



PETRONAS



Ethonas FAE
Fatty Alcohol
Ethoxylates

Overview of PETRONAS Chemicals Group Berhad

PETRONAS Chemicals Group Berhad (PCG) is the leading integrated chemicals producer in Malaysia and one of the largest in Southeast Asia. It operates **19 world-class manufacturing sites** in Malaysia, Asia-Pacific, Europe and North America. With a total combined production capacity of **15.4 million metric tons per annum (mtpa)**, it is involved primarily in **manufacturing, marketing and selling a diversified range of chemical products**, including olefins, polymers, fertilisers, methanol, other basic chemicals, derivative products and specialty chemicals.

Listed on Bursa Malaysia with more than three decades of experience in the chemicals industry, PCG is established as part of the PETRONAS Group to maximise value from Malaysia's natural gas resources.

PCG is committed to ensuring that its business practices are in line with globally recognised standards for Economic, Environment, Social & Governance (EESG) practices. It is currently listed in the FTSE4Good Bursa Malaysia (F4GBM) Index and the Dow Jones Sustainability™ World Index.

PETRONAS Chemicals Derivatives Sdn. Bhd. (PC DSB)

Produces Fatty Alcohol Ethoxylates in Kertih, Terengganu.



6-030-05/2013



ISO 9001:2015, ISO 14001:2015



6-ISO-45001:2018



2-0699-16-000-00

Ethonas FAE

Fatty Alcohol Ethoxylates

Clear, colourless, nonionic surfactant produced from natural mid-cut fatty alcohol and ethylene oxide.

Acts as a surfactant or surface-active agents, which change the surface tension of water to aid in cleansing, wetting surfaces, foaming, and emulsifying.

PCG offers Fatty Alcohol Ethoxylates in various grades.

Characteristics & Benefits

Ethonas FAE (Fatty Alcohol Ethoxylate) is a linear fatty alcohol ethoxylate belonging to the class of nonionic surfactant. They are produced using environmentally friendly feedstock, Lauryl Myristyl (C12-C14) fatty alcohol.

Readily Biodegradable

Produced from natural based raw material which makes them environmentally friendly.

Excellent Detergency

Superior detergency on common household stain indicates superior cleaning performance.

Low Critical Micelle Concentration (CMC)

Optimised surfactant concentration in product formulation.

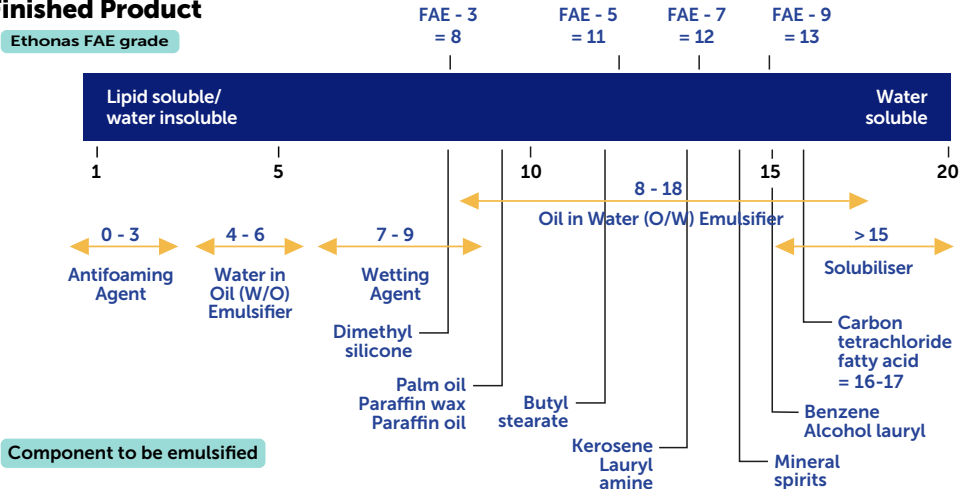
Low To Moderate Foam

Foamability of surfactant can cater to various applications.






Hydrophilic - Lipophilic Balance (HLB)






Matching the HLB values (surfactant and component to be emulsified) is key in formulating the finished product.

Finished Product



Applications

Industry	Function	Recommended Ethonas FAE Series					
		FAE-1	FAE-2	FAE-3	FAE-5	FAE-7	FAE-9
 Household detergent	Wetting & detergency				✓	✓	✓
 Textile processing	Lubricant & emulsifying				✓	✓	✓
 Industrial cleaning	Solubility, wetting & detergency			✓	✓	✓	✓
 Metal working	Emulsifier			✓	✓	✓	✓
 Chemical intermediates	Surfactant	✓	✓	✓			

Industry	Function	Recommended Ethonas FAE Series					
		FAE-1 RSPO Grade (MB)	FAE-2 RSPO Grade (MB)	FAE-3 RSPO Grade (MB)	FAE-5 RSPO Grade (MB)	FAE-7 RSPO Grade (MB)	FAE-9 RSPO Grade (MB)
 Household detergent	Wetting & detergency				✓	✓	✓
 Textile processing	Lubricant & emulsifying				✓	✓	✓
 Industrial cleaning	Solubility, wetting & detergency			✓	✓	✓	✓
 Metal working	Emulsifier			✓	✓	✓	✓
 Chemical intermediates	Surfactant	✓	✓	✓			

Product Properties

Components	Unit	Ethonas FAE series					
		FAE-1	FAE-2	FAE-3	FAE-5	FAE-7	FAE-9
Appearance @ 25°C	-	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Hydroxyl number	mgKOH/g	229-240	195-203	172-180	130-138	109-115	95-100
pH (10/6 IPA/water), 1% solution	-	6.0-7.5	6.0-7.5	6.0-7.5	6.0-7.5	-	-
pH (1% in water)	-	-	-	-	-	6.0-7.5	6.0-7.5
Water	wt%	0.10 max	0.10 max	0.10 max	0.10 max	0.10 max	0.10 max
Colour, PtCo	Pt-Co	-	-	20 max	20 max	30 max	50 max
Colour (APHA)	Pt-Co	20 max	20 max	-	-	-	-
Cloud point, 1% aq solution	°C	Insoluble	Insoluble	Insoluble	Insoluble	54-62	77-82

Components	Unit	Ethonas FAE series (RSPO grade)					
		FAE-1 RSPO Grade (MB)	FAE-2 RSPO Grade (MB)	FAE-3 RSPO Grade (MB)	FAE-5 RSPO Grade (MB)	FAE-7 RSPO Grade (MB)	FAE-9 RSPO Grade (MB)
Appearance @ 25°C	-	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Hydroxyl number	mgKOH/g	229-240	195-203	171-177	130-138	109-115	95-100
pH (10/6 IPA/water), 1% solution	-	6.0-7.5	6.0-7.5	6.0-7.5	6.0-7.5	-	-
pH (1% in water)	-	-	-	-	-	6.0-7.5	6.0-7.5
Water	wt%	0.10 max	0.10 max	0.10 max	0.10 max	0.10 max	0.10 max
Color, PtCo	Pt-Co	-	-	20 max	20 max	30 max	50 max
Color (APHA)	Pt-Co	20 max	20 max	-	-	-	-
Cloud point, 1% aq solution	°C	Insoluble	Insoluble	Insoluble	Insoluble	54-62	77-82



For more information on PCG products



Connect with the team