

XYLOCOL- NT

XYLOCOL- NT is a Sustainable, Nonionic, Ethylene Oxide/Propylene Oxide free as well as quaternary reaction free, high molecular weight Polysaccharide in powder form with a white appearance and a branched chain polymeric group based on Xylose & Galacto Xylose.

SUSTAINABLE

HIGH MOLECULAR WEIGHT

POWDER FORM

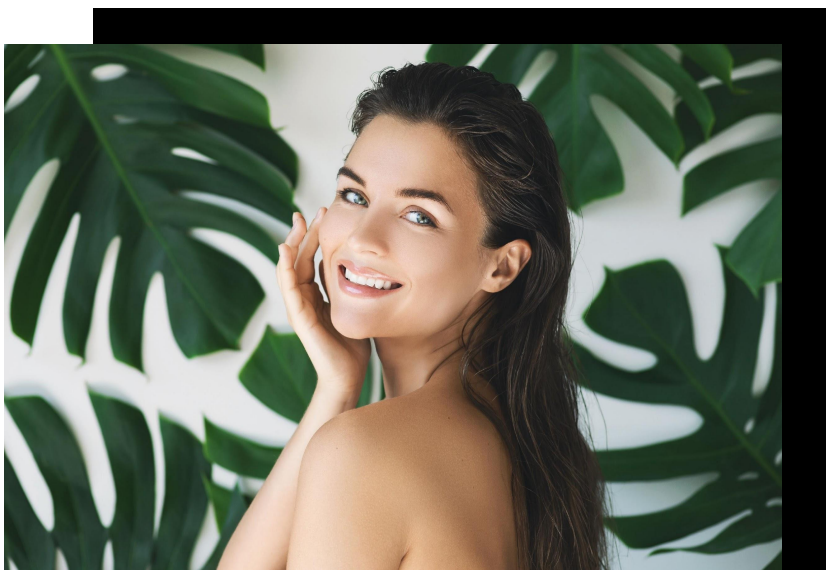
INTRODUCTORY REMARKS

- ✓ XYLOCOL- NT is derived on a novel polymeric system, the patented reaction pathway does not utilise ethylene oxide or propylene oxide. Additionally, it is free of Quaternary ammonium compound which are known to have extremely high environmental & human toxicity.
- ✓ XYLOCOL- NT is a nonionic polymeric system, it exhibits high nitrogen content without using Quaternary ammonium compound, which makes the product highly sustainable & Safe.
- ✓ Being nonionic, it is compatible with both anionic as well as cationic surfactants & ingredients.
- ✓ XYLOCOL-NT is capable of doing so without a synthetic Quaternary group but by protonation of positive ion function groups based on pH variability.
- ✓ The polymer is therefore highly sustainable & biodegradable and passes the stringent OECD guidelines.
- ✓ Test for inherent biodegradability: OECD 302 B (Zahn-Wellens Test) 28 days: 90%
Test for Ready biodegradability: OECD 301 F Manometric Respiratory test: 86%



KEY FEATURES OF XYLOCOL- NT

- ✓ High Nitrogen Content.
- ✓ Excellent moisture regulation properties due to high molecular weight.
- ✓ Exceptionally good Hair Conditioning effect.
- ✓ Superior Dry combability.
- ✓ Nonionic character to enhance compatibility in various surfactant systems.



- ✓ Excellent pseudo plastic flow rheology.
- ✓ Exhibits ease of application & improved spread ability.
- ✓ Excellent stabilizer for o/w emulsions at increased dosages.
- ✓ Stability over wide range of pH from 3 to 11.
- ✓ Unique sensory feeling.
- ✓ Biodegradable meeting stringent OECD Guidelines.

WHY USE XYLOCOL-NT?

XYLOCOL- NT is a high molecular weight Polysaccharide in powder form with a bright white appearance, with a branched chain polymeric group based on Xylose & Galacto Xylose.

Due to its high molecular weight, it possesses excellent moisture regulating properties.

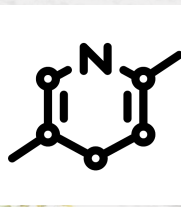
Due to its high nitrogen content, it can easily and effectively replace Hyaluronic Acid, Cationic Guar (Guar Hydroxypropyltrimonium chloride) as well as Polyquaternium-10 from personal care formulations, With the added advantage of being QAC Free, EO/PO free.

Ease of formulation is achieved by hydrating the polymer at neutral pH followed by addition of citric acid only after full hydration is achieved. It may be used in Opaque formulations.

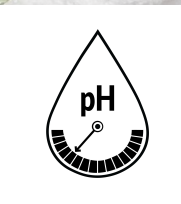
KEY SPECIFICATIONS FOR XYLOCOL-NT



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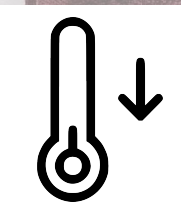
Nitrogen content: > 2.2 % (CHNS Analysis)



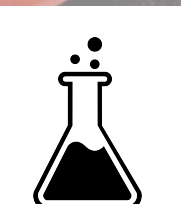
pH: 7 – 7.5



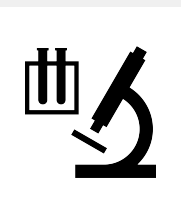
Naturality of product: 4 (SCHÜTZEN Naturality index)



Room temperature soluble



Test for inherent biodegradability: OECD 302 B (Zahn Wellens Test) 28 days: 90%



Test for Ready biodegradability: OECD 301 F Manometric Respiratory test: 86%



Total plate count: Maximum 300 c.f.u./g (Typically less than 10)



Total yeast and mold count: Maximum 100 c.f.u./g (Typically less than 10)

ADVANTAGES TO FORMULATORS

- ✓ Claims such as “Natural, Sustainable, Bio-based” can be acquired.
- ✓ Claims such as Quaternary ammonium compound free, EO/PO Free
- ✓ 100% Bio-degradable.
- ✓ Additional traction is provided for certifications such as COSMOS , vegan, vegetarian, cruelty free, no animal testing etc.
- ✓ Replacement of molecules such as PQ-10, hyaluronic acid is possible.
- ✓ Owing to the room temperature solubility, sustainable process development is possible.
- ✓ It has High compatibility with other generally used personal care ingredients.



MOLECULAR WEIGHT OF XYLOCOL- NT

- Average Molecular weight is 3,86,686 Da.
- Due to high molecular weight, it has excellent moisture holding and regulating properties.
- Hence, it is an excellent conditioner and moisture regulator in skin care formulations and can be used as a replacement to Hyaluronic acid.
- In case of hair care formulations, It provides excellent film forming ability due to its molecular weight



PARAMETER	XYLOCOL-NT
Appearance	Bright White Powder
INCI Name	Sodium Tamarindus Indica Seed Polysaccharide
Ionic Character	Nonionic
pH In water	7-7.5
Nitrogen Content (%CHNS Method)	Greater than 2.2%
Viscosity @4(%) (Brookfield) (20 Degree Celsius, 20rpm)	Appx 220 cPs
Average Molecular weight	3,86,686 Da
Solubility @Room Temperature (20 Degree Celsius)	Yes
Naturality of the product (5 being highest)	4
Total Plate Count	Max 300 c.f.u/g (Typically less than 10)
Total Yeast and Mold Count	Max 100 c.f.u/g (Typically less than 10)
Test for inherent Biodegradability: OECD 302 B (Zahn-Wellens Test) 28days	90%
Test for ready Biodegradability: OECD 301 F Manometric Respiratory test	86%