

Pigment RED SY-208

1. General Properties

CAS Number: 6410-26-0

EINECS Number: 229-091-6

Molecular Formula: C₂₂H₁₈ N₄O₄

Common Names: Toluidine Red, PR21

Chemical Class: Monoazo (β-Naphthol)

2. Typical Physical and Chemical Properties

Property	Typical Value / Description	Test Method
Colour Mass Tone	Medium to yellowish red	Visual comparison
Density (g/cm³)	~1.45 - 1.55	ISO 787-10
Bulk Volume (l/kg)	~1.8 - 2.5	--
Oil Absorption (g/100g)	40 - 55	ASTM D281
Specific Surface Area (m²/g)	15 - 30	BET method
pH Value (10% Aqueous Slurry)	6.0 - 8.0	ISO 787-9
Water Content (%)	≤ 1.5	ISO 787-2

Property	Typical Value / Description	Test Method
Volatile Matter (%)	≤ 2.0	--

3. Application Properties

Property	Performance Rating	Comments
Lightfastness (Full Shade)	Fair to Moderate (3-4)	Not suitable for high-durability outdoor applications.
Weather Resistance	Poor	Not recommended for automotive or exterior coatings.
Heat Resistance (°C)	140 - 160	Stable for most plastic processing and baking enamels.
Migration Resistance	Good	Good in most common application media.
Acid Resistance	Fair	May be sensitive to strong acids.
Alkali Resistance	Poor	Not stable in alkaline environments.
Solvent Resistance	Fair to Good	Resistant to aliphatic hydrocarbons; may bleed in some polar solvents (alcohols, esters, ketones).

(Note: Performance ratings are on a 1-5 scale, where 5 is excellent.)

4. Recommended Applications

Due to its cost-effectiveness and bright red shade, PR21 is widely used in:

Industrial Paints & Coatings: Air-drying systems, primers.

Printing Inks: Especially for packaging inks and other applications where high lightfastness is not critical.

Plastics: Coloring of PVC, LDPE, and other polymers processed at moderate temperatures.

Office & Stationery Products: Inks, toners, and colored pencils.

Textile Printing.

Latex Emulsions.