



*Fichas Técnicas*  
*Pigmentos de baja*  
*Temperatura*  
*550° a 620°*

# AMARILLO

550° a 620°



## 13 440· Range: 30

<b>Description:</b>	glass color
<b>Color shade:</b>	Yellow
<b>Further description:</b>	low fusing glass color
<b>Use for:</b>	Soda-Lime glass
<b>Application:</b>	Tumblers, lightning fixtures, promotional items
<b>Storage:</b>	Powder colors should be stored in a dry place. We recommend to dry the color at 130 °C prior to mixing with an oil-based screen printing medium. Moisture in the color powder can result in an emulsion in the paste which makes it difficult to process.

### Color description:

Lab	
NCS	
RAL	5005
Surface	glossy

For description of the color the nearest color index was chosen.

### Firing conditions:

Normal firing/°C:	520 - 580°C
Shock firing/°C:	

### Chemical characteristics:

Glaze frit system	Pb-B-Si
PbO */ weight-%	40 - 70
CdO/CdS/CdSe* / weigt-%	5 - 10
Stain system	Co-Al

\*The values for the oxides are given in ranges. If there is no value written, the oxide is not added to the recipe. However, small amounts may be present as an impurity.

**Resistance:**

Acid resistance:	10%ige Zitronensäure	7
Alkali resistance:	10%ige NAOH (4h/88°C)	7
Pb release (EN 1388.1) /mg/dm <sup>2</sup>		
Cd release (EN 1388.1) /mg/dm <sup>2</sup>		

**Physical characteristics:**

Lin. coeff. of thermal expansion/10-7/K	
Transformation temperature / °C	
Softening temperature / °C	
Softening intervall / °C	
Half ball temperature / °C	

**Particle size distribution:**

Fineness D50:	
Fineness D90:	11

The above mentioned values are the values of the standard product. The production batches can vary slightly from the standard product.

- 
- (1) No attack
  - (2) Iridescence or visible stain on the exposed surface when viewed at a 45 angle but not apparent at angles <30.
  - (3) Definite staining which does not blur reflected images and is visible at angles < 30.
  - (4) Definite stain with gross color change or strongly iridescent surface visible at angles < 30 and which may blur reflected images
  - (5) Surface dull or matt with chalking possible
  - (6) Significant removal of enamel with pinholing evident
  - (7) Complete removal of enamel in the exposed area

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# AZUL

550° a 620°



## 12 602      · Range: 30

<b>Description:</b>	glass color
<b>Color shade:</b>	blue
<b>Further description:</b>	low fusing glass color
<b>Use for:</b>	Soda-Lime glass
<b>Application:</b>	Tumblers, lightning fixtures, promotional items
<b>Storage:</b>	Powder colors should be stored in a dry place. We recommend to dry the color at 130 °C prior to mixing with an oil-based screen printing medium. Moisture in the color powder can result in an emulsion in the paste which makes it difficult to process.

### Color description:

Lab	
NCS	
RAL	5005
Surface	glossy

For description of the color the nearest color index was chosen.

### Firing conditions:

Normal firing/°C:	520 - 580°C
Shock firing/°C:	

### Chemical characteristics:

Glaze frit system	Pb-B-Si
PbO */ weight-%	40 - 70
CdO/CdS/CdSe* / weight-%	5 - 10
Stain system	Co-Al

\*The values for the oxides are given in ranges. If there is no value written, the oxide is not added to the recipe. However, small amounts may be present as an impurity.

## Resistance:

Acid resistance:	10%ige Zitronensäure	7
Alkali resistance:	10%ige NAOH (4h/88°C)	7
Pb release (EN 1388.1) /mg/dm <sup>2</sup>		
Cd release (EN 1388.1) /mg/dm <sup>2</sup>		

## Physical characteristics:

Lin. coeff. of thermal expansion/10-7/K	
Transformation temperature / °C	
Softening temperature / °C	
Softening intervall / °C	
Half ball temperature / °C	

## Particle size distribution:

Fineness D50:	
Fineness D90:	11

The above mentioned values are the values of the standard product. The production batches can vary slightly from the standard product.

