

# Technical Data Sheet.



## Permasolid® VHS Hardeners.

3220 fast  
3225  
3230 slow  
3240 extra slow

## Permasolid® VHS Performance Hardeners (for Permasolid® HS Performance Surfacer 5320)

3425  
3440 slow

Thanks to the variety of Permasolid® VHS and Permasolid® VHS Performance Hardeners all painting conditions can be optimally catered for and highly reliable application is guaranteed.

Their high solids content allows for economical and eco-friendly application.

For professional use only!  
VR Technical Data Sheet No. EN / 3220\_3440 / 03



## Application.

### Possible base materials:

Permasolid® HS Express Surfacer 5250  
Permasolid® HS Premium Surfacer 5310  
Permasolid® HS Performance Surfacer 5320  
Permasolid® HS Wet-on-Wet Surfacer 5330  
Permasolid® HS SpectroFlex Surfacer 5400  
Permasolid® HS Vario Surfacer 8590

Permasolid® HS Automotive Top Coat 275

Permasolid® HS Clear Coat 8030  
Permasolid® HS Clear Coat 8034  
Permasolid® HS Clear Coat 8035  
Permasolid® HS Clear Coat 8055  
Permasolid® HS Diamond Clear Coat 8450  
Permasolid® HS Clear Coat 8650

### Field of application:

- 1. Permasolid® VHS Hardener 3220 fast**  
Suitable for partial refinishes (speed repairs) and low volumes of outgoing air in the spray booth.
- 2. Permasolid® VHS Hardener 3225**  
Suitable for full and partial refinishes at normal temperatures.
- 3. Permasolid® VHS Hardener 3230 slow**  
Suitable for full and partial refinishes, even at high temperatures.
- 4. Permasolid® VHS Hardener 3240 extra slow**  
Suitable for full and partial refinishes, even at very high temperatures.
- 5. Permasolid® VHS Performance Hardener 3425 \***  
Suitable for full and partial refinishes at normal temperatures.
- 6. Permasolid® VHS Performance Hardener 3440 slow \***  
Suitable for full and partial refinishes, even at very high temperatures.

### Mixing ratio:



See Technical Data Sheet of the respective base material.

\* Permasolid® VHS Performance Hardeners may only be used for Permasolid® HS Performance Surfacer 5320.

Selection of hardeners	VHS Hardener 3220 fast	VHS Hardener 3225
Full or partial refinish (large objects)	--	+
Partial refinish (speed repairs)	++	+
High temperature above +25°C	--	+
Very high temperature +30°C to +35°C	--	-
Normal temperature +20°C to +25°C	--	++
Low temperature +15°C to +20°C	++	-
Low baking	+	++
Air drying	++	++

Selection of hardeners	VHS Hardener 3230 slow	VHS Hardener 3240 extra slow
Full or partial refinish (large objects)	+	++
Partial refinish (speed repairs)	+	+
High temperature above +25°C	+	++
Very high temperature +30°C to +35°C	-	++
Normal temperature +20°C to +25°C	++	++
Low temperature +15°C to +20°C	-	-
Low baking	++	++
Air drying	++	+

++ ideal

+ suitable

- not particularly suitable

-- unsuitable

Selection of hardeners	VHS Performance Hardener 3425	VHS Performance Hardener 3440 slow
Full or partial refinish (large objects)	+	++
Partial refinish (speed repairs)	+	+
High temperature above +25°C	+	++
Very high temperature +30°C to +35°C	-	++
Normal temperature +20°C to +25°C	++	++
Low temperature +15°C to +20°C	-	-
Low baking	++	++
Air drying	++	+

++ ideal

+ suitable

- not particularly suitable    -- unsuitable

**Note on safety:**



This product is classified according to regulation (EC) 1272/2008 (CLP).

Please consult the Safety Data Sheet.

It is strongly recommended to use appropriate personal protection equipment during application.

**Data.**

Flash point:

+24°C

**Storage.**

Storage conditions:



Do not store in damp conditions.



After use, replace container lid immediately, ensuring an airtight seal.

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