



**PETRONAS**



**Ethonas SF401**

## 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



# Ethonas SF401

An innovative solution which functions as a spacer fluid with superior water-wet surface post-phase inversion, resulting in optimum well-cementing performance

## Characteristics and Benefits

### Compatibility with low to high density of synthetic-based mud (SBM):

Effective across various SBM densities, suitable for different drilling conditions.

### Suitable for solvent and water-based formulations:

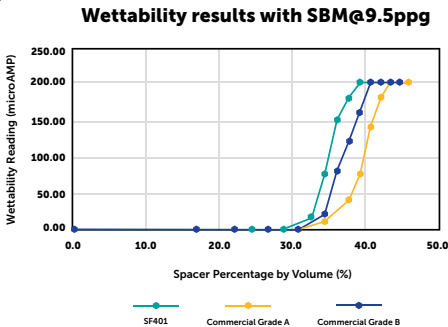
Versatile for both solvent and water-based systems, applicable in multiple industries.

### Non-hazardous to human and aquatic microorganisms:

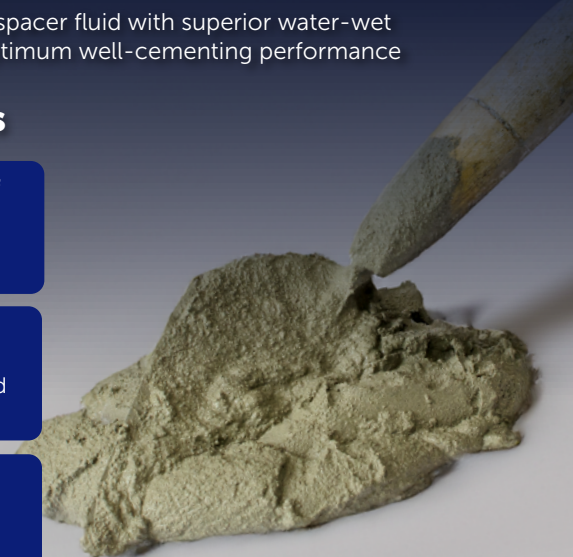
Safe for environment, aquatic life and human contact, meeting regulatory standards.

### Excellent wetting performance

Ethonas SF401 exhibited superior wettability performance against commercial grade solvent-surfactant systems.



- From the graph, it shows that **2 gallon per barrel (GPB) SF401 has better performance than 2 GPB Commercial Grade A and Commercial Grade B** since it only required **approximately less than 40%** volume of spacer to complete the water-wetting of the surface.
- In contrast, 2 GPB Commercial Grade B required approximately 41% and Commercial Grade A required approximately 42% volume of spacer to complete the water-wetting of the surface.



## Sustainability Values

Plant-derived alcohol ethoxylates

Non-toxic to aquatic microorganisms

Non-dangerous good

# Applications

Ethonas SF401 is an **innovative solution** which **functions as a spacer fluid** with **superior water-wet surface** post-phase inversion, resulting in **optimum well-cementing performance**.

Functionalities of surfactant solvent blend as displacement package

- Modification from oil to water-wet phase on formation, casing & borehole surface
- Cleaning oil or synthetic-based mud

Base Components	Chemicals	Functions	Composition
Base fluid	Fresh water	Base fluid	66.0%
Weighting agent	Barite	Provide density to spacer	25.0%
Viscosifier (thickening)	Xanthan gum	Support particle suspension	3.0%
Antifoams	Polysiloxanes	Reduce surface tension	1.0%
Active ingredients	SF401	Phase inverter	5.0%

# Product Properties

Parameter	Specification	Test Method
Appearance	Clear liquid	In-house
Specific gravity @25°C	0.92 - 0.94	ASTM D4052
pH at aqueous form @25°C	5.0 - 8.0	ASTM D664



More information on PCG products



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