- 
- (1) No attack
  - (2) Iridescence or visible stain on the exposed surface when viewed at a 45 angle but not apparent at angles <30.
  - (3) Definite staining which does not blur reflected images and is visible at angles < 30.
  - (4) Definite stain with gross color change or strongly iridescent surface visible at angles < 30 and which may blur reflected images
  - (5) Surface dull or matt with chalking possible
  - (6) Significant removal of enamel with pinholing evident
  - (7) Complete removal of enamel in the exposed area

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# BLANCO

550° a 620°





## 19 130- Range: 30

- Description:** glass color
- Color shade:** White
- Further description:** low fusing glass color
- Use for:** Soda-Lime glass
- Application:** Tumblers, lightning fixtures, promotional items
- Storage:** Powder colors should be stored in a dry place. We recommend to dry the color at 130 °C prior to mixing with an oil-based screen printing medium. Moisture in the color powder can result in an emulsion in the paste which makes it difficult to process.

### Color description:

Lab	
NCS	
RAL	5005
Surface	glossy

For description of the color the nearest color index was chosen.

### Firing conditions:

Normal firing/°C:	520 - 580°C
Shock firing/°C:	

### Chemical characteristics:

Glaze frit system	Pb-B-Si
PbO */ weight-%	40 - 70
CdO/CdS/CdSe* / weigt-%	5 - 10
Stain system	Co-Al

\*The values for the oxides are given in ranges. If there is no value written, the oxide is not added to the recipe. However, small amounts may be present as an impurity.

## Resistance:

Acid resistance:	10%ige Zitronensäure	7
Alcali resistance:	10%ige NAOH (4h/88°C)	7
Pb release (EN 1388.1) /mg/dm <sup>2</sup>		
Cd release (EN 1388.1) /mg/dm <sup>2</sup>		

## Physical characteristics:

Lin. coeff. of thermal expansion/10-7/K	
Transformation temperature / °C	
Softening temperature / °C	
Softening intervall / °C	
Half ball temperature / °C	

## Particle size distribution:

Fineness D50:	
Fineness D90:	11

The above mentioned values are the values of the standard product. The production batches can vary slightly from the standard product.

- (1) No attack
- (2) Iridescence or visible stain on the exposed surface when viewed at a 45 angle but not apparent at angles <30.
- (3) Definite staining which does not blur reflected images and is visible at angles < 30.
- (4) Definite stain with gross color change or strongly iridescent surface visible at angles < 30 and which may blur reflected images
- (5) Surface dull or matt with chalking possible
- (6) Significant removal of enamel with pinholing evident
- (7) Complete removal of enamel in the exposed area

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# NEGRO

550° a 620°



## 14 171 · Range: 30

<b>Description:</b>	glass color
<b>Color shade:</b>	black
<b>Further description:</b>	low fusing glass color
<b>Use for:</b>	Soda-Lime glass
<b>Application:</b>	Tumblers, lightning fixtures, promotional items
<b>Storage:</b>	Powder colors should be stored in a dry place. We recommend to dry the color at 130 °C prior to mixing with an oil-based screen printing medium. Moisture in the color powder can result in an emulsion in the paste which makes it difficult to process.

### Color description:

Lab	
Pantone	3 C
NCS	
RAL	5005
Surface	glossy

For description of the color the nearest color index was chosen.

### Firing conditions:

Normal firing/°C:	520 - 580°C
Shock firing/°C:	

### Chemical characteristics:

Glaze frit system	Pb-B-Si
PbO */ weight-%	40 - 70
CdO/CdS/CdSe* / weight-%	5 - 10
Stain system	Co-Al

\*The values for the oxides are given in ranges. If there is no value written, the oxide is not added to the recipe. However, small amounts may be present as an impurity.

**Resistance:**

Acid resistance:	0%ige Zitronensäure (15min/Raumte	7
Alkali resistance:	10%ige NAOH (4h/88°C)	7
Pb release (EN 1388.1) /mg/dm <sup>2</sup>		
Cd release (EN 1388.1) /mg/dm <sup>2</sup>		

**Physical characteristics:**

Lin. coeff. of thermal expansion/10-7/K	
Transformation temperature / °C	
Softening temperature / °C	
Softening intervall / °C	
Half ball temperature / °C	

**Particle size distribution:**

Fineness D50:	
Fineness D90:	11

The above mentioned values are the values of the standard product. The production batches can vary slightly from the standard product.

