



HL3000

# Dehypound® Blends

The Next Step in Powerful, Efficient and Sustainable Cleaning

March 2022

 **BASF**

We create chemistry

# Today's presenters

## Camille Miller

Camille is the Marketing and New Business Development Manager of Industrial and Institutional Cleaning at BASF Corporation in Florham Park, NJ. She is responsible for managing new product introductions, developing digital marketing tools, conducting market analysis and steering channel execution within the I&I market. Camille has held various positions in Supply Chain and Marketing with BASF over the past nine years



## Scott Walters

Scott Walters is the Technical Support Specialist for Industrial and Institutional cleaning. Scott is an expert with 37 years in the detergents industry and has a large breadth of formulation and regulatory experience. Scott has previously held positions with Ecolab, Amway, Cargill, Harcros Organics and others. Scott earned his Bachelor of Science Degree in Chemistry and Biology from the University of Wisconsin





## 01 Why blends?

## 02 I need a Heavy Duty Degreasing surfactant, Dehypound® HDG

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## 03 I need a high performing sustainable surfactant, Dehypound® M

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## 04 Summary

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# Dehypound® Blend Series

## Simplicity



- Reduces formulation/product development time
- Reduces Production Time and Increase Productivity

## Performance



- Superior cleaning
- Eliminates need for solvents
- Increases formulation flexibility

## Safety



- Decreases Raw Material Handling and Exposure

## Sustainability



- Reduces Inventory Footprint
- Environmentally Friendly

## Dehypound® Blend Series

# Dehypound® Blend Series



**Dehypound®  
Advanced**

Increased Cleaning  
Performance

Increased Operational  
Temperature Range

Improved Formulation  
Flexibility



**Dehypound®  
HDG  
Dehypound®  
M**

# Dehypound® Blend Series

	Dehypound® Advanced	Dehypound® M	Dehypound® HDG
<b>Performance</b>	Excellent low/room temperature, "Streak Free" Cleaning	Excellent Overall Multi-Soil "Streak Free" Cleaning	Excellent Overall Multi-Soil Heavy Duty Cleaning and Degreasing
<b>Operational Temperature Range</b>	RT - 85°F	RT - 130°F	RT - 150°F
<b>Foam</b>	Moderately Low	Moderately High	Moderately Low, Dissipating
<b>Formulation Flexibility</b>	Incompatible with Solvents, Strong Acids, Moderate to Strong Alkalis	Compatible with Solvents; Weak Organic Acids; Moderate to Strong Alkali; Nonionic, Anionic, Cationic (Including Quaternary), and Amphoteric surfactants . Coupling properties generally eliminate need for additional hydrotrope	Compatible with Solvents; Weak Organic to Strong Acids; Moderate to Strong Alkali; Nonionic, Anionic, Cationic (Including Quaternary), and Amphoteric surfactants
<b>Regulatory</b>	Low 1,4 Dioxane Listed on EPA Safer Choice Ingredients List	Low 1,4 Dioxane Listed on EPA Safer Choice Ingredients List	Low 1,4 Dioxane Listed on EPA Safer Choice Ingredients List



01 Why blends?

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02 I need a Heavy Duty Degreasing surfactant, Dehypound® HDG

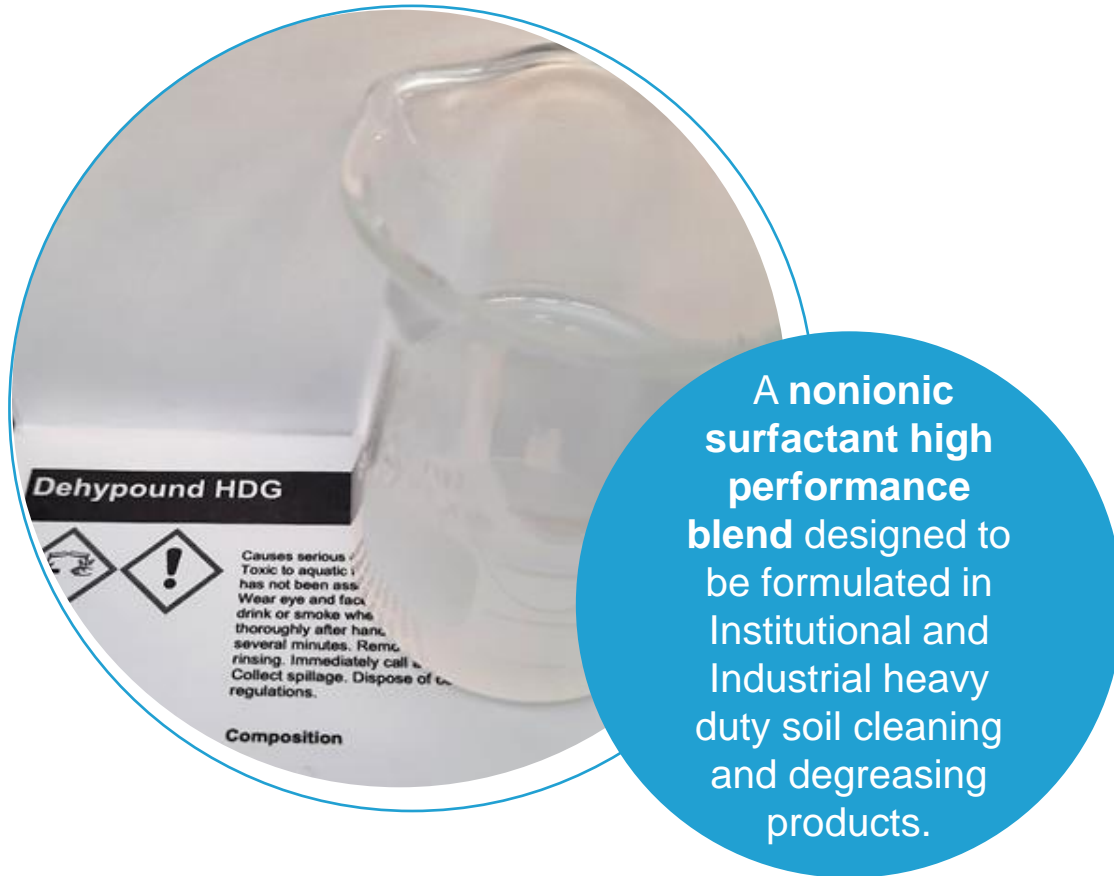
03 I need a high performing sustainable surfactant, Dehypound® M

