	--
Blend on anionic and nonionic surfactants	100%	Liquid	--	--				--	Registration required	910, 920, 930
Blend on anionic and nonionic surfactants	100%	Liquid	--	--				--	Registration required	910, 920, 930

Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx
Castor oil ethoxylate with 20 EO	100%	Liquid-pasty	max. 0,5%	--				10,5	Exempted due to polymer status	960
Castor oil ethoxylate with 30 EO	100%	Liquid	max. 1,0%	--				12,5	Exempted due to polymer status	960
Castor oil ethoxylate with 36 EO	100%	Liquid	max. 0,5%	--				13,5	Exempted due to polymer status	960
Castor oil ethoxylate with 40 EO	100%	Liquid-pasty	max. 0,5%	--				14	Exempted due to polymer status	960
Castor oil ethoxylate with 54 EO	100%	Pasty	max. 0,5%	--				15	Exempted due to polymer status	960

## Emulsifier (nonionic)

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
EO/PO alkoxylation product									
Emulsogen 3510	•		•	•	•				Emulsogen 3510 is a butanol derived EO/PO copolymer and a standard emulsifier component in many EC formulations.
Emulsogen EP 4901	•		•	•	•				Emulsogen EP 4901 is a butanol based EO/PO copolymer in liquid form for easier handling. It is mainly used as emulsifier and co-emulsifier in EC formulations.
EO/PO block copolymer									
Emulsogen V 1816	•	•	•	•					Emulsogen V 1816 is an EO/PO block-copoylmer with a low HLB which is mainly used as emulsifier or co-emulsifier in EC and SC formulations.
Genapol ED 1616	•		•	•					Genapol ED 1616 is a versatile surfactant which reduces surface tension, acts as compatibilizer in EC and EW formulations and can reduce crystallization.
Genapol PN 30	•	•	•	•					Genapol PN 30 is a versatile surfactant which acts as compatibilizer and stabilizes SC formulations.
Fatty alcohol ethoxylate									
Genapol C 050	•	•	•	•					Besides its use as emulsifier, Genapol C 050 shows excellent adjuvant properties in EC and SC formulations by enhancing performance in foliar applications.
Genapol C 070	•	•	•	•					Besides its use as emulsifier, Genapol C 070 shows excellent adjuvant properties in EC and SC formulations by enhancing performance in foliar applications.
Genapol C 100	•	•	•	•					Besides its use as emulsifier, Genapol C 100 shows excellent adjuvant properties in EC and SC formulations by enhancing performance in foliar applications.
Genapol C 120	•	•	•	•					Besides its use as emulsifier, Genapol C 120 shows excellent adjuvant properties in EC and SC formulations by enhancing performance in foliar applications.
Genapol C 200	•	•	•	•					Besides its use as emulsifier, Genapol C 200 shows excellent adjuvant properties in EC and SC formulations by enhancing performance in foliar applications.
Genapol LA 030	•		•	•	•				The Genapol LA types are readily biodegradable ethoxylates based on a naturally derived lauryl alcohol.
Genapol LA 070	•		•	•	•				The Genapol LA types are readily biodegradable ethoxylates based on a naturally derived lauryl alcohol.
Genapol LA 080	•		•	•	•				The Genapol LA types are readily biodegradable ethoxylates based on a naturally derived lauryl alcohol.
Genapol O 100	•		•	•	•				The Genapol O types are alcohol ethoxylates based on a naturally derived fatty alcohol. Besides its use as emulsifier, Genapol O 100 shows excellent adjuvant properties in EC and SC formulations.
Genapol O 109		•		•					The Genapol O types are alcohol ethoxylates based on a naturally derived fatty alcohol. Genapol O 109 is a 90% aqueous version of Genapol O 100 for easier handling in SC formulations .

Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx
n-Butanol alkoxyolate	100%	Wax-like	max. 0,5%	ca. 85,0%		•		11	Exempted due to polymer status	960
n-Butanol alkoxyolate	100%	Liquid	max. 0,5%	--				16,5	Exempted due to polymer status	960
EO/PO block copolymer	100%	Pasty	--	ca. 72,9		•		6	Exempted due to polymer status	960
Ethylene diamine EO/PO block copolymer	100%	Liquid	max. 0,4%	ca. 73,0 (10% a.m. in water)				16	Exempted due to polymer status	960
Ethylene diamine EO/PO block copolymer	100%	Viscous liquid	--	ca. 28,6		•		15	Exempted due to polymer status	960
Coconut fatty alcohol polyglycol ether with 5 EO	100%	Liquid	--	ca. 73		•		10	Exempted due to polymer status	910, 930, 960
Coconut fatty alcohol polyglycol ether with 7 EO	100%	Liquid	--	ca. 50,5	•			12	Exempted due to polymer status	910, 930, 960
Coconut fatty alcohol polyglycol ether with 10 EO	100%	Pasty-wax like	--	ca. 90,5	•			14	Exempted due to polymer status	910, 930, 960
Coconut fatty alcohol polyglycol ether with 12 EO	100%	Pasty	--	ca. 67			•	14,5	Exempted due to polymer status	910, 930, 960
Coconut fatty alcohol polyglycol ether with 20 EO	100%	Pasty, wax-like	--	ca. 77			•	16,5	Exempted due to polymer status	910, 930
C12/14 fatty alcohol polyglycol ether with 3 EO	100%	Liquid	max. 0,3%	ca. 54,0		•		8	Exempted due to polymer status	910, 930, 960
C12/14 fatty alcohol polyglycol ether with 7 EO	100%	Liquid	max. 0,2%	ca. 57,0	•			12	Exempted due to polymer status	910, 930, 960
C12/14 fatty alcohol polyglycol ether with 8 EO	100%	Liquid	max. 0,5%	ca. 64,0	•			13	Exempted due to polymer status	910, 930, 960
Oleyl alcohol polyglycol ether with 10 EO	100%	Pasty-wax like	--	ca. 50,0			•	12	Exempted due to polymer status	910, 930, 960
Oleyl alcohol polyglycol ether with 10 EO	90%	Liquid	ca. 10%	ca. 50,0			•	12	Exempted due to polymer status	910, 930, 960



## Emulsifier (nonionic)

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
Fatty alcohol ethoxylate									
Genapol O 150	●		●	●	●				The Genapol O types are alcohol ethoxylates based on a naturally derived fatty alcohol.
Genapol O 200	●		●	●	●				The Genapol O types are alcohol ethoxylates based on a naturally derived fatty alcohol.
Genapol T 150	●	●	●	●					Genapol T 150 is a vegetable tallow alcohol based emulsifer and is further successfully used as adjuvant in SC formulations.
Genapol UD 050	●		●	●	●				The Genapol UD products are ethoxylates based on a branched fatty alcohol. The products exhibit good wetting and low-foaming characteristics.
Genapol UD 079		●	●	●					The Genapol UD products are ethoxylates based on a branched fatty alcohol. The products exhibit good wetting and low-foaming characteristics. Genapol UD 079 is provided as an aqueous solution for easier handling.
Genapol UD 080	●		●	●					The Genapol UD products are ethoxylates based on a branched fatty alcohol. The products exhibit good wetting and low-foaming characteristics.
Genapol X 050	●	●	●	●					The Genapol X products combine low-foam emulsification and wetting properties which make them the first choice for many NPE-free formulations as emulsifier, wetting agent and adjuvant.
Genapol X 060	●	●		●				●	The Genapol X products combine low-foam emulsification and wetting properties which make them the first choice for many NPE-free formulations as emulsifier, wetting agent and adjuvant.
Genapol X 080	●	●	●	●					The Genapol X products combine low-foam emulsification and wetting properties which make themthe first choice for many NPE-free formulations as emulsifier, wetting agent and adjuvant.
Genapol X 150	●	●	●	●					The Genapol X products combine low-foam emulsification and wetting properties which make themthe first choice for many NPE-free formulations as emulsifier, wetting agent and adjuvant.
Genapol XM 060	●				●				Genapol XM 060 is a methyl-end-capped ethoxylate based on Genapol X 060 which can enable the formulation of very sensitive active ingredients in non-aqueous formulations like ECs and ODs.
Genapol XM 150	●				●			●	Genapol XM 150 is a methyl-end-capped ethoxylate based on Genapol X 060 which can enable the formulation of very sensitive active ingredients in non-aqueous formulations like ECs and ODs.
Phosphate ester									
Emulsogen 3475	●	●			●				Emulsogen 3475 is an excellent surfactant based dispersing agent highly stable in the presence of electrolytes and improved emulsification properties.
Sorbitan ester ethoxylated									
Emulsogen 4156	●	●	●	●					Excellent emulsifier based on renewable resources and with a favorable toxicological profile used as tank mix adjuvant and in various formulations
Special emulsifier									

Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx
Oleyl alcohol polyglycol ether with 15 EO	100%	Wax-like	--	ca. 72,0			●	14	Exempted due to polymer status	910, 930, 960
Oleyl alcohol polyglycol ether with 20 EO	100%	Wax-like	--	ca. 75,0			●	15,5	Exempted due to polymer status	910, 930, 960
C16/C18 fatty alcohol polyglycol ether with 15 EO	100%	Wax-like	--	ca. 72,0			●	--	Exempted due to polymer status	910, 930, 960
C11 oxo alcohol polyglycol ether with 5 EO	100%	Liquid	--	ca. 68,0			●	11	Exempted due to polymer status	910, 930, 960
C11 oxo alcohol polyglycol ether with 7 EO	90%	Liquid	ca. 10%	ca. 53,5	●			13	Exempted due to polymer status	910, 930, 960
C11 oxo alcohol polyglycol ether with 8 EO	100%	Liquid	--	ca. 63,5	●			13	Exempted due to polymer status	910, 930, 960
Iso-tridecyl alcohol polyglycol ether with 5 EO	100%	Liquid	max. 0,5%	ca. 60,5		●		10	Exempted due to polymer status	910, 930, 960
Iso-tridecyl alcohol polyglycol ether with 6 EO	100%	Liquid	max. 0,5%	ca. 65,5			●	11	Exempted due to polymer status	910, 930, 960
Iso-tridecyl alcohol polyglycol ether with 8 EO	100%	Liquid	max. 0,5%	ca. 75,5		●		13	Exempted due to polymer status	910, 930, 960
Iso-tridecyl alcohol polyglycol ether with 15 EO	100%	Wax-like	max. 0,5%	ca. 70			●	15	Exempted due to polymer status	910, 930, 960
Iso-tridecyl alcohol ethoxylate methyl ether with 6 EO	100%	Liquid	max. 0,5%	--				11	Exempted due to polymer status	--
Iso-tridecyl alcohol ethoxylate methyl ether with 15 EO	100%	Wax-like	max. 0,5%	--				15	Exempted due to polymer status	--
2,4,6-Tri-(1-phenylethyl)-phenol polyglycol ether phosphoric ester, triethanolamine salt	96%	Viscous Liquid	max. 4.5%	--				--	Exempted due to polymer status	--
Sorbitan monolaurate polyglycol ether with 20 EO	97%	Liquid	ca. 2,5%	--				17	Exempted due to polymer status	910, 930

