



# Ask us for your solutions



Agricultural solutions – product portfolio  
Asia

**Nouryon**



# We are Nouryon

Nouryon is a global, specialty chemicals leader. Markets and consumers worldwide rely on our essential solutions to manufacture everyday products, such as personal care, cleaning goods, paints and coatings, agriculture and food, pharmaceuticals, and building products. Furthermore, the dedication of approximately 8,300 employees with a shared commitment to our customers, business growth, safety, sustainability, and innovation has resulted in a consistently strong financial performance. We operate in over 80 countries around the world with a portfolio of industry-leading brands.

- **7,900** employees worldwide
- Operating in over **80** countries
- **11** global innovation centers
- **77%** of our R&D product pipeline is focused on solutions with sustainability benefits
- **\$5.8 B** revenue in 2022



## The right partner with the right solutions for your agribusiness needs

Nouryon strives to be our customers' first choice for essential agriculture and food science solutions. We make significant investments in research and development, and we never stop searching for new and innovative solutions that are effective and more sustainable. Nouryon also offers international production and logistics capabilities to ensure a consistent and reliable supply of the agriculture and food solutions that customers and partners depend on daily.



Annually investing in Research and Development (R&D) and innovation



**16 production facilities** across 6 countries on 4 continents for international supply of agriculture and food solutions



**Ongoing investments** in production facilities to scale capacity to meet evolving customer needs



A **network of third parties** to better manage volatility in the global supply chain