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04 Summary

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# What is Dehypound® HDG?



## Specifications

Appearance @ 25 °C	Off White Liquid
pH value, 5% aq. @ 25°C	5.5-7.5
% Active	>99%
Cloud Pt	67°C-69°C

## Typical Properties

HLB	12.0
Surface Tension (0.1% aq) mNm	28.2
Solidification	approx. 1°C
Viscosity @ 25 °C	approx. 300 cps



# About Dehypound® HDG



## Top Notch Degreasing Performance

- Powerful cleaning performance without solvents
- Superior degreasing performance over a wide temperature range
- High performance multi application solution for broad range soils

## Easy to formulate

- Exceptional formulation flexibility across pH scale
- Outstanding compatibility with Anionic, Cationic, and Amphoteric surfactants
- High active level, compatibility with concentrated formulations
- Quat free surfactant blend



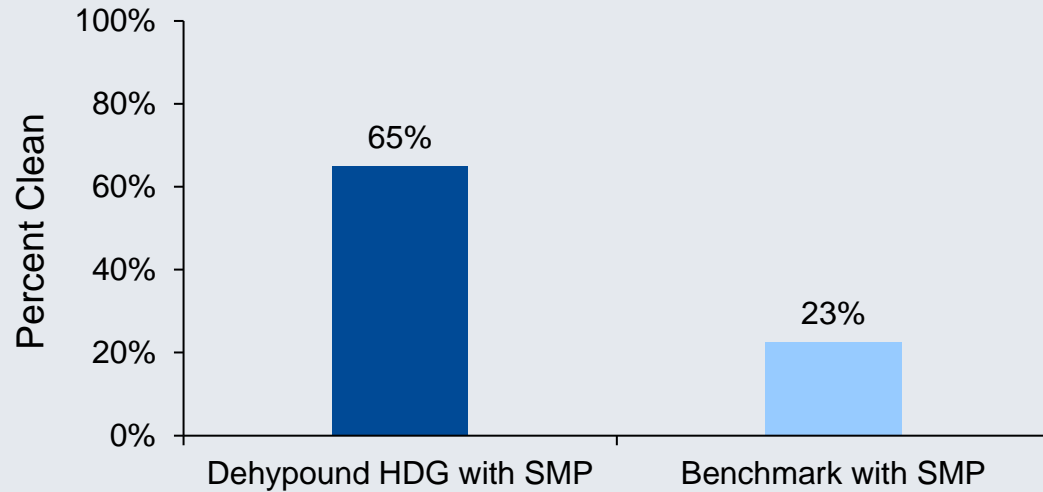
## Applications

- Fabric PreWash/Prespotter
- Alkaline Cleaner/Degreaser
- Acid Cleaner
- Bottle Wash
- Floor Cleaner
- Oven/Grill
- Metal Cleaner
- Soak Tank Cleaner
- Dairy Cleaner
- Truck Wash Detergent
- Bilge Cleaner
- Barge Cleaner
- Rail Cleaner
- Brewery Cleaner

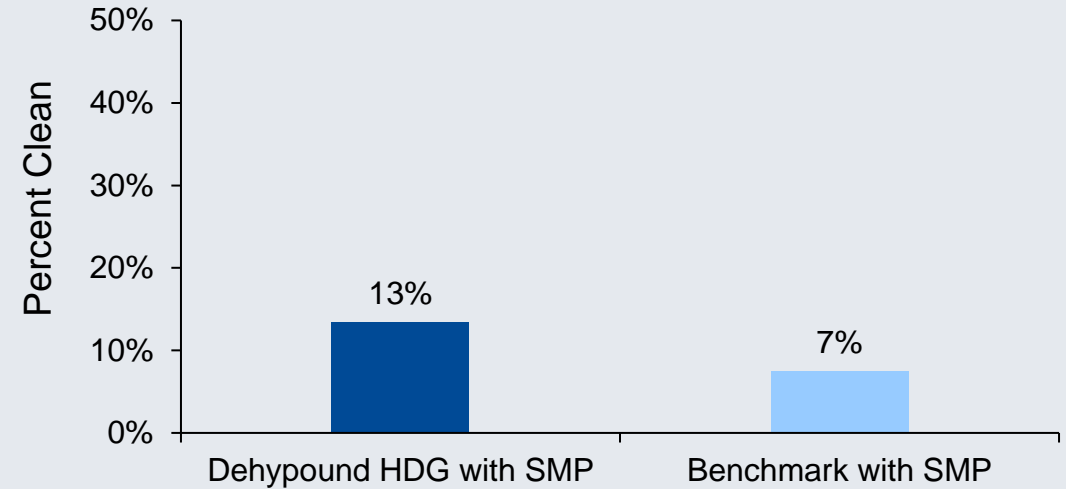
# Dehypound® HDG: Mechanical and Lubricant Soil Removal Performance

