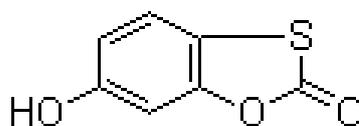


Tioxolone

CHEMISTRY

Tioxolone is an organic compound corresponding to 6-hydroxy-1,3-benzoxathiol-2-one (C₇H₄O₃S). It is a compound with a high proportion of sulfur (19.1%). The importance of this active in cosmetics lies in the presence of sulfur in its molecule.



Molecular weight: 168.17

CAS: 4991-65-5

EINECS: 225-653-0

The compound may appear in one of two forms,

- Tioxolone Powder
- Tioxolone 5% Water Soluble

Tioxolone is a microcrystalline substance. The substance is white-ivory in colour and has a characteristic light smell of sulfur. It is practically insoluble in water, but soluble in ethanol, isopropanol, propylene glycol, ether, benzene and toluene. It is stable in acid medium, hydrolyses in basic medium and its melting point is 160 +/- 1°C. The soluble form is produced to facilitate the incorporation of the product in cosmetic formulations in which the solvents are mixtures of water and alcohol.

Cosmetic formulation containing Tioxolone must have a pH of less than 6.5 because, as mentioned before, the substance hydrolyses in alkaline pH solutions.

COSMETIC PROPERTIES

Tioxolone is a product with good anti-seborrhoeic, anti-acne, keratolytic, anti-bacterial and anti-mycotic properties. On skin, the substance has a slight hyperemic effect and gives very good results against seborrhoeic dandruff. It is recommended for the treatment of acne vulgaris, indurata and conglobata, for seborrhoea and rosaceous eczema. It improves and regulates sebaceous secretion and facilitates the elimination of spots (freckles, rosacea, etc.).

Tioxolone owes its properties to the presence of sulfur in its chemical composition. Sulfur is a component of the proteic substance and is therefore essential for living beings; cells contain sulfur in the chemical form of the amino acids methionine, cysteine and cystine, which are synthesised from food. When the levels of the sulfur coming from food intake decrease, the mucosas degenerate and hair and nails stop growing.

RECOMMENDED DOSE

Tioxolone Powder: 0.1 -0.5%

Tioxolone 5% Water Soluble: 2-10%

EXAMPLE OF FORMULATION

- Shampoo for greasy hair

	% (w/w)
Sodium Laureth Sulfate	30.00
TIOXOLONE 5% WATER SOLUBLE	4.00
Cocamide DEA	2.00
Sodium Chloride	0.15
Lactic Acid	0.10
Preservative	q.s.
Fragrance	q.s.
Water	q.s. to 100.00