# We will design and supply the ultimate solutions for your needs Today and tomorrow



1) 1% in water 2) Draves test 3) Griffin/Davis *	GENERAL CHARACTERISTICS											SOLUBILITY		FUNCTIONALITY & USE			EPA (explanation see next page) REACH
	Physical form (20°C)	Description	Active content	Water content	pH <sup>1)</sup>	CMC g/l	Surface tension mN/m <sup>2</sup>	Contact angle	Wetting power <sup>2)</sup> 1g/l	HLB <sup>3)</sup>	Water	Veg oil	Application area	Function	Prime use		
<b>ADJUVANTS</b>																	
Adsee™ 611	Liquid	Fatty amine ethoxylate blend	100%	1%	6-7	0.027	38	66	48 sec	NA	Soluble	Dispersible	TM	Penetrant	Rice, all pesticides	N	920
Adsee™ 900	Liquid	Fatty alcohol ethoxylate	90%	10%	5-7	1.0	26	41	5 sec	NA	Soluble	Dispersible	TM	Penetrant, wetter	Fungicides, Sulfonylureas, hydrophobic actives	Y	910, 930
Adsee™ 907	Liquid	Tallow amine ethoxylate blend	96%	4%	9-11.5	0.062	39.5	71	>10 min	NA	Soluble	Insoluble	SL	Penetrant	IPA Glyphosate 360	N	920
Adsee™ 1629	Liquid	Cetyl trimethyl ammonium chloride	29%	70%	6-9		34			21.2	Soluble		SL	Penetrant, thickener with Adsee™ C-70A	Glufosinate, Glyphosate, 2,4-D, Paraquat	N	920
Adsee™ AB 600	Liquid	Tallow alkoxylated amine	100%	1%	6-9	0.01	37	66	46 sec	NA	Soluble	Dispersible	TM	Penetrant, retention, spreading	Multipurpose	N	N
Adsee™ AMP40	Liquid	Amphoteric	40%	60%	8.5-9.5	13.3	64	102	>5 min	25	Soluble	Insoluble	SL, SC, EW, ME	Humectant, penetrant, compatibilizer	Glyphosate, Glufosinate and fungicides	Y	N
Adsee™ C80W	Liquid	Cocoamine propyl amide	87%	13%	9-10	0.02	27	41	5 min	22.9	Dispersible	Dispersible	SL, WDG	Penetrant, compatibilizer	K Glyphosate 540, herbicide mixtures	Y	920
Adsee™ C-70A	Liquid	Cocoamine propyl amide	30%	70%	6.5-8.5	5.0	33	53	>5 min	22.9	Soluble	Insoluble	SL	Penetrant, compatibilizer	K Glyphosate 540, herbicide mixtures, not in TSCA	N	920
Adsee™ C-70S	Liquid	Cocoamine propyl amide	30%	70%	6.5-8.5	0.014	30	55	>5 min	22.9	Soluble	Insoluble	SL	Penetrant, thickener with Adsee™ 1629	Glufosinate, Glyphosate, 2,4-D, Paraquat	N	N
Ethomeen® C/15	Liquid	Coco amine ethoxylate	100%	1%	11	0.04	29	47	40 sec	13	Soluble	Soluble	SL	Penetrant	Glyphosate in general	Y	920, 930
Ethylan® 995	Liquid	Fatty alcohol alkoxyolate	100%	1%	5-6	>50	31	41	51 sec	NA	Dispersible	Soluble	SC, SE	Penetrant	Fungicides, reduce drift	Y	N
<b>DISPERSANTS</b>																	
Agrilan® 1015	Liquid	Phosphate ester	50%	25%	5.5-6.2	68	32	42	17 sec	NA	Soluble	Insoluble	EW, FC, SC, SE	Dispersant, emulsifier, wetter	Dispersant for aqueous formulations	N	N
Agrilan® 1028	Liquid	Phosphate ester	100%	1%	2-3	0.54	25	36	45 sec	NA	Dispersible	Insoluble	SC, SE, SL	Dispersant, compatibilizer	High electrolyte and fertilizer formulations	Y	910, 930 **
Agrilan® 700 Dry	White powder	Polyacrylate copolymer	95%	5%	7-8	NA	NA	NA	>5 min	NA	Soluble	Insoluble	SC, WDG, WSG, WP	Dispersant, stabiliser	White, cost-effective	N	960
Agrilan® 755	Liquid	Polyacrylate copolymer	30%	19%	3.5-5	NA	NA	NA	>10 min	NA	Soluble	Dispersible	SC, SE, OD	Dispersant, emulsifier, stabiliser	High performance SC stabiliser	Y	910, 930
Agrilan® 788	Liquid	Polyacrylate copolymer	40%		8-10	NA	NA	NA	>5 min	NA	Soluble	Dispersible	SC	Dispersant, stabiliser	White, cost-effective	Y	960
Agrilan® 789 Dry	White powder	Polyacrylate copolymer	95%	5%	7-9	3	42	92	>5 min	NA	Soluble	Dispersible	SC, WDG, WSG, WP	Dispersant, stabiliser	White, cost-effective	N	960
Agrilan® 855	Liquid	Modified acrylic co-polymer	31-35%	50%	6-8	0.02	47.85	NA	NA	NA	Soluble	Insoluble	SC, SE, WDG	Dispersant, milling aid	Powerful and flexible dispersant	Y	910, 930
Ethylan® NS-500LQ	Viscous liquid	Alcohol block copolymer	100%	0.2%	6.5-7.5	0.2	36	62	163 sec	NA	Soluble	Insoluble	SC, SE	Dispersant, emulsifier, wetter	Versatile, standard co-dispersant for SC with Morwet® D-425 Powder	Y	960
Morwet® D-400 Powder	Brown powder	Naphthalene sulphonate condensate	72.5%	3%	7.5-10	>25	60	83	>5 min	NA	Soluble	Insoluble	SC, WDG, WSG, WP	Dispersant, milling aid	Cost effective alternative for Morwet® D-425 Powder	Y	910
Morwet® D-425 Powder	Brown powder	Naphthalene sulphonate condensate	88%	4%	7.5-10	>25	60	85	>5 min	NA	Soluble	Insoluble	SC, WDG, WSG, WP	Dispersant, milling aid	Robust, universal, reliable performance	Y	910
Morwet® D-450 Powder	Brown powder	Naphthalene sulphonate blend	98%	2%	7.5-10		42		25 sec	NA	Soluble	Insoluble	SC, WDG, WSG, WP	Dispersant, wetting, milling aid	Combination for improved granule breakdown	Y	910
Morwet® D-500 Powder	Brown powder	Naphthalene sulphonate blend	98%	2%	7.5-10	>25	43		>5 min	NA	Soluble	Insoluble	SC, WDG, WSG, WP	Dispersant, wetting, milling aid	Complete robust solution	Y	910

