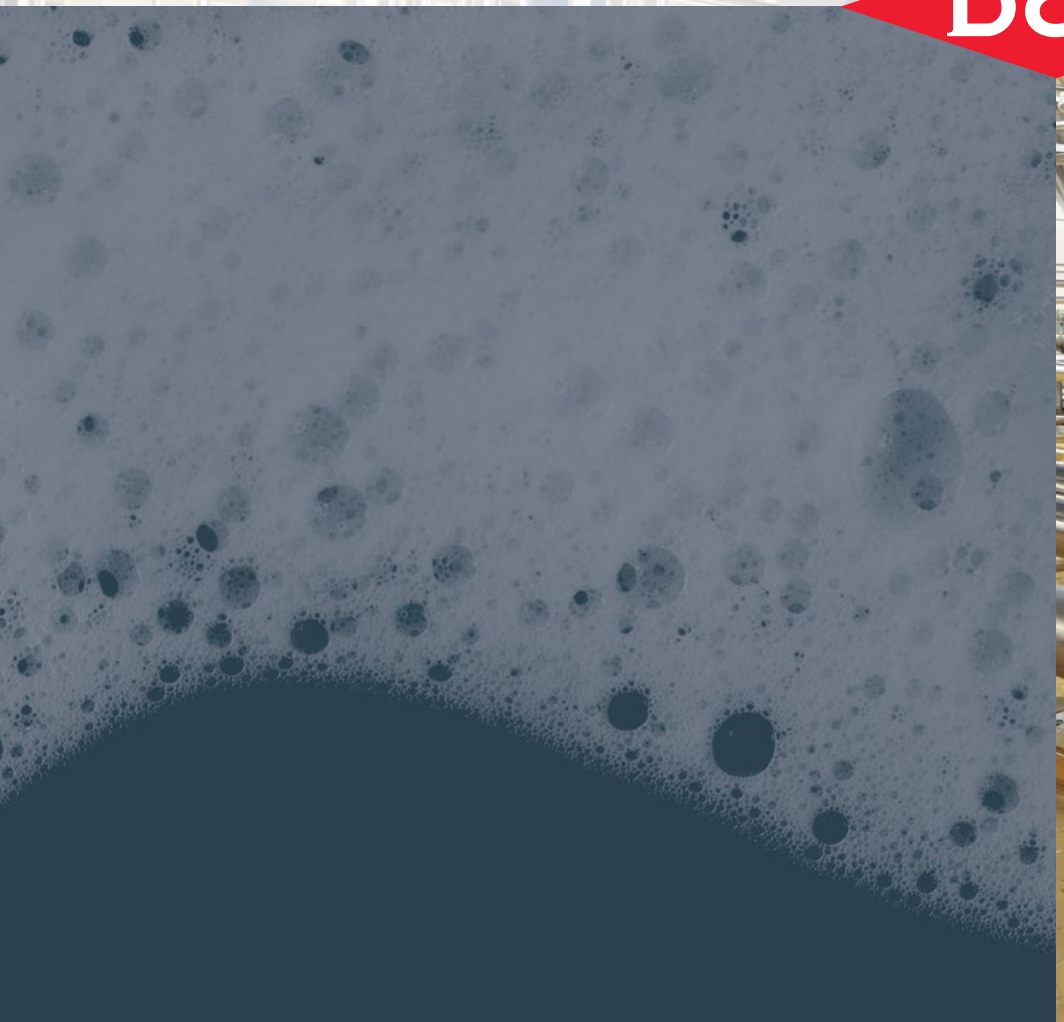
Polyglycol Foam Control

Product Reference Chart



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A broad range of alkoxylated foam control agents

For many applications and industries, foam isn't just a nuisance, it's a problem. Excessive foaming can interfere with processes and packaging, damage materials or equipment, reduce the useable volume of a vessel or lead to raw material loss. Foam control agents can help efficiently and effectively solve these challenges.

Dow's line of polyglycol foam control agents offers a wide spectrum of physical and performance properties which can be tailored to suit each distinct application. They are trusted for their known performance as processing aids, defoamers, foam preventers and deaeration materials in various industries. These products can be used either directly or within formulations to provide customized foam control solutions.

Dow's polypropylene glycols (PPGs) and EO/PO copolymers are effective foam control agents because of their low foam characteristics and inverse water solubility. These products are available in liquid form, with different cloud points and viscosities to meet diverse needs.