H6 Soil	
Ingredients	Weight
Kerosene	56.8%
Mineral Oil	8.0%
Motor Oil (10W-40)	5.7%
Carbon Black	1.1%
Black Charm Clay	28.4%

### Soil Removal Performance 1:8 Dilution



### Soil Removal Performance 1:32 Dilution

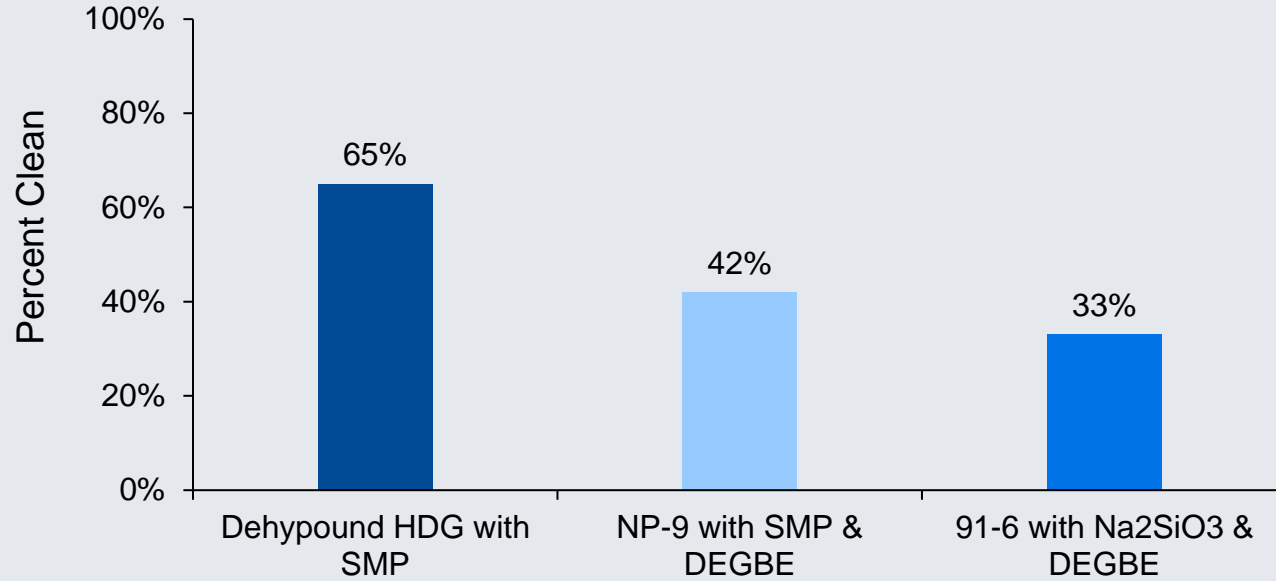


**Dehypound HDG is a higher performing solvent free solution compared to other blends**

# Dehypound® HDG: Mechanical and Lubricant Soil Removal Performance

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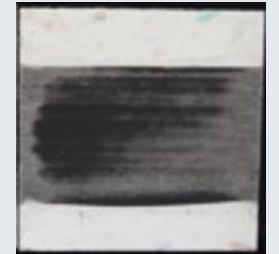
## Soil Removal Performance 1:8 Dilution