## Emulsifier (nonionic)

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
Special emulsifier									
Emulsogen M	●		●	●	●				Emulsogen M is an excellent emulsifier for mineral oils with a low pour point. The product is not eye-irritating and does not require any hazardous labeling.
Tributylphenol ethoxylate									
Sapogenat T 040	●		●	●	●				Sapogenat T products are the best-performing NPE alternatives: Besides excellent emulsification power, these surfactants are also good wetters, increasing pesticide efficacy in foliar application.
Sapogenat T 060	●		●	●	●				Sapogenat T products are the best-performing NPE alternatives: Besides excellent emulsification power, these surfactants are also good wetters, increasing pesticide efficacy in foliar application.
Sapogenat T 080	●		●	●	●				Sapogenat T products are the best-performing NPE alternatives: Besides excellent emulsification power, these surfactants are also good wetters, increasing pesticide efficacy in foliar application.
Sapogenat T 110	●	●	●	●					Sapogenat T products are the best-performing NPE alternatives: Besides excellent emulsification power, these surfactants are also good wetters, increasing pesticide efficacy in foliar application.
Sapogenat T 130	●	●	●	●					Sapogenat T products are the best-performing NPE alternatives: Besides excellent emulsification power, these surfactants are also good wetters, increasing pesticide efficacy in foliar application.
Sapogenat T 180	●	●	●	●					Sapogenat T products are the best-performing NPE alternatives: Besides excellent emulsification power, these surfactants are also good wetters, increasing pesticide efficacy in foliar application.
Sapogenat T 300	●		●	●					Sapogenat T products are the best-performing NPE alternatives: Besides excellent emulsification power, these surfactants are also good wetters, increasing pesticide efficacy in foliar application.
Sapogenat T 500	●		●	●					Sapogenat T products are the best-performing NPE alternatives: Besides excellent emulsification power, these surfactants are also good wetters, increasing pesticide efficacy in foliar application.
Tristyrylphenol ethoxylate									
Emulsogen TS 100	●		●	●	●				The Emulsogen TS types are well established replacements for NPEs in many formulations.
Emulsogen TS 160	●		●	●	●				The Emulsogen TS types are well established replacements for NPEs in many formulations.
Emulsogen TS 200	●	●	●	●					The Emulsogen TS types are well established replacements for NPEs in many formulations. Emulsogen TS 200 is also used as dispersing agent.
Emulsogen TS 290	●		●	●	●				The Emulsogen TS types are well established replacements for NPEs in many formulations.
Emulsogen TS 540	●		●	●					The Emulsogen TS types are well established replacements for NPEs in many formulations.
Emulsogen TS 600	●		●	●					The Emulsogen TS types are well established replacements for NPEs in many formulations.

Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx
Oleyl alcohol polyglycol ether	100%	Liquid	max. 1,5%	ca. 66,8		•		9	Exempted due to polymer status	910, 930, 960
Tri-sec-butylphenol polyglycol ether with 4 EO	100%	Liquid	--	ca. 27,5		•		8	Exempted due to polymer status	--
Tri-sec-butylphenol polyglycol ether with 6 EO	100%	Liquid	--	ca. 54,7		•		10	Exempted due to polymer status	--
Tri-sec-butylphenol polyglycol ether with 8 EO	100%	Liquid	--	ca. 67,0		•		11	Exempted due to polymer status	--
Tri-sec-butylphenol polyglycol ether with 11 EO	100%	Liquid	max. 0,5%	ca. 43,0	•			13	Exempted due to polymer status	--
Tri-sec-butylphenol polyglycol ether with 13 EO	100%	Liquid-pasty	--	ca. 63,0	•			14	Exempted due to polymer status	--
Tri-sec-butylphenol polyglycol ether with 18 EO	100%	Wax-like	--	ca. 62,5			•	15	Exempted due to polymer status	--
Tri-sec-butylphenol polyglycol ether with 30 EO	100%	Wax-like	--	--				17	Exempted due to polymer status	--
Tri-sec-butylphenol polyglycol ether with 50 EO	100%	Wax-like	--	--				18	Exempted due to polymer status	--
2,4,6-Tri(1-phenylethyl)-phenol polyglycol ether with 10 EO	100%	Liquid	max. 0,3%	ca. 67,0		•		10	Exempted due to polymer status	910, 920
2,4,6-Tri(1-phenylethyl)-phenol polyglycol ether with 16 EO	100%	Liquid	max. 0,3%	ca. 60,0	•			13	Exempted due to polymer status	910, 920
2,4,6-Tri(1-phenylethyl)-phenol polyglycol ether with 20 EO	100%	Liquid-pasty	max. 0,5%	ca. 57,5			•	13,5	Exempted due to polymer status	910, 920
2,4,6-Tri(1-phenylethyl)-phenol polyglycol ether with 29 EO	100%	Wax-like	max. 0,3%	ca. 68,0			•	15	Exempted due to polymer status	910, 920
2,4,6-Tri(1-phenylethyl)-phenol polyglycol ether with 54 EO	100%	Wax	max. 0,3%	ca. 73,0			•	17	Exempted due to polymer status	910, 920
2,4,6-Tri(1-phenylethyl)-phenol polyglycol ether with 60 EO	100%	Wax	max. 0,3%	--				17,5	Exempted due to polymer status	910, 920

