

# HydroBlue®90

Our solution for consistent  
dyeing results

*HydroBlue®90*  
Always authentic.

 **BASF**  
We create chemistry

# HydroBlue® 90

Always authentic.



We create chemistry.....	4
The quality brand .....	5
A success story .....	6
Premium features .....	7
An optimized process .....	8
Benefits for all .....	9
Influence of sodium dithionite.....	10
HydroBlue®90 in 30 seconds.....	11



## About BASF

BASF is one of the world's leading chemical companies: We create chemistry. With more than 100,000 employees, six Verbund sites, and more than 370 additional production sites worldwide, we serve customers and partners in almost every country in the world.

The portfolio of BASF ranges from chemicals, plastics, performance products, and crop protection products to oil and gas. We combine economic success with environmental protection and social responsibility. Through science and innovation, we enable our customers in nearly every industry to meet the current

and future needs of society. Through our major investments in research and development, we provide them with uniquely innovative products and sustainable competitive advantages.

Innovations in the chemical industry are nowadays not just based on the development of new chemicals, but increasingly on new materials and system solutions. For us, innovations of this kind require a broad portfolio and interdisciplinary cooperation as well as a deep understanding of technology and our customers' value chains.



## HydroBlue®90: Always authentic.

As the inventor of the original Hydrosulfite in 1904, we have massively improved on our heritage and are very proud to present the all-new first-choice dyeing product for leading suppliers of premium denim brands.

Due to its **long-term stable, odorless,** and **dust-free dithionite content of 90%**

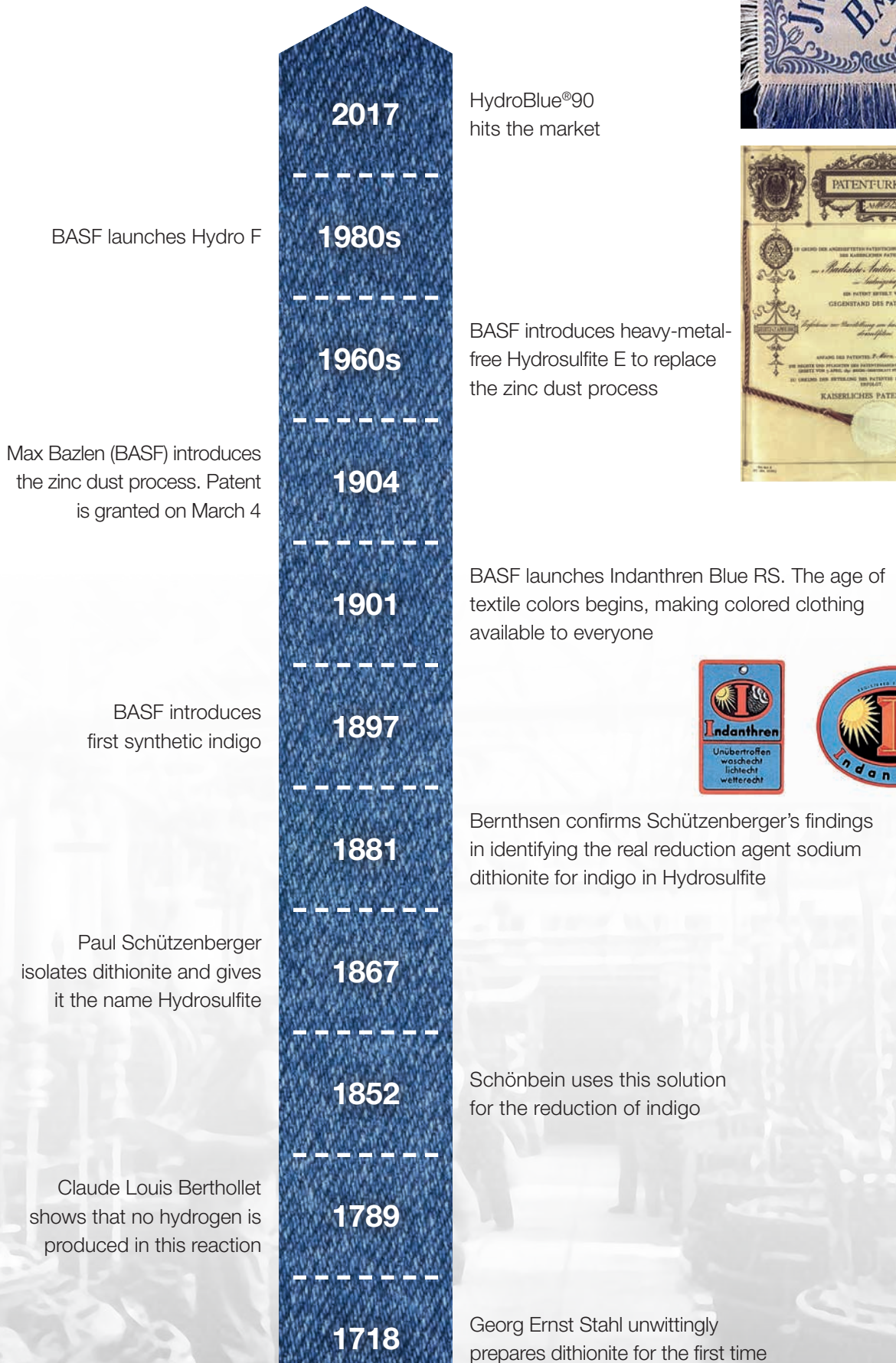
it offers **unparalleled consistent dyeing quality, reliability, and efficiency,** combined with **safer handling.**