**Dehypound HDG  
with SMP**



**NP-9 with  
SMP & DEGBE**



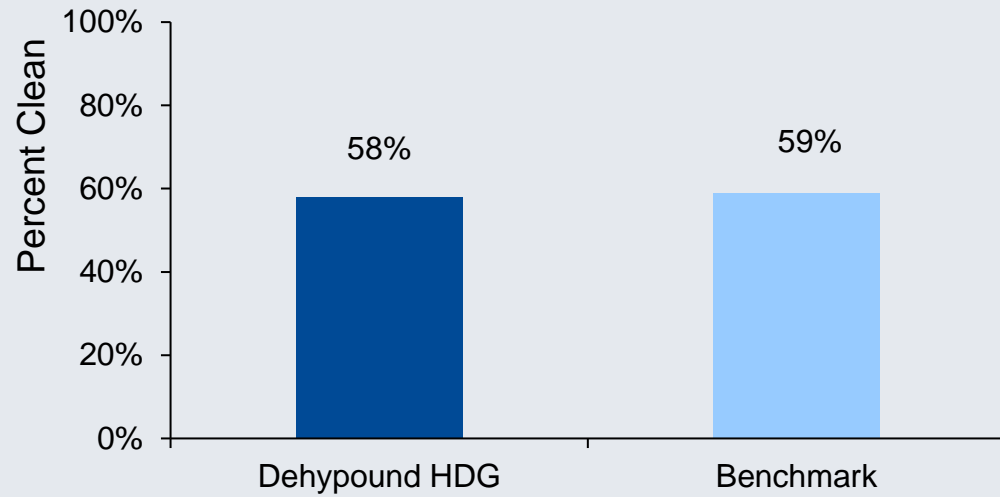
**91-6 with  
SMP & DEGBE**

**Solvent free Dehypound HDG can help you streamline your formulation compared to other single surfactants**

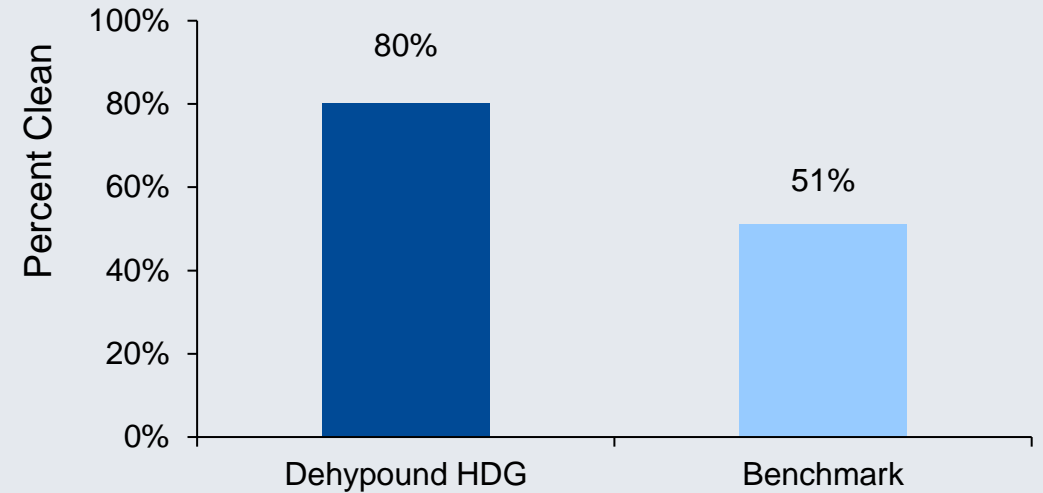
# Dehypound® HDG: Cumulative Cleaning Performance of Oily\* Soils

A6 Soil	
Ingredients	Weight %
Stoddard Solvent	63.7
Mineral Oil	12.7
Vegetable Oil	5.1
Carbon Black	5.7
Black Charm Clay	12.7

### Cleaning Performance at 25°C



### Cleaning Performance at 50°C



**Very good cleaning performance at multiple temperatures**

\*Oily soils includes A6 and H6 soils

# Dehypound® HDG: Acidic Cleaner and Descaler



Formulation  
contains less  
than <1pmm  
1,4-Dioxane



## Starter Formulation

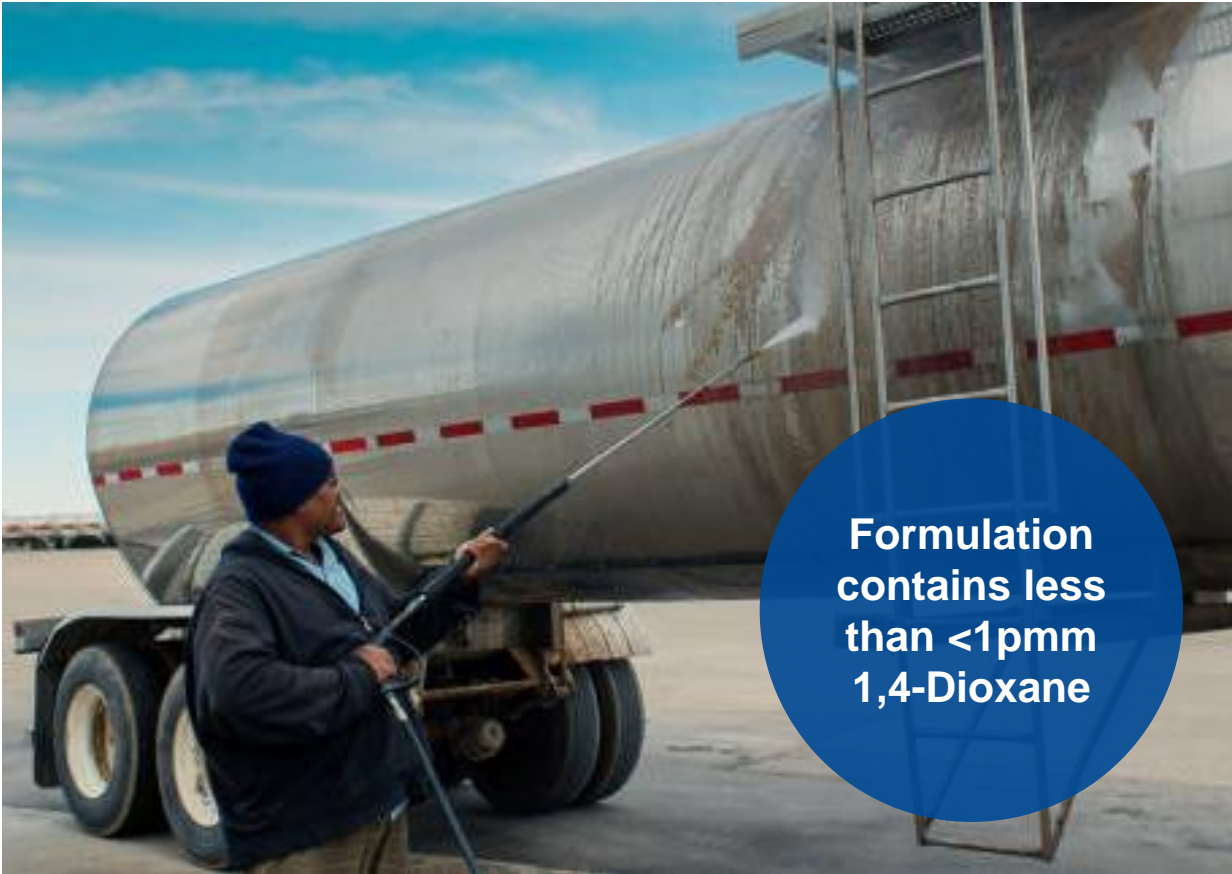
Ingredients	Weight%
Water	77.5
Lutropur MSA 70%	6.0
Trilon M Liquid T	10.0
Dehypound HDG	4.0
Glucopon 215 UP (as needed)	2.5