Our products help meet a range of regulatory and sustainability profile requirements:

Readily biodegradable

*Readily biodegradable as defined in OECD Guidelines for the Testing of Chemicals, Section 3 (Rev. 23 March 2006)

CleanGredients™

CleanGredients™ is a database of chemical ingredients used primarily to formulate residential, institutional, industrial and janitorial cleaning products that have been pre-approved to meet the U.S. EPA's Safer Choice Standard.

EPA inerts list

Dow produces surfactants that act as emulsifiers, dispersants, wetting agents for crop protection and antimicrobial products. These surfactants can be used as Inert Ingredients in pesticide and antimicrobial formulations under EPA Inert Regulations. See the EPA website for specific EPA Status **https://iaspub.epa.gov/apex/pesticides/f?p=inertfinder:mixtures**.

FDA Approval

Several of Dow's foam control solutions meet various FDA food contact regulations, including indirect and secondary direct food contact approval. A selection of grades additionally carry Kosher certification or are Halal compliant.

Our polyglycol foam control solutions can be used in many industries:

- Agrochemical production
- Bioethanol production
- Chemical manufacturing
- Construction products
- Food and beverage
- Personal care
- Household cleaners and laundry detergents
- Metal working fluids
- Oil and gas production
- Paint, coatings and ink formulations
- Pulp and paper
- Textiles
- Water treatment

Industrial application examples of nonionic foam control agents

Industrial fermentation

Today many useful products are produced by fermentation processes. These include the production of bioplastic materials for packaging, industrial enzymes for laundry detergents, bioethanol as renewable fuel, yeasts for bread making, and feed for antibiotic production.

All these processes result in the capture or formation of gases which increases foaming, leading to inefficient production and a less desirable working environment. The use of foam control agents is mandatory to suppress foaming during the fermentation process, while not affecting the fermentation's microorganisms. Nonionic polymers are often preferred since they are highly efficient processing aids and generally have no adverse effect on the culture medium.

Vegetable processing

This industry consists of different processes, such as washing, cutting, slicing, and others, which yield foams that are stabilized by proteins, bio-surfactants, starches, and more. Nonionic polymers are very effective in controlling these foams and have the advantage of a low toxicity profile.

Sugar manufacturing

Sugar products are mainly obtained from sugar beets or sugar cane. Foaming has traditionally been a problem during the washing, liming, diffusion, evaporation and crystallization processes. The introduction of nonionic foam control agents has made these processes easier to control. Notably, the use of nonionic foam control agents does not affect the fermentation of molasses by microbial action.

Total support capabilities

Our investments in foam control products and technology create one of the strongest capability platforms in the industry, while providing sustainable and safer product alternatives.

We are your collaborative source for solutions and will work closely with you to find the most optimal product to meet your performance and sustainability requirements.

We help provide customers access to…

- A wide range of chemistries
- Extensive applications expertise
- The knowledge and resources to innovate
- Experience in and awareness of current regulations and legislation
- A global sales, distribution and technical support network
- Global supply from high-class manufacturing facilities
- Reliable supply for confidence and peace of mind

For the most recent regulatory information, please contact your Dow representative for a Food Contact Letter. For TDS, SDS and Food Contact Letters, you can also visit **www.dow.com** or contact the Customer Information Group at +1-800-258-2436.

