

Erythrosine B (FD&C Red No. 3)

Catalog No: ASD-638 | CAS: 16423-68-0 | C.I. 45430 | E127 | Food Grade / Lab Reagent
Synthetic xanthene dye — brilliant pink-red — food, pharma, cosmetic, and laboratory use

1. Product Overview

Erythrosine B (ASD-638) is a synthetic red dye of the xanthene group, registered as FD&C Red No. 3 (USA) and E127 (EU/EEC). It is the disodium salt of tetraiodofluorescein and appears as a dark cherry-red crystalline powder producing a brilliant pink-red solution in water. With a dye content of $\geq 92\%$, it meets international food-grade and laboratory-reagent specifications. Erythrosine B is versatile across food manufacturing (confectionery, beverages, cake decorations), pharmaceutical formulations (tablet coatings, syrups), cosmetics (lipsticks, blushes), and microbiological laboratory applications. Its vivid colour, aqueous stability, and multi-jurisdictional regulatory approvals make it a widely used synthetic colorant.

2. Chemical & Physical Properties

Property	Value
Chemical Name	Erythrosin B disodium salt; Tetraiodofluorescein disodium salt
Common Names	FD&C Red No. 3, Food Red 14, Erythrosine, Acid Red 51
Catalog Number	ASD-638
CAS Number	16423-68-0
C.I. Name / Number	Acid Red 51 C.I. 45430
EEC No.	E127
Molecular Formula	$C_{20}H_6I_4Na_2O_5$
Molecular Weight	879.86 g/mol
Grade	Food Grade / Laboratory Reagent
Form	Dark cherry-red crystalline powder
Colour in Solution	Brilliant pink-red in water
Solubility	Freely soluble in water; sparingly soluble in ethanol
Dye Content	$\geq 92\%$
Loss on Drying	$\leq 11.5\%$
Water Insoluble Matter	$\leq 0.058\%$
Heavy Metals (as Pb)	≤ 40 ppm
Arsenic	≤ 3 ppm
Mercury	≤ 1 ppm
Lead	≤ 2 ppm
Chromium	≤ 5 ppm

Shelf Life	3 years under recommended storage conditions
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3. Key Features & Benefits

- Brilliant pink-red shade with high colour stability in aqueous systems
- Dye content $\geq 92\%$ — consistent quality and purity for demanding applications
- Low heavy metals profile — meets food and pharmaceutical grade limits
- Freely soluble in water — easy to formulate at required concentrations
- Versatile — approved for food, pharmaceutical, cosmetic, and laboratory uses
- Available in bulk packaging for industrial and contract supply
- Supplied with full COA and regulatory documentation

4. Applications

Sector	Applications
Food Industry	Confectionery, beverages, cake decorations, candied fruits, and processed foods where permitted by regulation
Pharmaceuticals	Tablet coatings, capsule shells, syrups, and topical preparations
Cosmetics	Lipsticks, blushes, and personal care products
Laboratory	Indicator dye in microbiological culture media; staining procedures; analytical reference standard

5. Regulatory Status

Region	Status
EU / EEC	Approved food colour E127 — limited applications per EU Directive
USA (FDA)	Approved as FD&C Red No. 3 — subject to FDA category-specific restrictions
Australia / NZ	Refer to FSANZ Food Standards Code for current permitted food uses
Pharma / Cosmetic	Suitable for tablet coatings and cosmetic formulations per applicable national regulations

6. Packaging & Storage

Pack Sizes	Various — contact AuSaMicS for current options
Storage	Cool, dry place — tightly sealed, away from direct sunlight
Shelf Life	3 years under recommended storage conditions



Technical Data Sheet

TDS-ASD-638

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