## Applications

- Dairy Cleaner
- Brewery Cleaner
- Descalers
- Metal Cleaner & Degreaser

# Dehypound® HDG: Alkaline Degreaser



**Formulation  
contains less  
than <1pmm  
1,4-Dioxane**



## Starter Formulation

Ingredients	Weight%
Water	88.0
Sodium Metasilicate Pentahydrate	2.0
Trilon M Liquid T	2.5
Sokalan PA25CL gran.	1.0
Dehypound HDG	4.0
Glucopon 215 UP (as needed)	2.5



## Applications

- Barge Cleaner
- Bilge Cleaner
- Bottle Wash Cleaner
- Fabric Pre wash/Prespotter
- Floor Cleaner
- Oven/Grill Cleaner
- Rail Cleaner
- Soak Tank Cleaner
- Truck Wash Detergent



## 01 Why blends?

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## 02 I need a Heavy Duty Degreasing surfactant, Dehypound® HDG

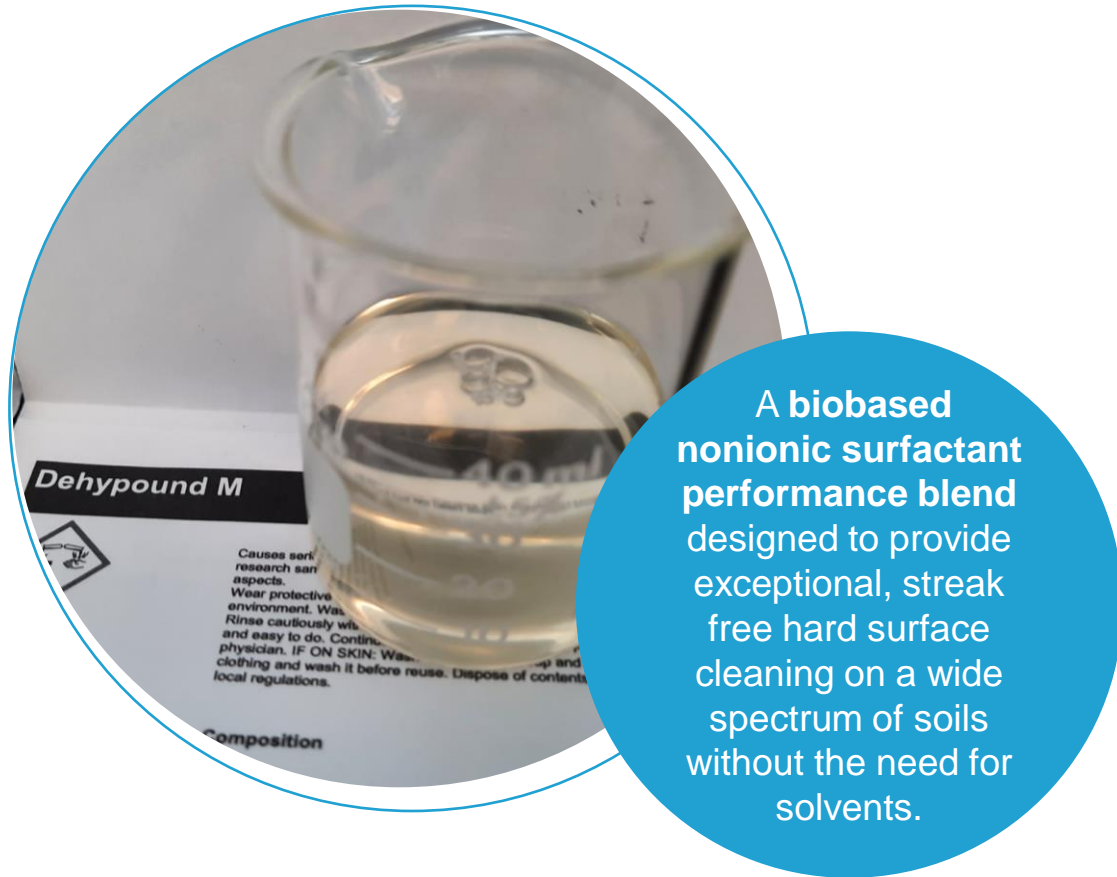
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## 03 I need a high performing sustainable surfactant, Dehypound® M

## 04 Summary

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# What is Dehypound® M?



## Specifications

Appearance @ 25 °C	Light Yellow liquid
pH, 5% aq.	10 - 12
% Active	73 - 78
Cloud Pt	54°C-58°C