Finally, quality-oriented customers around the world seeking process stability and best yield in dyeing application need look no further. HydroBlue®90 is always authentic.



# A history of Hydrosulfite

## Develop a stable Hydro F



## Fresh colors, fresh air

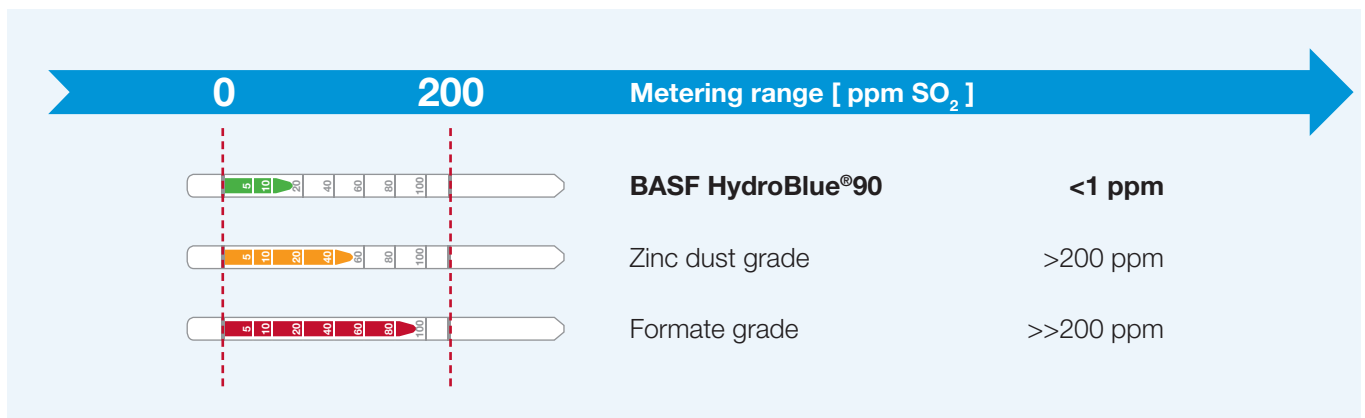
HydroBlue®90 is an improved formate-based Hydrosulfite which even surpasses our excellent Hydrosulfite E in quality and efficiency. Over other formate-based products, HydroBlue®90 offers a higher sodium dithionite content of 90% and unprecedented stability. This results in a groundbreaking consistency of dyeing results.

