Foreverest Resources Ltd

Cooling Agents WS-23

99%

WS-23 (2-Isopropyl-N,2,3-trimethylbutanamide) is renowned for its clean and long-lasting cooling effect (with a cooling strength of approximately 0.75). Unlike menthol, WS-23 delivers a cooling sensation without any accompanying minty flavour or odour, making it highly versatile for a wide range of applications.

WS-23 has KOSHER ,HALAL,REACH ready.

Substance Identification

Synonyms	2-Isopropyl-N,2,3-trimethylbutanamide
CAS	N/A

EINECS	
FEMA	N/A
HS.CODE	
Molecular Formula	C10H21NO
Moleclar Weight	171.28

Application & Uses

WS-23 is widely used across diverse product categories, including:

- Oral care products (e.g., toothpaste, mouthwash)
- Cosmetics (e.g., creams, lotions)
- Food and beverages
- Pharmaceuticals
- Personal care items (e.g., shampoos, conditioners)

It serves as one of the most common cooling agents in high-intensity cooling candies, mouthwashes, and beverages, with typical addition levels of 0.3%–0.5%. Unlike menthol, which develops bitterness above 0.08%, WS-23 maintains a clean profile at these concentrations. Pulverising WS-23 breaks down its crystalline structure into finer, powder-like particles, making it easier to incorporate into compressed tablets. Most commercially available compressed lozenges and ring-shaped candies now rely on WS-23 as their primary cooling agent.

Features & Benefits

- WS-23 exhibits excellent stability, making it ideal for formulations requiring consistent and prolonged cooling effects. It has virtually no odour or taste and low volatility, with a mild, refreshing mint flavour that delivers strong, impactful cooling which dissipates quickly (lasting approximately 7 minutes).

- It is generally recognised as safe (GRAS) for use in food, cosmetics, and personal care products when applied within recommended concentrations.
- Sparingly soluble in water at room temperature but highly soluble in hot water. Once dissolved in propylene glycol, it can be directly solubilised in water at ambient temperature and is readily soluble in alcohol and fats.
- Slightly less intense than WS-3, yet smoother without side effects like burning, numbness, or irritation. Sensory evaluations confirm WS-23 provides a cooler sensation than menthol, primarily affecting the front of the tongue and mouth.

	min	max
Fog-fluid	450 ppm	2250 ppm
Beverage	3 ppm	24 ppm
Toothpaste	300 ppm	3000 ppm
Mouthwash	15 ppm	600 ppm
Hard candy	30 ppm	150 ppm
Chewing gum	1500 ppm	9000 ppm
Creams & Lotions	1500 ppm	15000 ppm
Recommended usage level	WS-23	

Sales Specification

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

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

ITEM	VALUE	TEST METHOD & UNIT
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

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 Agents WS-3
- Cooling Agent WS-5
- Cooling Agent WS-10
- Cooling Agents WS-12
- Menthol (Natural)

Relation Articles

- Overview of Cooling Agents

Remark

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