Properties: Polypropylene glycols PPGs

		Properties								
		Product	Active Content (%)	Color	Specific gravity ASTM D892	Flash Point, Closed Cup (°C) ASTM D93	Cloud Point @1% Aqueous ASTM D 2024 / Cloud Point @10% Aqueous ASTM D 2024 / Cloud Point @ 10% solvent [1]	Viscosity cSt 25°C / 40°C ASTM 445/446	Pour Point °C ASTM D97	Theoretical Molecular Weight (g/mol) [2]	Product highlights
Polypropylene glycols PPGs	PO homopolymer	Polyglycol P-425	100	Colorless to yellow	1.007	166	- / - / -	- / 33	-45	425	
		Polyglycol P-600	100	Clear to yellow	1.003	>100	65 / - / 57	84 / 40	-47	600	
		Polyglycol P 1000-TB [a]	95-100	Clear	1.005	237	21 / - / 38	143 / 78	-25	1000	
		Polyglycol P-1000E	100	Clear	1.004	>150 (Open cup)	21 / - / 38	143 / 71	-43	1000	
		Polyglycol P 1200	100	Clear	1.007	166	20 / - / 32.5	160 / 91	-41	1200	
		Polyglycol P-1200E	100	Clear	1.003	>150	20 / - / 32.5	160 / 80	-41	1200	
		Polyglycol P 2000	100	Clear	0.999	185	15 / - / 20	300 / 158	-31	2000	
		Polyglycol P 2000P	100	Clear	0.999	185	15 / - / 20	300 / 158	-31	2000	
		Polyglycol 2000LM	100	Clear	1.002	174	15 / - / 20	368 / -	-31	2000	
		Polyglycol P-3000E	100	Clear	1.025	169	- / - / -	- / 268	-	3000	
		Polyglycol P 4000	100	Clear	1.0048	185	9 / - / 10.0	1110 / 455	-20	4000	
		Polyglycol 4000LM	100	Clear	1.002	145	9 / - / -	920 / -	-20	4000	
	PO homopolymer triol	Polyglycol PT 250	100	Clear	1.09	188	- / - / -	- / 285	-18	250	
		Polyglycol PT 700	100	Clear	1.033	>177	- / - / -	- / 108	-32	700	
		Polyglycol PT 3000	100	Clear	1.01	177	- / - / -	484 / 235	-27	3000	
		Polyglycol PT 4800	100	Clear	1.018	>182	- / - / -	435 / -	-29	-	

These are typical properties, not to be construed as specifications.
(1) Surfactant in a solution of 25% diethylene glycol butyl ether in water.
(2) Molecular Weight: Calculated from the molecular weight of the initiator and oxide units in the molecule.
(a) Materials sourced from Asia Pacific may have fewer compliances.

Readily biodegradable CleanGredients™ EPA inerts list

Properties: EO-PO block copolymers

		Properties								
		Product	Active Content (%)	Color	Specific gravity ASTM D892	Flash Point, Closed Cup (°C) ASTM D93	Cloud Point @1% Aqueous ASTM D 2024 / Cloud Point @10% Aqueous ASTM D 2024 / Cloud Point @ 10% solvent [1]	Viscosity cSt 25°C / 40°C ASTM 445/446	Pour Point °C ASTM D97	Theoretical Molecular Weight (g/mol) [2]	Product highlights
EO-PO block copolymers	Linear block copolymers	Polyglycol EP 436	100	Clear to white	>1.00	>216	20 / - / -	- / 198	-	-	
		Polyglycol EP 436E	100	Clear to yellow	1.01	200	20 / - / -	- / 180	<-20	-	
		DOWFAX™ 63N10	100	Clear	1.105	216	23 / 18 / 39	294 / 140	-35	1900	
		DOWFAX™ 63N10L	100	Clear	1.01	216	23 / 18 / 39	294 / 140	-33	1900	
		DOWFAX™ 63N13	100	Clear	1.018	>200	24 / 19 / 39	300 / 160	<-20	2000	
		DOWFAX™ 63N30	100	Clear	1.04	216	32 / 22 / 62	441 / 215	-5	2250	
		DOWFAX™ 63N37	100	Clear	1.04	>180	- / 55 / -	- / 305	18	3100	
		DOWFAX™ 63N40	100	Clear to white	1.05	>180	62 / 63 / 72	589 / 284	7	2700	
		DOWFAX™ 81N13	100	Clear	1.017	150	20 / 14 / 41	475 / 224	-27	2700	
		DOWFAX™ 92N20	100	Light yellow	1.024	>216	15 / 15 / 53	850 / 386	-8	4050	
		DOWFAX™ 100N15	100	Clear	1.025	216	17 / 13 / 45	630 / 392	-17	3800	
		TERGITOL™ L-61	100	Clear	1.015	216	18 / 17 / -	- / 168	-24	2000	
		TERGITOL™ L-62	100	Clear to white	1.048	>180	32 / 23 / -	- / 284	-2	2500	
		TERGITOL™ L-64	100	Clear to white	1.048	>180	62 / - / -	- / 284	7	2700	
		TERGITOL™ L-81	100	Clear	1.016	150	20 / - / 43	- / -	-20	2750	
		TERGITOL™ L-101	100	Clear	1.018	216	18 / - / -	- / 412	-24	3900	
		TERGITOL™ P-104	100	Waxy solid	1.03	>93	80 / - / -	- / 550 (at 60°C)	32		
		TERGITOL™ P-105	100	Waxy solid	1.03	>93	90 / - / -	- / 399	45		
		TERGITOL™ 25R2	100	Clear	1.01	>220	30 / - / -	675 / -	-15	3100	
		TERGITOL™ 17R2	100	Clear to yellow	1.028	>200°C (Open cup ASTM D92)	35 / - / -	- / 170	-43	-	
		TERGITOL™ 17R4	100	Clear to yellow	1.05	>200	45 / - / -	- / 260	3	-	
	Fatty alcohol alkoxylates	DOWFAX™ 20A42 EB	100	Clear	0.95	>100	<4 / <4 / 52	52 / 32	<-10	600	
		DOWFAX™ 20A612	100	White to yellow	0.99	230	14 / 8 / 28	28 / 61	-21	1170	
		DOWFAX™ 20A64	100	Clear	0.973	217	30 / 28 / 51	51 / 34	-10	685	
		DOWFAX™ 25A414	100	Clear	0.97	>100	13 / 6 / 27	27 / 65	-7	1200	
		DOWFAX™ 20B102	95	Clear	1.007	>100	32 / 31 / 44	44 / 40	-8	885	
	High performance defoamers	DOWFAX™ DF 101	100	Clear	1.017	180	20 / 8 / 30	490 / 232	-20	2760	
		DOWFAX™ DF 103	100	Clear	1.0155	221	22 / - / -	450 / -	<-20	-	
		DOWFAX™ DF 103	100	Clear	0.999	>185	15 / - / -	300 / -	<-20	-	
		DOWFAX™ DF 105	100	Clear	1.015	216	24 / - / -	- / 168	-32	2000	
		DOWFAX™ DF 107	100	Clear	1.0115	180	22 / 15.5 / 29	465 / -	<-30	3500	
		DOWFAX™ DF 109	100	Clear	1.05	150	- / - / 41	- / -	-	-	