\* Griffin method is used to calculate nonionic surfactants and Davis method is used to calculate amine containing surfactants and anionic surfactants

\*\* limited to 30% in the pesticide formulation

EC = Emulsifiable concentrate, EW = Emulsion, oil in water, FS = Flowable conc. for seed treatment, G = Granulation, ME = Microemulsions, OD = Oil dispersions, SC = Suspension concentrate, SE = Suspoemulsions, SL = Soluble liquid, TM = Tankmix, WDG = Water dispersible granule, WP = Wettable powder, WSG = Water soluble granule

1) 1% in water 2) Draves test 3) Griffin/Davis *	GENERAL CHARACTERISTICS											SOLUBILITY		FUNCTIONALITY & USE			EPA (explanation see below)	
	Physical form (20°C)	Description	Active content	Water content	pH <sup>1)</sup>	CMC g/l	Surface tension mN/m <sup>2</sup>	Contact angle	Wetting power <sup>2)</sup> 1g/l	HLB <sup>3)</sup>	Water	Veg oil	Application area	Function	Prime use	REACH		
<b>WETTING AGENTS</b>																		
Adsee™ 2610	Liquid	Non-ionic proprietary blend	83%	15-19%	5.5-7.5	NA	32.1	NA	30 sec	NA	Soluble	Dispersible	SC, SE, EW, FS, CS, ZC	Wetter	Versatile, cost effective, use with Agrilan® 855	N	N	
Adsee™ 900	Liquid	Fatty alcohol ethoxylate	90%	10%	5-7	1.0	26	41	5 sec	NA	Soluble	Dispersible	SC, SL, TM	Wetter, penetrant	Fungicides, Sulfonylureas, Hydrophobic actives	Y	910, 930	
Berol® 790A	White powder	Alkyl sulfonate	≥93%	≤3%	11.5-13.5	0.0731	32	67	25 sec	NA	Soluble	Insoluble	SC, WDG, WSG, WP	Wetter	Multipurpose, White wetter	N	N	
Ethylan® TD-60	Liquid	Fatty alcohol ethoxylate	98%	0.2%	6-8	0.04	27	33	13 sec	11.4	Soluble	Insoluble	SC, SL, TM	Wetter, penetrant	Multipurpose	N	910, 930	
Lankropol® KPH70	Liquid	Diocylsulfosuccinate in mppg/water	70%	11%	5-8	1.6	34	35	4 sec	NA	Opaque sol	Insoluble	EC, EW, ME	Wetter	Extra fast, no colour	Y	910, 930	
Morwet® 3028	Brown powder	Naphthalene sulphonate blend	95%	2%	7.5-10	1.5	36	64	20 sec	NA	Soluble	Insoluble	SC, WDG, WSG, WP	Wetter	Excellent wetter, assist granulation breakdown in high concentration system, lighter color	Y	910, 930	
Morwet® EFW Powder	Brown powder	Naphthalene sulphonate blend	95%	2%	7.5-10	6.0	32	65	17 sec	NA	Soluble	Insoluble	SC, WDG, WSG, WP	Wetter	Extra fast wetting, use with Morwet® D-425 Powder	Y	910	
Morwet® IP Powder	Brown powder	Naphthalene sulphonate condensate	75%	2.5%	7.5-10	7.7	50	87	>5 min	NA	Soluble	Insoluble	SC, WDG, WSG, WP	Wetter	Low foam	Y	910, 930	
<b>EMULSIFIERS</b>																		
Agrilan® AEC145	Liquid/paste	TSP-ethoxylate 15 EO	100%	0.5%	6-7	0.015	41	63	6 min	NA	Soluble	Soluble	EW, ME	Emulsifier	Combine with Lankropol KPH70	Y	910, 920	
Berol® 829	Liquid	Castor oil ethoxylate 20	100%	1%	5.5-7.5	0.11	40	72	>10 min	10.9	Dispersible	Soluble	EC, EW, ME, OD	Emulsifier	Combine with anionic emulsifier	Y	960	
Berol® 904	Liquid/paste	Castor oil ethoxylate 40	100%	0.3%	6-7.5	0.29	41	73	>10 min	13.8	Soluble	Soluble	EC, EW, ME	Emulsifier	Combine with anionic emulsifier	Y	960	
Berol® 9927	Liquid/paste	Nonionic/anionic blend	100%	0.5%	5-7	NA	30	44	10 sec	NA	Soluble	Soluble	EC	Emulsifier blend		N	N	
