Technical Data Sheet

XIAMETER™ APW-4248 Powdered Antifoam

Powdered antifoam containing silicone antifoam compound

Features & Benefits

- Active at low addition levels
- No performance loss on storage under warm and humid conditions in the detergent powder
- Free-flowing, non-caking granules, easy to incorporate by dry-mixing
- 100% detergent active components
- Suitable for a wide range of surfactants, over a wide range of pH and washing temperatures
- Performance not dependent on water hardness

Applications

- In-wash foam-control for laundry powder detergents.

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

CTM[1]	Property	Unit	Result
0176B	Appearance		White Freeflowing Granules
	Bulk Density	g/l	740
	Granulometry - Mean Particle Size	mm	0.500
	Particle Size Distribution - % Granules	> 1.4 mm	5.0 max.
		> 1.0 mm	25.0 max.
		< 0.150 mm	13.0 max.
	Cake Strength		Zero

1. CTM: Corporate Test Method, copies of CTMs are available on request.

Stability Characteristics In Detergent Powder

As displayed in Figure 1, XIAMETER™ APW-4248 Powdered Antifoam is stable when stored in the detergent formulation even under warm and humid conditions. No performance loss is observed between freshly mixed composition and a sample which has been aged during 8 weeks at 35°C and 70% humidity.

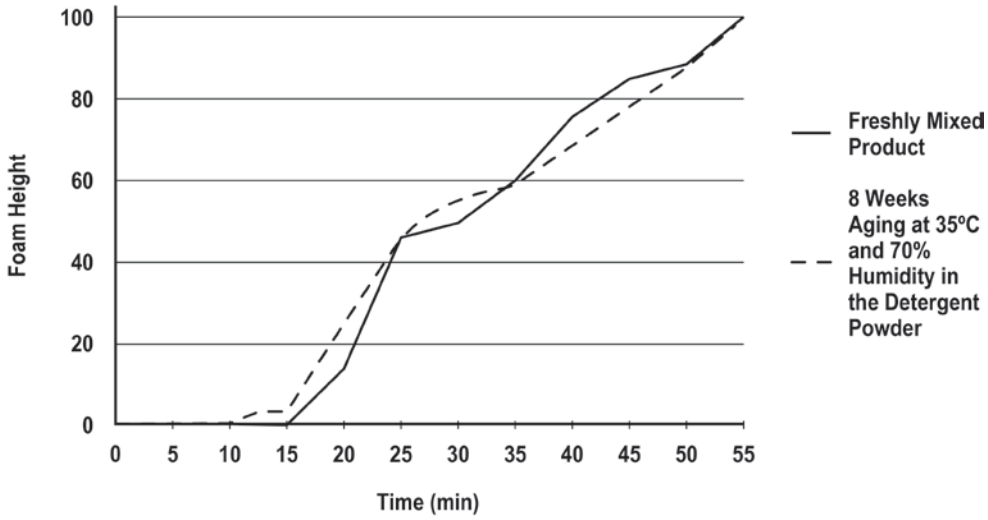

Figure 1: Stability Characteristics In Detergent Powder

Description

XIAMETER APW-4248 Powdered Antifoam has been developed to control the foam of powder laundry detergents generated during the washing process.

How To Use

XIAMETER APW-4248 Powdered Antifoam is easy to incorporate into powder laundry detergents. Dry mixing is the recommended method.

Typical addition levels are between 0.5 and 3.5%. Individual formulations vary, particularly with the surfactant level and composition. The exact level of addition needs to be assessed individually.

In the three example powder detergent formulations (Tables 1, 2 and 3), XIAMETER APW-4248 Powdered Antifoam was used to control the foam throughout the wash cycle (40°C and 95°C wash, 3.5kg load). Recommended addition levels are summarized in Table 4.

Table 1: Example Of Phosphate-Based Detergent

	Quantity
STPP	60 g
Sodium Perborate Tetrahydrate	50 g
AEO - Alcohol Ethoxylates C10-C16 (100% active)	4.2 g
LAS - Sodium Dodecyl Benzenesulfonate (80% active)	21.8 g

Table 2: Example Of Zeolite-Based Detergent

	Quantity
Zeolite A	30 g
Sodium Perborate Monohydrate	20 g
Sodium Carbonate	20 g
Sodium Sulphate	7.5 g
AEO - Alcohol Ethoxylates C10-C16 (100% active)	10 g
LAS - Sodium Dodecyl Benzenesulfonate (80% active)	12.5 g

Table 3: Example Of High Foaming Zeolite-Based Detergent

	Quantity
Zeolite A	30 g
Sodium Perborate Monohydrate	20 g
Sodium Carbonate	18 g
Polycarboxylate (40% active)	7.5 g
Sodium Silicate Solution (38% active)	5.25 g
FAS - Sodium C16–C18 Sulfate (91% active)	11 g
AES - Sodium Lauryl Ethersulfate (70% active)	2.85 g
AEO - Alcohol Ethoxylates C10–C16 (100% active)	8 g
APG - Fatty Alcohol C12–C14 Polyglycoside (51.5% active)	7.75 g

Table 4: Recommended Addition Levels

Formulation (Surfactants/ Builder)	XIAMETER APW-4248 Powdered Antifoam recommended addition level (%) Washing Temperature		
		40°C	95°C
1	LAS (13.25%) - AEO (3.2%) on STPP	2.6	0.8
2	LAS (10%) - AEO (10%) on Zeolite	1.3	0.6
3	FAS (10%) - AES (2%) - AEO (8%) – APG (4%) on Zeolite	3.4	3.7
Water hardness = 17°F			

ATTENTION: Sample formulations are provided for illustrative purposes only. Dow does not warrant their merchantability, fitness for use, performance, efficacy, safety or freedom from patent infringement. They are not commercial formulations and have not been subjected to extensive testing. It is your responsibility to thoroughly test any formulation before use.

Handling Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT WWW.CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

Usable Life And Storage

Product should be stored at or below 30°C in original, unopened containers.

The neat product should preferentially be stored in dry conditions.

Limitations

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

Not intended for human injection. Not intended for food use.

Health And Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, www.consumer.dow.com or consult your local representative.

http://www.xiameter.com