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(1) Surfactant in a solution of 25% diethylene glycol butyl ether in water.

(2) Molecular Weight: Calculated from the molecular weight of the initiator and oxide units in the molecule.

Readily biodegradable CleanGredients™ EPA inerts list

Properties: EO-PO block copolymers (continued)

		Properties								
		Product	Active Content (%)	Color	Specific gravity ASTM D892	Flash Point, Closed Cup (°C) ASTM D93	Cloud Point @1% Aqueous ASTM D 2024 / Cloud Point @10% Aqueous ASTM D 2024 / Cloud Point @ 10% solvent [1]	Viscosity cSt 25°C / 40°C ASTM 445/446	Pour Point °C ASTM D97	Theoretical Molecular Weight (g/mol) [2]	Product highlights
EO-PO block copolymers	High performance defoamers	DOWFAX™ DF 111	100	Clear	1.02	>150	20 / 15 / 26	790 / 372	-20	3550	
		DOWFAX™ DF 112	100	Clear	1.05	>100	49 / 34 / 48	680 / 286	-13	3150	
		DOWFAX™ DF 113	100	Clear	1.017	>170	14 / 11 / 40	752 / 500	<-20	5200	
		DOWFAX™ DF 114	100	Clear	1.04	194	40 / 8 / 42	810 / 321	<-20	3720	
		DOWFAX™ DF 117	100	Clear	1.02	>200	10 / 8 / 35	710 / 313	<-20	4100	
		DOWFAX™ DF 122	100	Clear	1.016	235	18 / 10 / 40	791 / 368	<-20	4650	
		DOWFAX™ DF 124	100	Clear	1.02	>200	<4 / <4 / 31	550 / 255	<-20	4000	
		DOWFAX™ DF 125	100	Clear	1.03	>250	19 / 10 / 40	1490 / 220	<-20	3000	
		DOWFAX™ DF 126	99.5	Clear	1.04	>150	22 / 16 / 32	750 / 360	<-20	5600	
		DOWFAX™ DF 127	100	Clear	1.05	>100	- / - / 33	- / 680	-13	-	
		DOWFAX™ DF 133	100	Brown	1.009	>100	<4 / <4 / 33	1000 / 418	-36	5550	
		DOWFAX™ DF 141	100	Clear	0.99	>170	13.5 / 6 / 28	193 / 96	<-20	1800	
		DOWFAX™ DF 142	99.5	Clear	0.99	>150	10 / 10 / 28	193 / 103	<-20	2000	
		DOWFAX™ DF 143	100	Clear to yellow	0.989	225°C (Open cup ASTM D92)	12 / <4 / 13	142 / 72	-35	1300	
		DOWFAX™ DF 144	99.5	Clear	1.008	>230°C	8 / <4 / 28	320 / 180	<-20	3600	
		DOWFAX™ DF 146	100	Clear	0.98	>100°C	<4 / <4 / 20	240 / 120	<-20	2000	
		DOWFAX™ DF 147	100	Clear to yellow	1.01	>250	18 / 10 / 37	520 / 200	7	3800	
		DOWFAX™ DF 148	99.5	Clear to yellow	1.007	>200	- / - / 21	- / 170	-	-	
		DOWFAX™ DF 161	100	Clear	1.046	>100	44 / 20 / 43	780 / 346	<-20	6500	
		DOWFAX™ DF 162	100	Clear to yellow	1.018	246°C (Open cup ASTM D92)	15 / <4 / 20	1340 / 617	<-20	13500	
		DOWFAX™ DF 163	100	Clear	1.044	-	32 / 17.5 / 35	1510 / 775	4	12000	
		UCON™ Lub LB-625	100	Clear	0.997	168	- / - / -	- / 120	-31.7	1550	
		UCON™ Lub LB-1145	100	Clear to yellow	1	191	- / - / -	- / 233	-28.9	2080	
		UCON™ Lub LB-1715	100	Clear to yellow	1	188	- / - / -	- / 370	-23.3	2490	
		UCON™ Lubricant 50-HB-2000	100	Clear to yellow	1.956	177	53 / - / -	- / 398	-32	2660	
		UCON™ Lubricant 50-HB-3520	100	Clear to yellow	1.056	171	51 / - / -	- / 700	-29	3380	
		UCON™ Lubricant 50-HB-5100	100	Clear to yellow	1.057	199	50 / - / -	- / 1015	-36	3930	
	Sugar cane fermentation process	FLUENT-CANE™ 113 Polyglycol	99.5	Clear	1.018	>182	- / - / -	- / 435	-29	-	
		FLUENT-CANE™ 149 Polyglycol	100	Clear	1.02	216	- / - / 58	- / 250	-	-	
		FLUENT-CANE™ 178 Polyglycol	100	Clear to yellow	1.05	>216	- / - / 58	- / 400	10	-	
		FLUENT-CANE™ 278 Polyglycol	100	Clear	1.05	-	- / - / 35	- / 300	10	-	

