

## SUMMARY OF PRODUCT CHARACTERISTICS

### 1. NAME OF THE MEDICINAL PRODUCT

MAXIMUS %25 Oral Spray

### 2. QUANTITATIVE COMPOSITION

#### Active Substance

30 ml oral spray contains 0.075 g flurbiprofen

#### Excipients

Glycerol	2.10 g
Saccharin Sodium	0.03g
Sorbitol,liquid,non-crystallized (70%)	7.50 g
Propylene Glycol	15.00 g

See 6.1 for all excipients.

### 3. PHARMACEUTICAL FORM

Oral Spray

Blue solution

### 4. CLINICAL PARTICULARS

#### 4.1 Therapeutic Indications

It is used as an anti-inflammatory agent in symptomatic treatment of pain related to an inflammation in the oropharyngeal area (e.g. gingival inflammation, oral inflammation, pharyngeal inflammation). It is used as protector following dental treatments.

#### 4.2 Posology and method of administration

##### Posology / Term and frequency of administration:

It is three direct sprays to the related area three times a day. Each spray will contain 0.13ml containing 0.325 mg flurbiprofen.

**Application Form:**

MAXIMUS Oral Spray is administered to the relevant area in the oral cavity and it should not be swallowed.

**Additional information considering special populations:****Renal failure:**

It must be used carefully in patients with renal failure.

**Liver failure:**

It must be used carefully in patients with liver failure.

**Pediatric population:**

It must not be used in children younger than 12 years of age.

**Geriatric Population:**

There are no data related to the use in the elderly.

**4.3 Contraindications**

- You are hypersensitive against flurbiprofen or any ingredient included in the composition of the product
- You are hypersensitive against acetylsalicylic acid or other non-steroidal anti-inflammatory drugs,
- You have had bronchospasm (breathing difficulty related to bronchial narrowing) or rhinitis or urticaria related to acetylsalicylic acid or other non-steroidal anti-inflammatory drugs,
- You have peptic ulcer or if you had this disease in the past.

**4.4 Special warnings and special precautions for use**

Applied externally.

MAXIMUS Oral Spray is administered to the relevant area in the oral cavity and it should not be swallowed.

It must be used carefully in patients with liver failure, renal failure or cardiac failure.

MAXIMUS contains glycerol, saccharine sodium, sorbitol and propylene glycol. But no warnings are required because of its administration route.

#### **4.5 Interaction with other medicinal products and other forms of interaction**

MAXIMUS can rarely decrease the diuretic activity of furosemide. In addition, flurbiprofen can rarely interact with anticoagulant drugs. Together with this, flurbiprofen has no interactions with digoxin, tolbutamide or antacids.

#### **4.6 Pregnancy and lactation**

##### **Overall recommendation**

Pregnancy category: **C (D in trimester 3)**

##### **Women with childbearing potential / (Contraception)**

There is no data on the use of flurbiprofen in women with potential for childbearing.

##### **Pregnancy period:**

Despite the fact that studies on animals have shown that there is no teratogenic effect of flurbiprofen, flurbiprofen should be used if there is more potential damage to the fetus than flurbiprofen, because of the inadequate work done by humans.

##### **Lactation period:**

The use of flurbiprofen in lactation is not recommended due to potential side effects of prostaglandin inhibitor drugs on newborns.

##### **Reproduction power/ Fertility :**

There is no known effect on fertility.

#### **4.7 Effects on ability to drive and use machines**

Effects of MAXIMUS on driving and using machines have not been studied; however, no effects are expected based on its pharmacodynamics properties and general safety profile.

#### **4.8 Undesirable effects**

The reported undesirable effects are listed according to the following frequency rating.

Very common ( $\geq 1/10$ ); common ( $\geq 1/100$  and  $< 1/10$ ); not common ( $\geq 1/1000$  and  $< 1/100$ ); rare ( $\geq 1/10.000$ , and  $< 1/1000$ ); very rare ( $< 1/10.000$ ), unknown (can not be predicted on the basis of available data)

### **General disorders and application region related diseases:**

Unknown:

Finding related to sensitivity,

Local irritation

### **4.9 Overdose**

Given the low availability of active substance and local use, it is unlikely that overdose conditions will be visible. In case of overdose, appropriate symptomatic treatment should be performed.

Symptoms of overdose may include nausea, vomiting, gastrointestinal disturbances.

## **5 PHARMACOLOGICAL PROPERTIES**

### **5.1 Pharmacodynamic properties**

Pharmacotherapeutic group: throat preparations

ATC Code : R02AX01

MAXIMUS contains flurbiprofen, a nonsteroidal anti-inflammatory drug with anti-inflammatory, analgesic and antipyretic effects. The mechanism of action of flurbiprofen is not fully understood, as it is in other nonsteroidal anti-inflammatory drugs, and is thought to be related to prostaglandin synthetase inhibition.

As in other NSAID drugs; flurbiprofen inhibits prostaglandin synthesis by inhibiting cyclooxygenase (COX), including COX-1 and COX-2 isoenzymes, in body tissues. Flurbiprofen is one of the most potent prostaglandin inhibitor NSAID drugs.