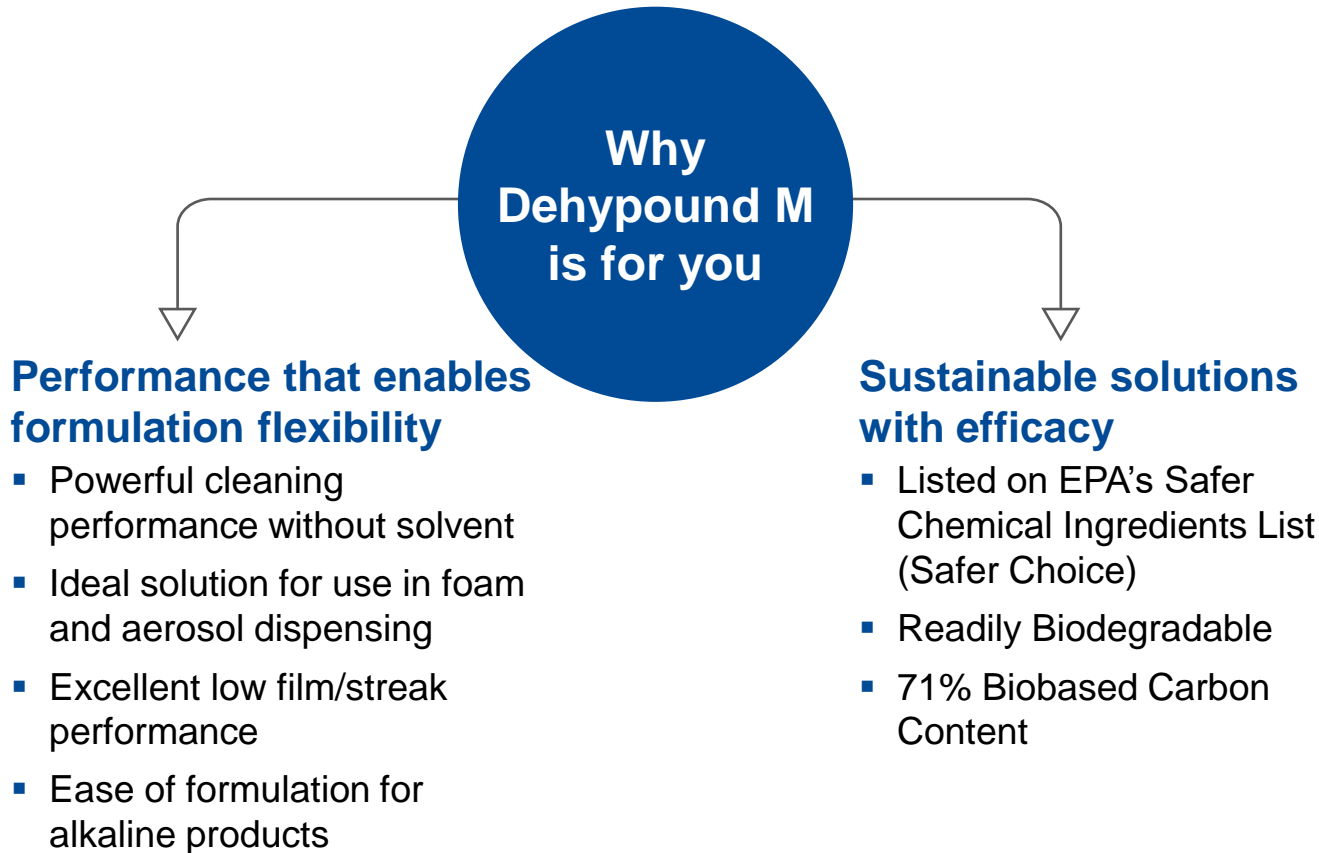
## Typical Properties

HLB	13.1
Surface Tension (0.1% aq) mNm	27.5
Solidification	approx. -21°C
Viscosity @ 25 °C	approx. 500 cps