Workers and production facilities will tremendously benefit, too. Conventional Hydrosulfites contain and release considerable amounts of outgased SO<sub>2</sub>. Measurements show that HydroBlue®90 contains at least 200 times less SO<sub>2</sub> than any other Hydrosulfite. As well it is odorless and dust-free.

## Stable product leads to extra long shelf life of at least two years

Measurements certify the unparalleled stability of HydroBlue®90. A comparison to other grades shows

that HydroBlue®90 is the most stable Hydrosulfite on the market.



- ! Hydrosulfite is converted from SO<sub>2</sub> using a strong reduction agent.  
Less SO<sub>2</sub> means less decomposition and higher stability.  
Therefore, a sulfuric smell is an indicator of decomposition.

**Stable**  
90% dithionite  
**odorless**  
**dust-free**

## HydroBlue®90 will optimize your value chain

Sodium dithionite is a reducing agent, added in the yarn dyeing process with the indigo before denim fabric is made. Unique to BASF, the stable sodium dithionite content of HydroBlue®90 products ensures an even steadier and

more consistent dyeing effect on the yarn to minimize off-specification products along the value chain. It increases your efficiency, the safety of your workers, the quality of your products, and the satisfaction of your customers.



The quality of Hydrosulfite is one of the most important factors for denim manufacturers because faults in denim dyeing are difficult to detect until the very last moment – i.e. when the jeans have been produced. This means that denim quality largely depends on the quality of the Hydrosulfite reducing agent and indigo used.

Manufacturers turning to BASF for consistent product quality has a direct bearing on production results. We are currently the only company in the world to produce Hydrosulfite in an improved formate process. This has helped us to achieve the highest consistent product quality and stability yet available, named HydroBlue®90.



## Your benefits

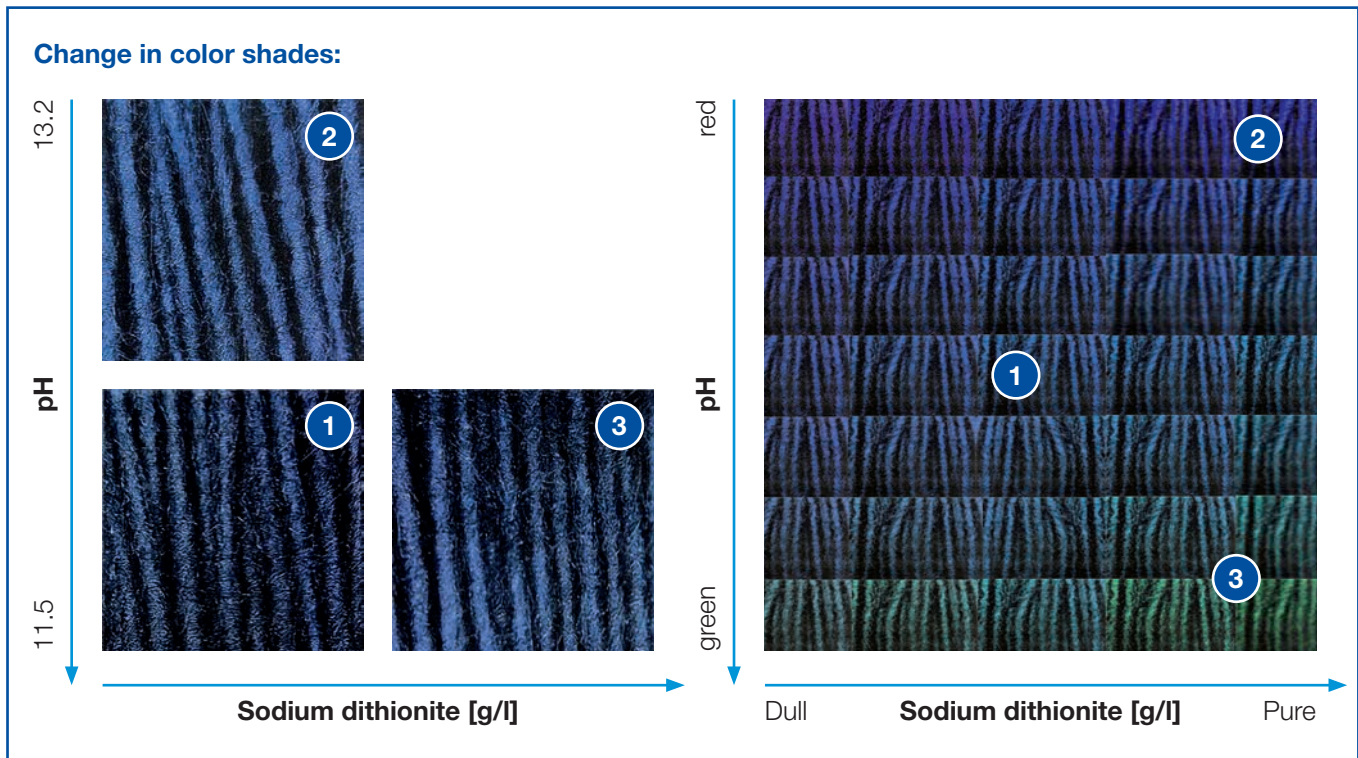
HydroBlue®90 offers unique improvements and benefits to departments and people across areas of responsibility.

