Foreverest Resources Ltd

Cooling Agents WS-3

WS-3

Cooling agent WS-3 (as known as Koolada 3, N-Ethyl-p-menthane-3-carboxamide) is a synthetic compound used to provide a cooling sensation in various consumer products. It offers a cooling effect of 1.5 and lasts up to 6 minutes. It is valued for its mild, pleasant, and long-lasting cooling properties, making it a versatile ingredient in many consumer products. WS-3 has KOSHER ,HALAL,REACH ready.

Substance Identification

Synonyms	N-Ethyl-p-menthane-3-carboxamide
CAS	N/A
EINECS	

FEMA	N/A
HS.CODE	
Molecular Formula	C13H25NO
Moleclar Weight	211.34

Application & Uses

- WS-3 is widely used across a variety of products, including oral care formulations (such as toothpaste and mouthwash), cosmetics (creams and lotions), food and beverages, pharmaceuticals, and personal care products (including shampoos and conditioners).
- For use in beverages and mouthwash, WS-3 should first be dissolved in propylene glycol, after which solubilisers such as Tween or Span should be added to ensure proper dispersion. In e-liquid formulations, WS-3 is often blended with WS-23 to deliver a balanced and long-lasting cooling sensation.
- At higher concentrations, a small amount of sweetener may be added to offset bitterness. When used together with peppermint oil, WS-3 produces a more pronounced, refreshing, and enduring cooling aroma.

Features & Benefits

- WS-3 offers a subtle menthol flavour, with a strong and enduring cooling sensation characterised by a slow, steady release of icy coolness and gentle notes of camphor and mint. Its cooling intensity is 1.5 times greater than that of menthol, and its effect lasts for 20 to 30 minutes. Like menthol, it presents a slight bitterness.
- The cooling effect is primarily experienced in the throat, on the roof of the mouth, towards the back of the oral cavity, and at the rear of the tongue.
- WS-3 is generally recognised as safe (GRAS) for use in foods, cosmetics, and personal care products when applied within recommended concentrations. At 10–100 mg/kg, it activates the trigeminal nerve, providing a robust and long-lasting cooling sensation. The initial effect is mild but gradually develops into a stable, persistent coolness with subtle camphor and menthol undertones. It produces an immediate, clean cooling effect, and at an aroma concentration of 10%, it is almost odourless, showing only a faint alcoholic and cooling note. Its taste threshold is 200 ppb, as determined by resin-

impregnated paper strips placed in the mouth.

Recommended usage level	WS-3	
	min	max
Fog-fluid	2250 ppm	22500 ppm
Beverage	10 ppm	100 ppm
Toothpaste	1000 ppm	10000 ppm
Mouthwash	50 ppm	2000 ppm
Hard candy	150 ppm	1500 ppm
Chewing gum	5000 ppm	20000 ppm
Creams & Lotions	5000 ppm	50000 ppm

Sales Specification

ITEM	VALUE	TEST METHOD & UNIT
Cooling Strength	1.5	@Menthol was set as 1 as a reference
Cooling Longevity	6	minutes

ITEM	VALUE	TEST METHOD & UNIT
Cooling Strength	4	@Menthol was set as 1 as a reference
Cooling Longevity	10	minutes

ITEM	VALUE	TEST METHOD & UNIT
Cooling Strength	4.5	@Menthol was set as 1 as a reference
Cooling Longevity	12	minutes

ITEM	VALUE	TEST METHOD & UNIT
Cooling Strength	3.5	@Menthol was set as 1 as a reference
Cooling Longevity	36	minutes

ITEM	VALUE	TEST METHOD & UNIT
Cooling Strength	0.75	@Menthol was set as 1 as a reference
Cooling Longevity	8	minutes

Package

- Customizable packaging details.

GHS Hazard Statements

Storage

- Flammable materials should be stored in a separate safety storage cabinet or room
- Ground all equipment containing material
- Keep away from heat
- Keep away from sources of ignition
- Keep container tightly closed
- Keep in a cool, well-ventilated place

Relation Products

- Cooling Agent WS-5
- Cooling Agent WS-10
- Cooling Agents WS-12
- Cooling Agents WS-23
- Menthol (Natural)

Relation Articles

- Overview of Cooling Agents

Remark

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