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(1) Surfactant in a solution of 25% diethylene glycol butyl ether in water.
(2) Molecular Weight: Calculated from the molecular weight of the initiator and oxide units in the molecule.

Readily biodegradable CleanGredients™ EPA inerts list

Food contact: Part 172, 173, 175 & 176

		Polypropylene glycols PPGs																EO-PO block copolymers																									
		PO homopolymer												PO homopolymer triol				Linear block copolymers																									
	Products	Polyglycol P-425	Polyglycol P-600	Polyglycol P 1000-TB [a]	Polyglycol P-1000E	Polyglycol P 1200	Polyglycol P-1200E	Polyglycol P 2000	Polyglycol P 2000P	Polyglycol 2000LM	Polyglycol P-3000E	Polyglycol P 4000	Polyglycol 4000LM	Polyglycol PT 250	Polyglycol PT 700	Polyglycol PT 3000	Polyglycol PT 4800	Polyglycol EP 436	Polyglycol EP 436E	DOWFAX™ 63N10	DOWFAX™ 63N10L	DOWFAX™ 63N13	DOWFAX™ 63N30	DOWFAX™ 63N37	DOWFAX™ 63N40	DOWFAX™ 81N13	DOWFAX™ 92N20	DOWFAX™ 100N15	TERGITOL™ L-61	TERGITOL™ L-62	TERGITOL™ L-64	TERGITOL™ L-81	TERGITOL™ L-101	TERGITOL™ P-104	TERGITOL™ P-105	TERGITOL™ 25R2	TERGITOL™ 17R2	TERGITOL™ 17R4
Part 172*	172.808(b)(3) - As a surfactant and defoaming agent, at levels not to exceed 0.05 percent by weight, in scald baths for poultry defeathering, followed by potable water rinse. The temperatures of the scald baths shall be not less than 125°F. As a foam control and rinse adjuvant in hog dehairing machines at a use level of not more than 5 grams per hog.																			•		•	•		•	•	•	•	•	•	•	•						
Part 173 - Secondary direct food additives permitted in food for human consumption	173.310 (c) - Boiler water additives			•		•	•	•			•	•																										
	173.315 (a) (1) - Chemicals used in washing or to assist in the peeling of fruits and vegetables																																					
	173.340 (a) (1) - Defoaming agents																			•					•					•	•	•						
	173.340 (a) (2) - Defoaming agents for use as described in 172.808(b)(3)																	•		•		•	•		•	•	•	•	•	•	•	•	•			•		•
	173.340 (a) (3) - Defoaming agents for use in food processing - (Beet sugar and yeast)					•	•	•			•																											
	173.340 (a) (4) - Defoaming agents for use in food processing - Beet sugar only																																					
Part 175 - Indirect food additives: Adhesives and compounds of coating	175.105 - Adhesives																																					
	175.105(c)(5) - Adhesives	•	•	•	•	•	•	•	•	•	•	•	•		•	•		•	•																			
	175.300(b)(3)(ii) - Resinous and polymeric coatings	•	•	•		•	•	•			•	•																										
	175.300(b)(3)(xxxii) - Resinous and polymeric coatings	•	•	•		•	•	•			•	•																										
Part 176 - Indirect food additives: Paper and paperboard components	176.170 - Components of paper and paperboard in contact with aqueous and fatty foods																																					
	176.170 (a) (5) - Components of paper and paperboard in contact with aqueous and fatty foods	•	•	•		•	•	•			•	•																										
	176.170 (b) (1) - Components of paper and paperboard in contact with aqueous and fatty foods	•	•	•		•	•	•			•	•																										•
	176.180 - Components of paper and paperboard in contact with dry food																																					•
	176.180 (b) (1) - Components of paper and paperboard in contact with dry food	•	•	•		•	•	•			•	•																										