# About Dehypound® M

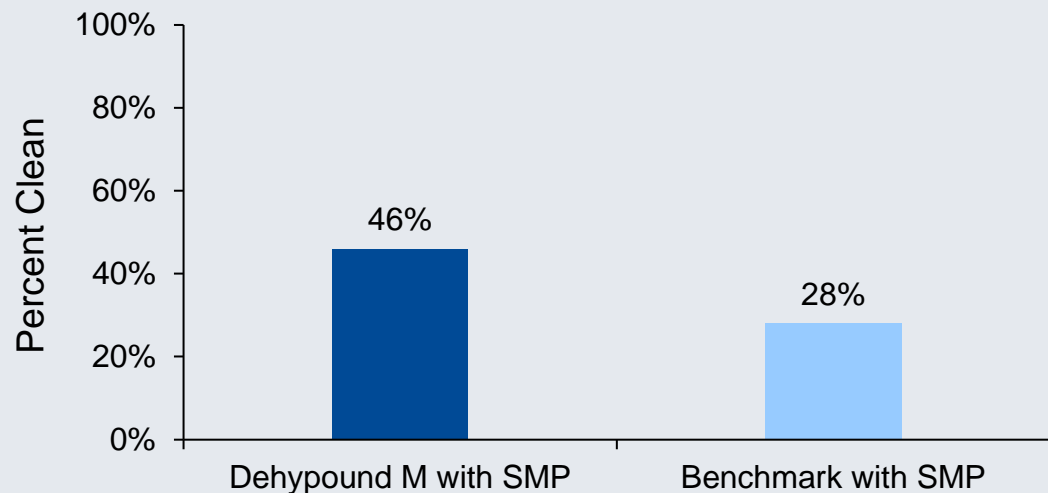


## Applications

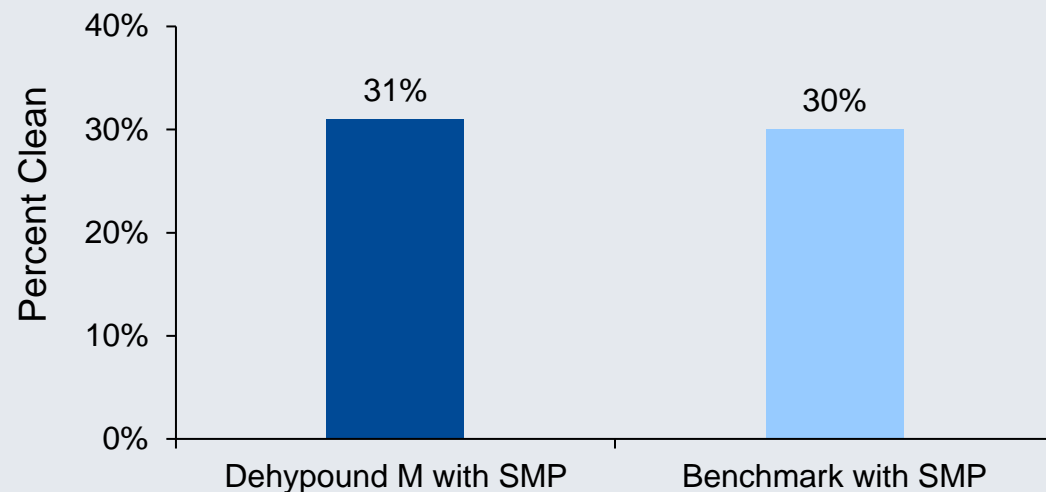
- Fabric PreWash/Prespotter
- Metal Cleaner
- Alkaline Cleaner/Degreaser
- Truck Wash Detergent
- Oven/Grill
- Car Wash Detergent
- Floor Cleaner
- Marine Wash
- Glass Cleaner
- Rail Cleaner
- Manual Dish Wash

# Dehypound<sup>®</sup> M: Multi soil removal cleaning performance

### Soil Removal Performance H6 Soil 1:8 Dilution



### Soil Removal Performance A6 Soil 1:32 Dilution

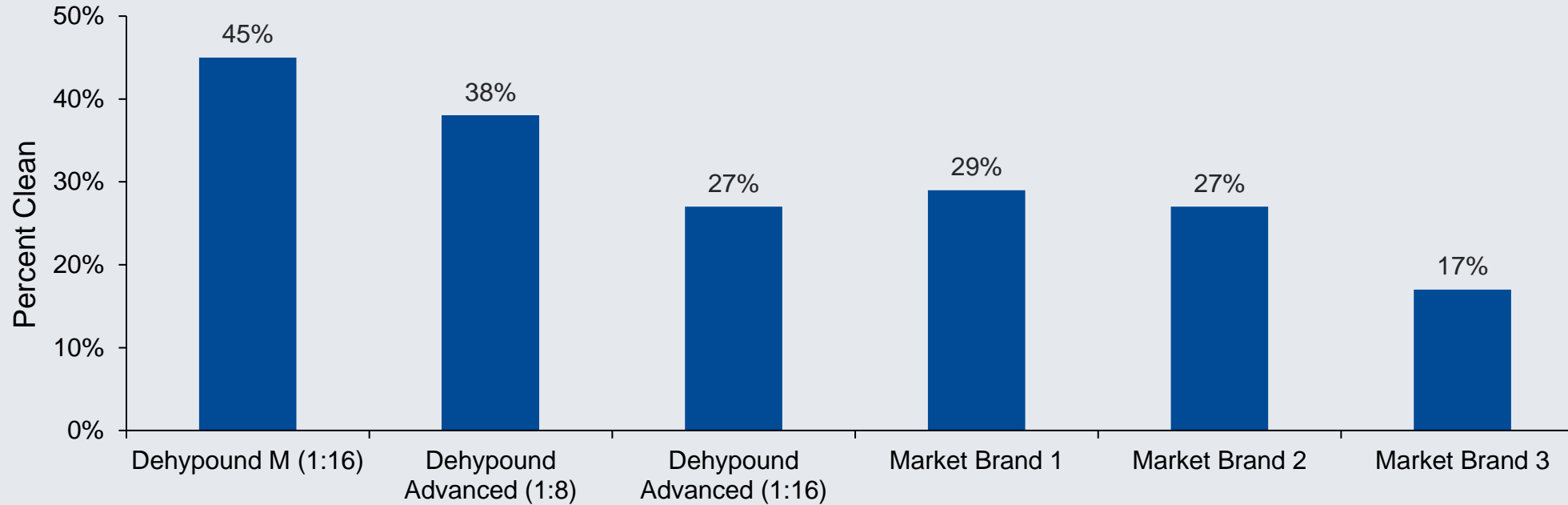


Compared to other blends, Dehypound M provides strong solvent free cleaning across soils and concentrations

# Dehypound® M:

## A new and improved surfactant blend

Ingredient	Weight %
Dehypound®	18.0
Dehyton® PK 45	7.5
Trilon® M	3.0
Citric Acid	0.3