### **5.2 Pharmacokinetic properties**

#### Absorption:

Flurbiprofen is absorbed buccally through the passive diffusional mechanism. The buccal membrane is essentially a lipid membrane and flurbiprofen passes easily through the buccal mucosa due to its high lipid solubility. Flurbiprofen is a weak acid and as a consequence the absorption ratios are pH variable.

Flurbiprofen is used in the treatment and prevention of periodontal diseases due to its anti-inflammatory effect. High locational concentration is not required, since localized effects

will be localized when the portal is applied. For this indication, as buccally weak absorption is desired.

MAXIMUS oral spray is a topically effective drug used externally. For this reason, it should not be swallowed in proper use of the tariff. No significant systemic effect is expected in the use of MAXIMUS oral spray. Nevertheless, the following pharmacokinetic properties of flurbiprofen administered orally at therapeutic doses of 50-100 mg are:

#### Dispersion:

Within about 1.5-2 hours, the plasma reaches its peak level. The apparent volume of distribution ( $V_z / F$ ) of both R- and S-flurbiprofen is about 0.12 L / Kg. Both flurbiprofen enantiomers. Above 99%, it binds to plasma proteins mainly albumin. Binding to plasma proteins is relatively stable at typical mean steady-state concentrations ( $\leq 10 \mu\text{g} / \text{ml}$ ) obtained at the recommended doses.

#### Biotransformation:

Numerous flurbiprofen metabolites have been identified in human plasma and urine.

Among these metabolites, the two major metabolites of flurbiprofen are [2- (2-fluoro-4-hydroxy-4-biphenyl)] and [2- (2-fluoro-3-hydroxy- also include 4'-hydroxy-flurbiprofen, 3', 4'-dihydroxy-fluribipufen, 3'-hydroxy-4'-methoxy-flurbiprofen, their conjugates and conjugated flurbiprofen. In contrast to other arylpropionic acid derivatives (for example, ibuprofen), the metabolism of R-flurbiprofen to S-flurbiprofen is minimal. In vitro studies have shown that cytochrome P450 2C9 plays an important role in the metabolism of 4'-hydroxy-flurbiprofen, the main metabolite of flurbiprofen. 4'-hydroxy-flurbiprofen metabolite showed little anti-inflammatory activity in animal inflammation models. Flurbiprofen does not induce enzymes that alter metabolism. The total plasma clearance of the unbound flurbiprofen is not stereoselective, and when used in the therapeutic range, the flurbiprofen clearance is dose-independent.

#### Elimination:

The elimination half-life varies from 3 to 4 hours. After the use of the drug, less than 3% of flurbiprofen is excreted unchanged, and about 70% of the dose that is eliminated in the urine forms the parent drug and its metabolites. 20% free and in conjugated form, and about 50% urinary excretion in the form of their hydroxylated metabolites. Because renal elimination is

a significant elimination pathway of flurbiprofen metabolites, dosage adjustment may be needed to prevent the accumulation of flurbiprofen metabolites in patients with moderate or severe renal insufficiency. The mean terminal half-lives ( $t_{1/2}$ ) of R- and S-flurbiprofen are 4.7 and 5.7 hours, respectively, similar to each other. After multiple dosing, flurbiprofen accumulation was minimal

#### Linearity / Nonlinearity:

The pharmacokinetic of flurbiprofen is linear. Plasma levels increase depending on the given dose.

### **5.3. Preclinical safety data**

Preclinical data have not posed a particular risk to humans based on conventional reliability pharmacology, repeated dose toxicity, genotoxicity, carcinogenic potential, toxicity studies for reproduction. Reproductive studies performed in rabbits and rats did not show any developmental disturbances. However, animal studies may not always reflect the answer in humans. Adequate and well-controlled studies performed in pregnant women are not available.

## **6 PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Sodium benzoate

Macrogolglycerol Hydroxystearate 40

Sodium bicarbonate

Glycerol

Saccharin sodium

Sorbitol, liquid, non-crystallized (70%)

Ecocool MP

Peppermint

Patent V blue

Propylene glycol

Purified water

## **6.2 Incompatibilities**

There is no incompatibility.

## **6.3 Shelf Life**

24 months

## **6.4 Special precautions for storage**

Store MAXIMUS below the room temperature of 25°C.

## **6.5 Nature and contents of container**

30 ml spray-colored white HDPE bottles in carton box packaging.

## **6.6 Instructions for use and handling**

Unused products or waste materials must be destructed in accordance with “Medical Products Control Directive” and “Package and Package Waste Control Directive”.

## **7. MARKETING AUTHORISATION HOLDER**

Drogsan İlaçları San. ve Tic. A.Ş.

Oğuzlar Mah. 1370. Sok. 7/3

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## **8. MARKETING AUTHORIZATION NUMBER**

2014/282

## **9. DATE OF FIRST AUTHORIZATION/RENEWAL OF THE AUTHORIZATION**

Date of First Authorization: 07.04.2014  
Renewal of the Authorization:

## **10. DATE OF REVISION OF THE TEXT**

22.09.2017