	176.180 (b) (2) - Components of paper and paperboard in contact with dry food																	•	•	•		•	•		•	•	•	•	•	•	•	•	•			•	•	•
	176.200 (c) - Defoaming agents used in coatings	•	•	•		•	•	•			•	•			•	•		•	•																			
	176.200 (d) (3) - Defoaming agents used in coatings	•	•	•		•	•	•			•	•						•	•	•		•	•		•	•	•	•	•	•	•	•	•			•	•	•
	176.210 (d) (2) - Defoaming agents used in the manufacture of paper and paperboard	•	•	•		•	•	•																														
	176.210 (d) (3) - Defoaming agents used in the manufacture of paper and paperboard	•	•	•		•	•	•										•	•	•		•	•		•	•	•	•	•	•	•	•	•			•	•	•

(a) Materials sourced from Asia Pacific may have fewer compliances.

These are typical properties, not to be construed as specifications.

* Part 172 - Food additives permitted for direct addition to food for human consumption

Food contact: Part 172, 173, 175 & 176

		EO-PO block copolymers																																								
		Fatty alcohol alkoxylates					High performance defoamers					High performance defoamers																											Sugar cane fermentation process			
	Products	DOWFAX™ 20A42 EB	DOWFAX™ 20A612	DOWFAX™ 20A64	DOWFAX™ 25A414	DOWFAX™ 20B102	DOWFAX™ DF 101	DOWFAX™ DF 103	DOWFAX™ DF 105	DOWFAX™ DF 107	DOWFAX™ DF 109	DOWFAX™ DF 111	DOWFAX™ DF 112	DOWFAX™ DF 113	DOWFAX™ DF 114	DOWFAX™ DF 117	DOWFAX™ DF 122	DOWFAX™ DF 124	DOWFAX™ DF 125	DOWFAX™ DF 126	DOWFAX™ DF 127	DOWFAX™ DF 133	DOWFAX™ DF 141	DOWFAX™ DF 142	DOWFAX™ DF 143	DOWFAX™ DF 144	DOWFAX™ DF 146	DOWFAX™ DF 147	DOWFAX™ DF 148	DOWFAX™ DF 161	DOWFAX™ DF 162	DOWFAX™ DF 163	UCON™ Lub LB-625	UCON™ Lub LB-1145	UCON™ Lub LB-1715	UCON™ Lubricant 50-HB-2000	UCON™ Lubricant 50-HB-3520	UCON™ Lubricant 50-HB-5100	FLUENT-CANE™ 113 Polyglycol	FLUENT-CANE™ 149 Polyglycol	FLUENT-CANE™ 178 Polyglycol	FLUENT-CANE™ 278 Polyglycol
Part 172*	172.808(b)(3) - As a surfactant and defoaming agent, at levels not to exceed 0.05 percent by weight, in scald baths for poultry defeathering, followed by potable water rinse. The temperatures of the scald baths shall be not less than 125°F. As a foam control and rinse adjuvant in hog dehairing machines at a use level of not more than 5 grams per hog.						•		•		•																															
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	173.340 (a) (1) - Defoaming agents											•	•	•	•	•	•	•		•	•																					
	173.340 (a) (2) - Defoaming agents for use as described in 172.808(b)(3)						•		•		•																															
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	173.340 (a) (4) - Defoaming agents for use in food processing - Beet sugar only																																				•					
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	176.170 (a) (5) - Components of paper and paperboard in contact with aqueous and fatty foods																																									
	176.170 (b) (1) - Components of paper and paperboard in contact with aqueous and fatty foods																																									
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	176.180 (b) (1) - Components of paper and paperboard in contact with dry food																																									
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	176.210 (d) (3) - Defoaming agents used in the manufacture of paper and paperboard						•		•	•	•																						•	•	•	•	•	•				