- (1) No attack
- (2) Iridescence or visible stain on the exposed surface when viewed at a 45 angle but not apparent at angles <30.
- (3) Definite staining which does not blur reflected images and is visible at angles < 30.
- (4) Definite stain with gross color change or strongly iridescent surface visible at angles < 30 and which may blur reflected images
- (5) Surface dull or matt with chalking possible
- (6) Significant removal of enamel with pinholing evident
- (7) Complete removal of enamel in the exposed area

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# ROJO

550° a 620°



## 17 395 · Range: 30

<b>Description:</b>	glass color
<b>Color shade:</b>	Red
<b>Further description:</b>	low fusing glass color
<b>Use for:</b>	Soda-Lime glass
<b>Application:</b>	Tumblers, lightning fixtures, promotional items
<b>Storage:</b>	Powder colors should be stored in a dry place. We recommend to dry the color at 130 °C prior to mixing with an oil-based screen printing medium. Moisture in the color powder can result in an emulsion in the paste which makes it difficult to process.

### Color description:

Lab	
NCS	
RAL	5005
Surface	glossy

For description of the color the nearest color index was chosen.

### Firing conditions:

Normal firing/°C:	520 - 580°C
Shock firing/°C:	

### Chemical characteristics:

Glaze frit system	Pb-B-Si
PbO */ weight-%	40 - 70
CdO/CdS/CdSe* / weight-%	5 - 10
Stain system	Co-Al

\*The values for the oxides are given in ranges. If there is no value written, the oxide is not added to the recipe. However, small amounts may be present as an impurity.

**Resistance:**

Acid resistance:	10%ige Zitronensäure	7
Alkali resistance:	10%ige NAOH (4h/88°C)	7
Pb release (EN 1388.1) /mg/dm <sup>2</sup>		
Cd release (EN 1388.1) /mg/dm <sup>2</sup>		

**Physical characteristics:**

Lin. coeff. of thermal expansion/10-7/K	
Transformation temperature / °C	
Softening temperature / °C	
Softening intervall / °C	
Half ball temperature / °C	

**Particle size distribution:**

Fineness D50:	
Fineness D90:	11

The above mentioned values are the values of the standard product. The production batches can vary slightly from the standard product.

- (1) No attack
- (2) Iridescence or visible stain on the exposed surface when viewed at a 45 angle but not apparent at angles <30.
- (3) Definite staining which does not blur reflected images and is visible at angles < 30.
- (4) Definite stain with gross color change or strongly iridescent surface visible at angles < 30 and which may blur reflected images
- (5) Surface dull or matt with chalking possible
- (6) Significant removal of enamel with pinholing evident
- (7) Complete removal of enamel in the exposed area

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# VERDE

550° a 620°



## 11 641- Range: 30

- Description:** glass color
- Color shade:** Green
- Further description:** low fusing glass color
- Use for:** Soda-Lime glass
- Application:** Tumblers, lightning fixtures, promotional items
- Storage:** Powder colors should be stored in a dry place. We recommend to dry the color at 130 °C prior to mixing with an oil-based screen printing medium. Moisture in the color powder can result in an emulsion in the paste which makes it difficult to process.

### Color description:

Lab	
NCS	
RAL	5005
Surface	glossy

For description of the color the nearest color index was chosen.

### Firing conditions:

Normal firing/°C:	520 - 580°C
Shock firing/°C:	

### Chemical characteristics:

Glaze frit system	Pb-B-Si
PbO */ weight-%	40 - 70
CdO/CdS/CdSe* / weight-%	5 - 10
Stain system	Co-Al

\*The values for the oxides are given in ranges. If there is no value written, the oxide is not added to the recipe. However, small amounts may be present as an impurity.

## Resistance:

Acid resistance:	10%ige Zitronensäure	7
Alkali resistance:	10%ige NAOH (4h/88°C)	7
Pb release (EN 1388.1) /mg/dm <sup>2</sup>		
Cd release (EN 1388.1) /mg/dm <sup>2</sup>		

## Physical characteristics:

Lin. coeff. of thermal expansion/10-7/K	
Transformation temperature / °C	
Softening temperature / °C	
Softening intervall / °C	
Half ball temperature / °C	

## Particle size distribution:

Fineness D50:	
Fineness D90:	11

The above mentioned values are the values of the standard product. The production batches can vary slightly from the standard product.

- (1) No attack
- (2) Iridescence or visible stain on the exposed surface when viewed at a 45 angle but not apparent at angles <30.
- (3) Definite staining which does not blur reflected images and is visible at angles < 30.
- (4) Definite stain with gross color change or strongly iridescent surface visible at angles < 30 and which may blur reflected images
- (5) Surface dull or matt with chalking possible
- (6) Significant removal of enamel with pinholing evident
- (7) Complete removal of enamel in the exposed area

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