Berol® 9960	Paste	Nonionic/anionic blend	100%	0.5%	6-7	NA	31	49	21 sec	NA	Soluble	Dispersible	EC	Emulsifier blend	Emulsifiers matched pair developed for EC Suitable for ECs in aromatic solvents	N	910, 930	
Berol® 9968	Liquid	Nonionic/anionic blend	100%	0.5%	7	NA	28	37	8 sec	NA	Dispersible	Soluble	EC	Emulsifier blend	Guide recipes available upon request	N	910, 930	
Berol® 9969	Paste	Nonionic/anionic blend	100%	0.5%	7-8	NA	29	40	13 sec	NA	Soluble	Insoluble	EC	Emulsifier blend		N	N	
Emulpon™ CO-36	Liquid	Castor oil ethoxylate 36	100%	0.5%	6-8		39	80	>10 min	13.4	Soluble	Soluble	EC, EW, ME	Emulsifier	Combine with anionic emulsifier	Y	960	
Emulpon™ CO-40	Liquid	Castor oil ethoxylate 40	100%	0.5%	6-7.5	0.29	41	73	>10 min	13.8	Soluble	Soluble	EC, EW, ME	Emulsifier	Combine with anionic emulsifier	Y	960	
Ethylan® 324	Paste	Alcohol alkoxyate	100%	0.2%	6-8	0.03	36	56	>10 min	NA	Soluble	Soluble	EC, EW, ME	Emulsifier, stabiliser	Aromatic and Armid DM solvents, spontaneity enhancer	N	960	
Ethylan® 954 LQ	Liquid	Alcohol alkoxyate	100%	0.3%	5-7	0.005	38	65	>5 min	NA	Soluble	Soluble	EC	Emulsifier, penetrant	Aromatic, Armid DM solvents	N	910, 930	
Ethylan® NS-500LQ	Viscous liquid	Alcohol block copolymer	100%	0.2%	6.5-7.5	0.2	36	62	163 sec	NA	Soluble	Insoluble	EC, EW	Emulsifier, stabiliser	Aromatic and Armid DM solvents, spontaneity enhancer	Y	960	
Phospholan® PE169	Liquid	C13- ethoxylate Phosphate ester, acid	100%	<1%	2-3	0.02	28 (pH=6)	37 (pH=6)	23 (pH=6)	NA	Dispersible	Soluble	ME, OD, SC, SE	Emulsifier, dispersant	Water soluble when neutralised, form ME with Agrilan® AEC145	Y	N	
Witconate® P-1220EH	Liquid	Branched DDBS, Ca salt	60%	1%	5-7	NA	NA	NA	NA	NA	Dispersible	Soluble	EC, EW, ME	Emulsifier	Combine with Ethylan 324 & Ethylan NS-500LQ	Y	910, 930	
<b>EMULSIFIER BLENDS</b>																		
Berol® 9985	Liquid	Nonionic/anionic blend	100%	0.8%	5-7					NA	Dispersible	Soluble	EC, OD	Emulsifier blend	Versatile emulsifier- phenoxies, dinitroanilines, MSO	N	N	
Sponto® EC-452	Liquid	Nonionic/anionic blend	100%	0.5%	5-7	NA	29	42	13 sec	NA	Dispersible	Dispersible	EC	Emulsifier blend	Versatile emulsifier- phenoxies, dinitroanilines, MSO	N	910, 930	
<b>SOLVENTS and OTHERS</b>																		
Adsee™ ST4	Liquid	Maltodextrin/vinylpyrrolidone polymer	24%	76%	4-6	NA	NA	NA	NA	NA	Soluble	Insoluble	FS	Binder	Reduce dust-off, improve flowabilit	Y	960	
Armid® DM10	Liquid	C10 dimethyl amide	100%	0.5%	4-7	NA	NA	NA	NA	NA	Insoluble	Soluble	EC, EW	Oil soluble	Replace NMP and aromatic solvents	Y	920	
Armid® DM810	Liquid	C8-10 dimethyl amide	100%	0.5%	NA	NA	NA	NA	NA	NA	Dispersible	Soluble	EC, EW	Oil soluble	Replace NMP and aromatic solvents	Y	920	
Armid® FMPC	Liquid	Morpholine derivative	100%	0.5%	NA	NA	NA	NA	NA	NA	Soluble	Soluble	EC, EW, SL	Water soluble, co-solvent	NMP replacer, soluble in most solvents	Y	N	
Polymer 2500	Liquid	Low-molecular weight polymer	48-51%	<2%	2-3.5	NA	NA	NA	NA	NA	Soluble	Insoluble	GR	Binder	Binder for sand and pan granulation process	N	960	