### YOUR BENEFITS

Owner	<ul style="list-style-type: none"> <li>Higher revenues through higher production share of A-quality denim – even for manufacturing of small denim batch sizes due to outstanding product consistency.</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable solution, significant increase of EHS (Environment, Health &amp; Safety) standards, and workers' satisfaction as HydroBlue®90 is stable, odorless (SO<sub>2</sub> max. 0.5 ppm), and dust-free.</li> </ul>	<ul style="list-style-type: none"> <li>Better image due to reliable high quality, high safety standards, and various certifications (like Ökotex, Bluesign).</li> </ul>
Dyeing manager	<ul style="list-style-type: none"> <li>Higher revenues through higher production share of A-quality denim – even for manufacturing of small denim batch sizes due to outstanding product consistency.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous, stable, and uniform dyeing quality and better color strength results are possible as HydroBlue®90 offers better process stability.</li> </ul>	
Production	<ul style="list-style-type: none"> <li>Stable and uniform dyeing quality even for manufacturing of small denim batch sizes. Less effort in production for cleaning and analyzing, combined with higher production security (no lumps, no caking).</li> </ul>	<ul style="list-style-type: none"> <li>Reduced risk of incidents/accidents because of improved EHS standards (stability, odorless, and dust-free).</li> </ul>	
Purchasing	<ul style="list-style-type: none"> <li>Higher efficiency of HydroBlue®90 compared to other Hydrosulfites due to higher dithionite content.</li> </ul>	<ul style="list-style-type: none"> <li>Income stream through selling used high-quality drums. Alternatively: savings by reusing drums internally.</li> </ul>	<ul style="list-style-type: none"> <li>Achieve and secure stable and continuous dyeing quality in production.</li> </ul>
Quality manager	<ul style="list-style-type: none"> <li>Achieve stable and uniform dyeing quality even for manufacturing of small denim batch sizes. Less effort in production for cleaning and analyzing, combined with higher production security (no lumps, no caking).</li> </ul>	<ul style="list-style-type: none"> <li>Reduced risk of incidents/accidents because of improved EHS standards (stability, odorless and dust-free).</li> </ul>	