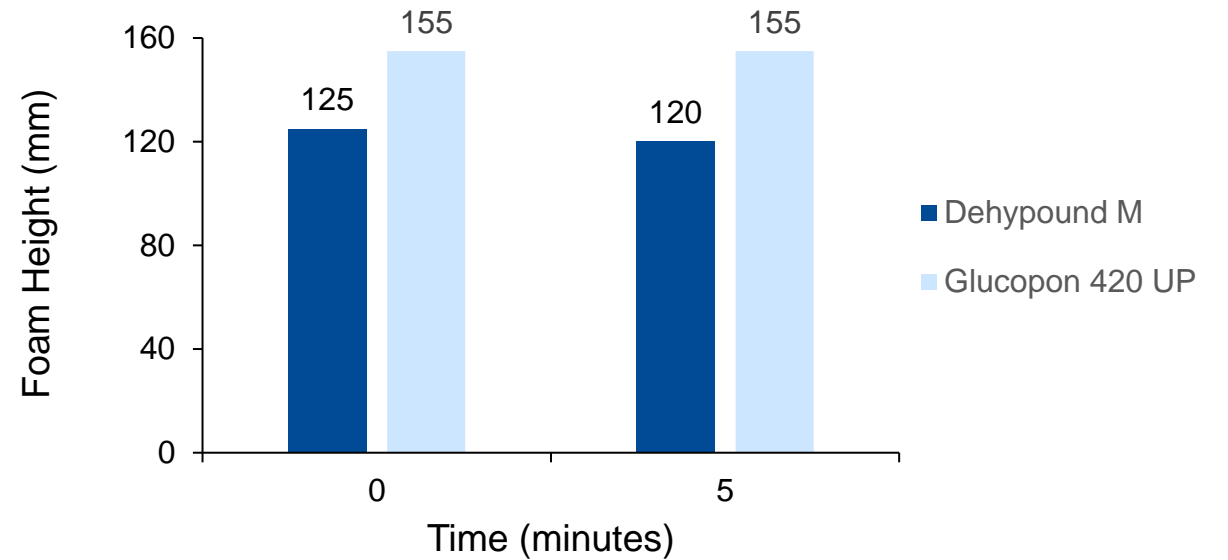
Dehypound M exceeds common Home Care APC market brands and proves to be a versatile, powerful solution

# Dehypound<sup>®</sup> M: Moderately high stable foam profile



Blender Test Dehypound M:  
Initial: 117 mm, after 5 Min: 74 mm, after 10 Min: 63mm

## Ross Height Miles Test



**Foam profile provides multiple dispensing options across many applications**

# Dehypound® M

Simply your alkaline formulations

## I&I Cleaner

### Hard Surface Cleaner

C9-C11 6 EO Alcohol Ethoxylate	Surfactant
Sodium Dodecylbenzenesulfonate 40%	Surfactant
Glycol Ether PM	Solvent
Sodium Xylene Sulfonate	Hydrotope
Water	Diluent
Sodium EDTA 40%	Chelator
Sodium Metasilicate Pentahydrate	Alkalinity

**4 ingredients**



### Dehypound® M Solvent Free I&I Hard Surface Cleaner

Dehypound M	Surfactant
Water	Diluent
Sodium EDTA 40%	Chelator
Sodium Metasilicate Pentahydrate	Alkalinity

**1 ingredient**



# Dehypound<sup>®</sup> M: Acidic Cleaner



Formulation  
contains less  
than <1ppm  
1,4-Dioxane



## Starter Formulation

Ingredients	Weight
Water	88.3%
Citric Acid 50%	5.0%
Trilon M Liquid T	2.5%
Dehypound M	4.2%



## Applications

- Boat Wash
- Carwash Detergent
- Glass Cleaner
- Metal Cleaner

# Dehypound® M: Alkaline Degreaser



## Starter Formulation

Ingredients	Weight
Water	90.3%
Sodium Metasilicate Pentahydrate	2.0%
Trilon M Liquid T	2.5%
Sokalan PA25CL gran.	1.0%
Dehypound M	4.2%



## Application

- Bathroom Cleaner
- Boat Wash
- Floor Cleaner
- Metal Cleaner
- Oven/Grill Cleaner
- Rail Cleaner
- Truck Wash Detergent



01 Why blends?

02 I need a Heavy Duty Degreasing surfactant, Dehypound® HDG

03 I need a high performing sustainable surfactant, Dehypound® M

04 Summary



# Dehypound® Blend: Summary

## Simplicity



- Multi application blends that attack a broad range of soils in consumer Home Care and I&I markets, reducing the need of chemical ingredients

## Performance



- Versatility in regard to concentrated or ready to use solutions
- Flexibility across temperature range and dispensing options
- Compatibility with other ingredients and surfactants

## Safety



- Provides performance without the use of solvent

## Dehypound® Blend Series

## Sustainability



- Safer Choice Listed Ingredients
- Readily Biodegradable
- Biobased (Dehypound M)
- Low 1,4-Dioxane (<=2ppm) levels

# Dehypound® Blend: Applications

Application	Dehypound Advanced	Dehypound M	Dehypound HDG
Aerosol Cleaners & Degreasers	☑	☑	☑
Car & Marine Cleaners		☑	☑
Heavy Duty Acid Cleaners & Descalers			☑
Heavy Duty Alkaline Cleaners & Degreasers		☑	☑
Laundry Detergents & Prespotters			☑
Light Duty Acid Cleaner		☑	☑
Light Duty Hard Surface Cleaners	☑	☑	☑
Manual Dish Wash Detergents		☑	
PVA/WaterSoluble Pouch Cleaners & Detergents			☑
Truck & Rail Cleaners		☑	☑
Wipes	☑	☑	☑

# Dehypound® Blend: Summary



## What does that mean for you?

### We understand:

- The relative risk of formulas
- Ingredients that contribute the most to 1,4-Dioxane levels

## BASF Solutions:

- Technical guidance for your reformulation and replacement efforts
- Alternative ingredients that do not contain 1,4-Dioxane
- Formulations Free of or Low in 1,4-Dioxane

**BASF can support your 1,4-Dioxane formulation needs**

# Questions?



Marketing  
**Camille Miller**



Technical  
**Scott Walters**



For more info, please visit BASF HCII's UL  
Prospector site or contact us by email at  
[detergents-cleaners-na@basf.com](mailto:detergents-cleaners-na@basf.com)



We create chemistry