EPA notes:  
40CFR180.910: Inert ingredients used pre- and post-harvest; exemptions from the requirement of a tolerance.  
40CFR180.920: Inert ingredients used pre-harvest; exemptions from the requirement of a tolerance.  
40CFR180.930: Inert ingredients applied to animals; exemptions from the requirement of a tolerance.  
40CFR180.960: Polymers; exemptions from the requirement of a tolerance.

\* Griffin method is used to calculate nonionic surfactants and Davis method is used to calculate amine containing surfactants and anionic surfactants

EC = Emulsifiable concentrate, EW = Emulsion, oil in water, FS = Flowable conc. for seed treatment, G = Granulation, ME = Microemulsions, OD = Oil dispersions, SC = Suspension concentrate, SE = Suspoemulsions, SL = Soluble liquid, TM = Tankmix, WDG = Water dispersible granule, WP = Wetttable powder, WSG = Water soluble granule

Contact us directly for detailed product information and sample request  
website | [nouryon.com/markets/agriculture](https://nouryon.com/markets/agriculture)  
email | [agro@nouryon.com](mailto:agro@nouryon.com)

# Nouryon

Nouryon is a global, specialty chemicals leader. Markets and consumers worldwide rely on our essential solutions to manufacture everyday products, such as personal care, cleaning goods, paints and coatings, agriculture and food, pharmaceuticals, and building products. Furthermore, the dedication of approximately 8,300 employees with a shared commitment to our customers, business growth, safety, sustainability and innovation has resulted in a consistently strong financial performance. We operate in over 80 countries around the world with a portfolio of industry-leading brands. Visit our website and follow us @Nouryon and on LinkedIn.

All information concerning our products and/or all suggestions for handling and use contained herein (including formulation and toxicity information) are offered in good faith and are believed to be reliable. However, Nouryon makes no warranty express or implied (i) as to the accuracy or sufficiency of such information and/or suggestions, (ii) as to any product's merchantability or fitness for a particular use or (iii) that any suggested use (including use in any formulation) will not infringe any patent. Nothing contained herein shall be construed as granting or extending any license under any patent. The user must determine for itself by preliminary tests or otherwise the suitability of any product and of any information contained herein (including but not limited to formulation and toxicity information) for the user's purpose. The safety of any formulations described herein has not been established. The suitability and safety of a formulation should be confirmed in all respects by the user prior to use. The information contained herein supersedes all previously issued bulletins on the subject matter covered.

Products mentioned are trademarks of Nouryon and registered in many countries.

[nouryon.com](https://nouryon.com)