* Part 172 - Food additives permitted for direct addition to food for human consumption

These are typical properties, not to be construed as specifications.

Food contact: Part 177 & 178

		Polypropylene glycols PPGs																EO-PO block copolymers																									
		PO homopolymer												PO homopolymer triol				Linear block copolymers																									
	Products	Polyglycol P-425	Polyglycol P-600	Polyglycol P 1000-TB [a]	Polyglycol P-1000E	Polyglycol P 1200	Polyglycol P-1200E	Polyglycol P 2000	Polyglycol P 2000P	Polyglycol 2000LM	Polyglycol P-3000E	Polyglycol P 4000	Polyglycol 4000LM	Polyglycol PT 250	Polyglycol PT 700	Polyglycol PT 3000	Polyglycol PT 4800	Polyglycol EP 436	Polyglycol EP 436E	DOWFAX™ 63N10	DOWFAX™ 63N10L	DOWFAX™ 63N13	DOWFAX™ 63N30	DOWFAX™ 63N37	DOWFAX™ 63N40	DOWFAX™ 81N13	DOWFAX™ 92N20	DOWFAX™ 100N15	TERGITOL™ L-61	TERGITOL™ L-62	TERGITOL™ L-64	TERGITOL™ L-81	TERGITOL™ L-101	TERGITOL™ P-104	TERGITOL™ P-105	TERGITOL™ 25R2	TERGITOL™ 17R2	TERGITOL™ 17R4
Part 177 - Indirect food additives: Polymers	177.1200 (c) - Cellophane for food packaging	•	•	•		•	•	•			•	•						•	•	-		-	-		-	-	-	-	-	-	-	-	-	-	-					
	177.1210 (b) - Closures with sealing gaskets for food containers	•	•	•		•	•	•			•	•																				•								
	177.1390 (c) (2) (ii) - Laminate structures for use at temperatures of 250°F and above	•	•	•	•	•	•	•		•	•	•	•		•	•		•	•	•		•	•		•	•	•	•	•	•	•	•	•						•
	177.1400 (b) (4) - Hydroxyethyl cellulose film, water-insoluble	•	•	•		•	•	•			•	•						•	•	•		•	•		•	•	•	•	•	•	•	•	•						
	177.1680(a)(2) - Polyurethane resins	•	•	•		•	•	•			•	•						•	•			•	•																	
Part 178 - Indirect food additives: Adjuvants, production aids, and sanitizers	178.1010 (b) (5) - Sanitizing solutions for use on food-processing equipment																	•	•	•		•	•		•	•	•	•	•	•	•	•	•						
	178.1010 (b) (6) - Sanitizing solutions for use on food-processing equipment																	•	•	•		•	•		•	•	•	•	•	•	•	•	•						
	178.1010 (b) (7) - Sanitizing solutions for use on food-processing equipment																										•	•				•							
	178.1010 (b) (8) - Sanitizing solutions for use on food-processing equipment																																						
	178.1010 (b)(12) - Sanitizing solutions for use on food-processing equipment																					•	•												•				
	178.1010 (b) (14) - Sanitizing solutions for use on food-processing equipment																	•	•			•	•		•	•	•	•		•	•	•	•			•	•	•	•
	178.1010 (b) (16) - Sanitizing solutions for use on food-processing equipment																	•	•	•		•	•		•	•	•	•	•	•	•	•	•						
	178.3120 (d) (3) - Animal glue	•	•	•		•	•	•										•	•			•	•		•	•	•	•	•	•	•	•	•						
	178.3570 (a) (3) - Lubricants with incidental food contact																																						
	178.3910 (a) (2) - Surface lubricants used in the manufacture of metallic articles																																						
	178.3740 (b) - Plasticizers in polymeric substances [b]					•	•	•			•	•																											