## Solvent

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
Solvent									
Dipropylene glycol DME	●			●					Dipropylene glycol DME is a safe and environmentally friendly solvent and an established replacement for NMP in various application areas. The product does not require a hazardous labeling.
Genagen 4166	●			●					Genagen 4166 is a dimethylamide based on naturally derived fatty acids. This extremely versatile non-water miscible solvent is used for various EC, EW and SE formulations.
Genagen 4296	●			●					Genagen 4296 is a dimethylamide based on naturally derived fatty acids. This extremely versatile non-water miscible solvent is used for various EC, EW formulations.

## Wetting agent

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
Amine ethoxylate									
Genamin S 080	•			•		•			Genamin S 080 is a wetting agent and can have other adjuvant functions.
Genamin S 100	•			•		•			Genamin S 100 is a wetting agent and can have other adjuvant functions.
EO/PO block copolymer									
Genapol PN 30	•	•	•	•					Genapol PN 30 is a versatile surfactant which acts as compatibilizer and stabilizes SC formulations.
Ether sulfate									
Genapol LRO liq.		•				•			Genapol LRO is a standard wetting agent/adjuvant for tank-mix uses and SL formulations of water-soluble herbicides like Glufosinate. Furthermore it is used as wetting agent in SCs.



Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx
Dipropylene glycol dimethyl ether	> 99%	Liquid	max. 0,1%	--				--	Registration required	--
Dimethylamide of C8/C10 fatty acid	100%	Liquid	max. 0,5%	--				--	Registration required	920
Dimethylamide of C10 fatty acid	100%	Liquid	max. 0,5%	--				--	Registration required	920

Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx
Stearyl fatty amine with 8 EO	100%	Liquid	--	--				--	Exempted due to polymer status	920
Stearyl fatty amine with 10 EO	100%	Liquid	--	--				--	Exempted due to polymer status	920
Ethylene diamine EO/PO block copolymer	100%	Viscous liquid	--	ca. 28,6		•		15	Exempted due to polymer status	960
Alkyl ether sulfate, sodium salt	26%	Liquid	ca. 70%	--				--	Registration required	910, 930

## Wetting agent

Product Name	Formulation type								Product description
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)	Water Dispersible Granules (WG)	
Ether sulfate									
Genapol LRO paste		•				•		•	Genapol LRO is a standard wetting agent/adjuvant for tank-mix uses and SL formulations of water-soluble herbicides like Glufosinate. Furthermore it is used as wetting agent in SCs or WGs.
Fatty alcohol alkoxylate									
Genapol EP 0244	•	•		•					Genapol EP 0244 combines extremely low-foaming tendency with very low surface tension making it a powerful wetting agent in demanding environments. The product does not require a hazardous labeling.
Genapol EP 2564	•	•		•					Genapol EP 2564 is an alkoxylate wetting agent which does not require a hazardous labeling.
Genapol EP 2584	•	•		•					Genapol EP 2584 is an alkoxylate wetting agent which does not require a hazardous labeling.
Fatty alcohol ethoxylate									
Genapol ID 060	•	•	•	•					Genapol ID 060 is a wetting agent in SC formulations and can also be used as built-in-adjuvant or as a component of tank-mix adjuvants to increase wetting of the plant surface.
Genapol ID 100	•	•	•	•		•			Genapol ID 100 is a wetting agent in SC formulations and can also be used as built-in-adjuvant or as a component of tank-mix adjuvants that is rapidly wetting the plant surface and can improve penetration.
Genapol UD 050	•		•	•	•				The Genapol UD products are ethoxylates based on a branched fatty alcohol. The products exhibit good wetting and low-foaming characteristics.
Genapol UD 079		•	•	•					The Genapol UD products are ethoxylates based on a branched fatty alcohol. The products exhibit good wetting and low-foaming characteristics. Genapol UD 079 is provided as an aqueous solution for easier handling.
Genapol UD 080	•		•	•					The Genapol UD products are ethoxylates based on a branched fatty alcohol. The products exhibit good wetting and low-foaming characteristics.
Genapol XM 060	•				•				Genapol XM 060 is a methyl-end-capped ethoxylate based on Genapol X 060 which can enable the formulation of very sensitive active ingredients in non-aqueous formulations like ECs and ODs.
Genapol XM 150	•				•			•	Genapol XM 150 is a methyl-end-capped ethoxylate based on Genapol X 060 which can enable the formulation of very sensitive active ingredients in non-aqueous formulations like ECs and ODs.
Methyl oleyl taurate									
Hostapon TPHC		•						•	Hostapon TPHC shows both wetting and dispersing properties which makes it a versatile inert ingredient for many liquid and solid formulations with an excellent toxicological and ecotoxicological profile.
Olefin sulfonate									
Hostapur OS liq.		•						•	Hostapur OS liq. is an aqueous solution of an alpha olefin sulfonate and is used as anionic wetting agent in liquid formulations.
Hostapur OSB		•						•	Hostapur OSB is a solid alpha olefin sulfonate and especially suitable as anionic wetting agent for solid formulations.
Sulfosuccinate									

Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx
Alkyl ether sulfate, sodium salt	69%	Paste	ca. 30%	--				--	Registration required	910, 930
Fatty alcohol alkoxylate	100%	Liquid	--	ca. 36,5		•		11	Exempted due to polymer status	910, 930, 960
Fatty alcohol alkoxylate	100%	Liquid	--	ca. 30,0	•			11	Exempted due to polymer status	910, 930, 960
Fatty alcohol alkoxylate	100%	Liquid	--	ca. 40,5	•			12	Exempted due to polymer status	910, 930, 960
Iso-decyl alcohol polyglycol ether with 6 EO	100%	Liquid	max. 0,2%	ca. 43,0		•		13	Exempted due to polymer status	910, 930, 960
Iso-decyl alcohol polyglycol ether with 10 EO	100%	Liquid	--	ca. 85,0	•			14	Exempted due to polymer status	910, 930, 960
C11 oxo alcohol polyglycol ether with 5 EO	100%	Liquid	--	ca. 68,0		•		11	Exempted due to polymer status	910, 930, 960
C11 oxo alcohol polyglycol ether with 7 EO	90%	Liquid	ca. 10%	ca. 53,5	•			13	Exempted due to polymer status	910, 930, 960
C11 oxo alcohol polyglycol ether with 8 EO	100%	Liquid	--	ca. 63,5	•			13	Exempted due to polymer status	910, 930, 960
Iso-tridecyl alcohol ethoxylate methyl ether with 6 EO	100%	Liquid	max. 0,5%	--				11	Exempted due to polymer status	--
Iso-tridecyl alcohol ethoxylate methyl ether with 15 EO	100%	Wax-like	max. 0,5%	--				15	Exempted due to polymer status	--
Fatty acid methyl tauride sodium salt	60-65%	Powder	max. 1,0%	--				--	Registration required	910, 930
Alpha olefin sulfonate, sodium salt	40%	Liquid	ca. 60%	--				--	Registration required	910
Alpha olefin sulfonate, sodium salt	90%	Solid	max. 2,0%	--				--	Registration required	920

Wetting agent

Product Name	Formulation type							Product description	
	Emulsifiable Concentrate (EC)	Suspension Concentrate (SC)	Suspo-Emulsion (SE)	Emulsion oil in Water (EW)	Oil Dispersion (OD)	Soluble Liquid (SL)	Water Soluble Granules (SG)		
	Water Dispersible Granules (WG)								
Sulfosuccinate									
Emulsogen SF 8		●	●					●	Emulsogen SF 8 is an aqueous solution of a dioctyl sulfosuccinate and is mainly used as anionic wetting agent.

Product composition	Active content [%]	Appearance	Water content	Cloud point method				HLB (calc.)	Regulatory Status	
				Cloud Point [°C]	1% active ingredient in water	5g / 25g/ 25% BDG	1g/ 100 ml/ 10% NaCl		Reach Status	EPA exempted from tolerance under 40 CFR § 180.xxx
Aqueous solution of sodium dioctyl sulfosuccinate	50%	Liquid	ca. 50%	--				--	Registration required	910, 930