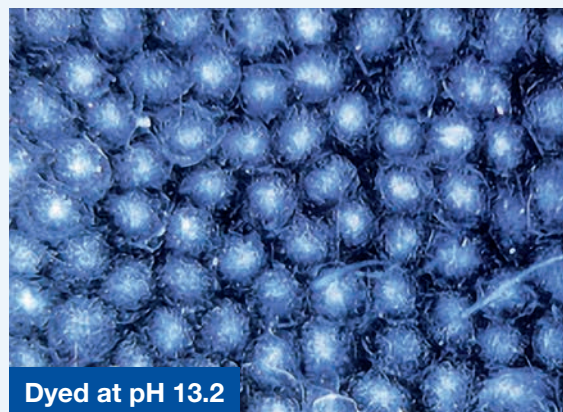
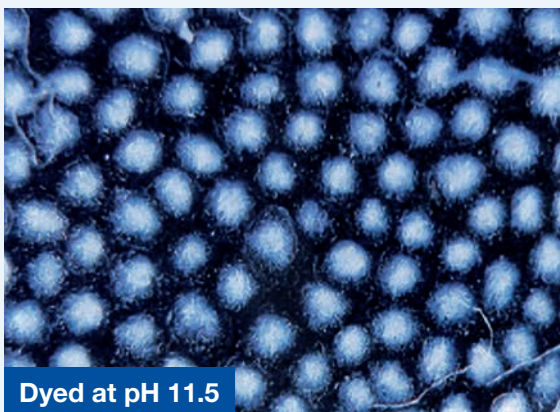


## Influence of sodium dithionite – color shade



The indigo-dyed yarn may appear more greenish, reddish, dull, or pure depending on the ratio of sodium dithionite and caustic soda. The smallest variation in terms of sodium dithionite content can affect dyeing results, such as ring dyeing, fastness, and color fixation. Thanks to the stable sodium dithionite content in HydroBlue®90, consistent dyeing results are ensured in order to reproduce the same shade.

### Ring dyeing



Dyed at pH 11.5, the ring dyeing effect is more distinctive, compared to pH 13.2 where greater dye penetration is visible.

## Why HydroBlue®90?

Find out here with all features and benefits at a glance.



### Consistent dyeing quality

Reliable results for A-quality denim



### Free-flowing crystal behavior

Stable for indigo dyeing



### Odorless

No release of SO<sub>2</sub> in production facilities



### Less heavy metals

Meets criteria set by leading fashion companies



### Guaranteed contents

Stable sodium dithionite content (90% without variation)



### Complying to quality standards

Oeko-Tex Standard 100, GOTS 4.0, ZDHC, as well as fashion-specific RSL's such as Levis and Inditex



### Highest yield of Hydrosulfite

Dithionite content: 90%



### Safer handling

Odorless, dust-free, 50 kg drums with tension ring, unpressurized



### Outstanding stability

Unparalleled consistency ensures the uniform shade of color



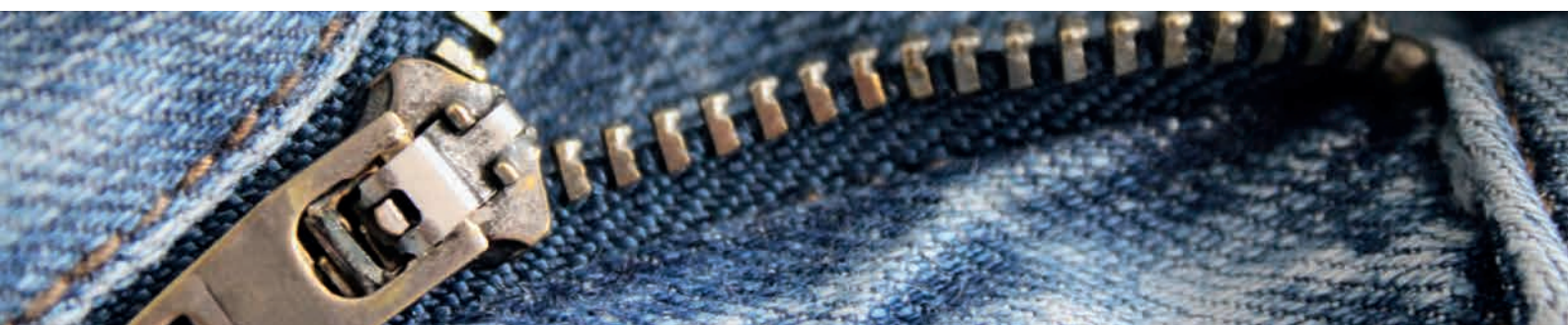
### Improved processability

Drum that is easy to open and close



### Longer shelf life

Stable content extends the shelf life to two years





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