(a) Materials sourced from Asia Pacific may have fewer compliances.
(b) for use only in polystyrene plastics, identified in Sec. 177.1640(a)(1) in an amount not to exceed 6 pct by weight of the finished food contact article - for use as an adjuvant employed during the processing of cellulose pulp used in the manufacture of cellophane base sheet.

These are typical properties, not to be construed as specifications.

Food contact: Part 177 & 178

		EO-PO block copolymers																																								
		Fatty alcohol alkoxylates					High performance defoamers					High performance defoamers																											Sugar cane fermentation process			
	Products	DOWFAX™ 20A42 EB	DOWFAX™ 20A612	DOWFAX™ 20A64	DOWFAX™ 25A414	DOWFAX™ 20B102	DOWFAX™ DF 101	DOWFAX™ DF 103	DOWFAX™ DF 105	DOWFAX™ DF 107	DOWFAX™ DF 109	DOWFAX™ DF 111	DOWFAX™ DF 112	DOWFAX™ DF 113	DOWFAX™ DF 114	DOWFAX™ DF 117	DOWFAX™ DF 122	DOWFAX™ DF 124	DOWFAX™ DF 125	DOWFAX™ DF 126	DOWFAX™ DF 127	DOWFAX™ DF 133	DOWFAX™ DF 141	DOWFAX™ DF 142	DOWFAX™ DF 143	DOWFAX™ DF 144	DOWFAX™ DF 146	DOWFAX™ DF 147	DOWFAX™ DF 148	DOWFAX™ DF 161	DOWFAX™ DF 162	DOWFAX™ DF 163	UCON™ Lub LB-625	UCON™ Lub LB-1145	UCON™ Lub LB-1715	UCON™ Lubricant 50-HB-2000	UCON™ Lubricant 50-HB-3520	UCON™ Lubricant 50-HB-5100	FLUENT-CANE™ 113 Polyglycol	FLUENT-CANE™ 149 Polyglycol	FLUENT-CANE™ 178 Polyglycol	FLUENT-CANE™ 278 Polyglycol
Part 177 - Indirect food additives: Polymers	177.1200 (c) - Cellophane for food packaging						-		-		-																						•	•	•							
	177.1210 (b) - Closures with sealing gaskets for food containers																																									
	177.1390 (c) (2) (ii) - Laminate structures for use at temperatures of 250°F and above						•		•		•																						•	•	•	•	•	•				
	177.1400 (b) (4) - Hydroxyethyl cellulose film, water-insoluble						•		•																								•	•	•							
	177.1680(a)(2) - Polyurethane resins											•	•		•		•																									
Part 178 - Indirect food additives: Adjuvants, production aids, and sanitizers	178.1010 (b) (5) - Sanitizing solutions for use on food-processing equipment						•		•																																	
	178.1010 (b) (6) - Sanitizing solutions for use on food-processing equipment						•		•																																	
	178.1010 (b) (7) - Sanitizing solutions for use on food-processing equipment						•																																			
	178.1010 (b) (8) - Sanitizing solutions for use on food-processing equipment																																			•	•	•				
	178.1010 (b)(12) - Sanitizing solutions for use on food-processing equipment																																									
	178.1010 (b) (14) - Sanitizing solutions for use on food-processing equipment						•																																			
	178.1010 (b) (16) - Sanitizing solutions for use on food-processing equipment						•		•																																	
	178.3120 (d) (3) - Animal glue						•		•																								•	•	•	•	•	•				
	178.3570 (a) (3) - Lubricants with incidental food contact																																•	•	•	•	•	•				
	178.3910 (a) (2) - Surface lubricants used in the manufacture of metallic articles																																•	•	•	•	•	•				
	178.3740 (b) - Plasticizers in polymeric substances [(b)]																																									

(b) for use only in polystyrene plastics, identified in Sec. 177.1640(a)(1) in an amount not to exceed 6 pct by weight of the finished food contact article

- for use as an adjuvant employed during the processing of cellulose pulp used in the manufacture of cellophane base sheet

These are typical properties, not to be construed as specifications.

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