

From Strength To Scale: Tailor-Made Surfactant Solutions Driving Agro Innovation

Speaker : **Nitin Khatik**
nitin.khatik@rossari.com

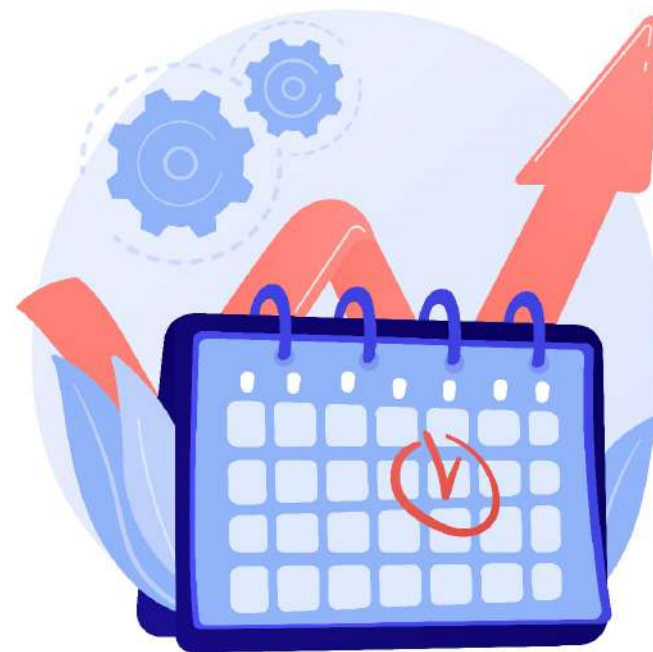
ROSSARI BIOTECH LIMITED

Touching the lives of billions daily, delivering value as one of India's largest specialty chemical manufacturers.



Agenda

- Overview of Rossari
- Products Portfolio for Agro Formulation
- RENEWA -Biosurfactant
- New Solvents
- Polymeric Surfactant
- Products for SE formulations
- Oil Dispersion offerings
- Formulation of Micronutrient
- Silicon based Defoamer and Super-spreader
- Conclusion and way forward



Strength Lays The Foundation, But Scale Shapes The Future.

At Rossari Biotech Limited, our strong foundation is built on expertise and relationships -evolved into purposeful, scalable growth driven by innovation and sustainability. Today, we're entering a new phase - **leveraging capabilities and opportunities to expand strategically with agility, impact, and clarity.**

Our globally-renowned core chemistries advance our customer-centric product diversification, unlocking optimal green chemistry possibilities, driving inclusive growth and actively reshaping industry standards.

Delivering customized solutions across:



FMCG



Home
Care



Industrial &
Institutional
Cleaning



Personal
Care



Pet Care



Agro-
chemicals



Textile
Chemicals



Performance
Additives



Oil & Gas



Animal Health &
Nutrition

4300+
Products

40+
R&D Experts

\$243.5 Million
Consolidated
Revenue

332,100
MTPA Installed
Capacity

45+
Cumulative Years
Of Experience

65+
Countries Serving

3010+
Total Customers

4
Best-in-class R&D
Facilities

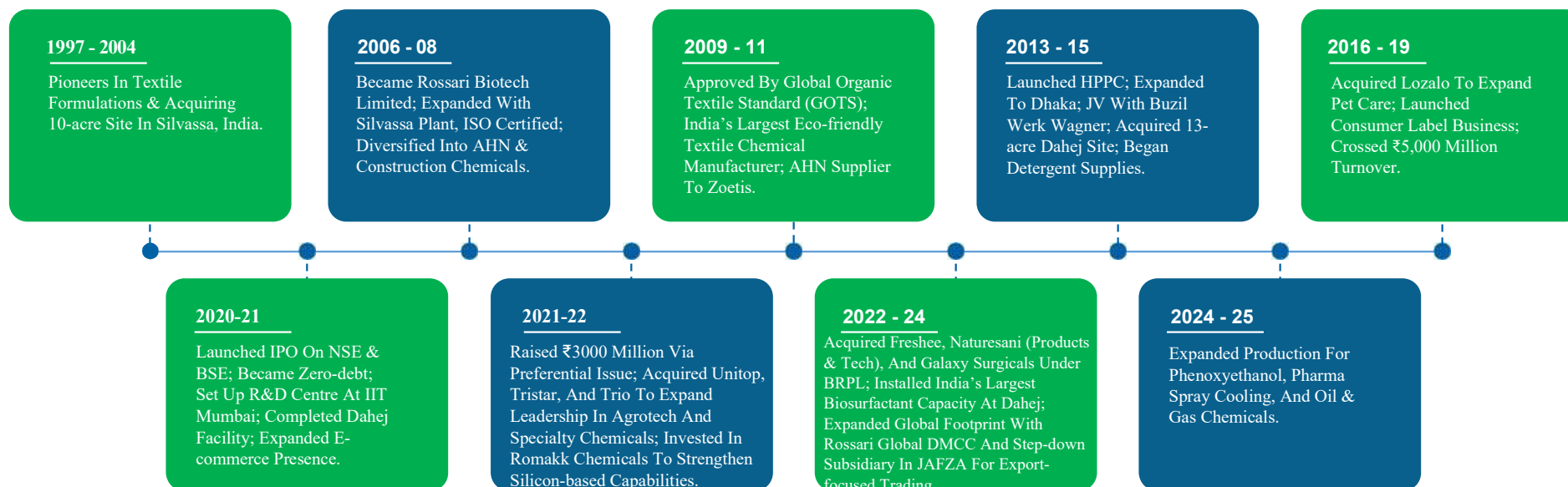
7
Manufacturing
Facilities

13.6%
YoY Consolidated
Growth

3 Upcoming
Manufacturing Facilities

\$480+ Million
Market cap

The Story of Rossari Biotech from Strength to Scale... Becoming One of India's Largest Specialty Chemical Manufacturers.



Rossari Group of Companies

Rossari Biotech Limited



Buzil Rossari Pvt. Ltd.



Rossari Consumer Products Pvt. Ltd.



Unitop Chemicals Pvt. Ltd.



Tristar Intermediates Pvt. Ltd.



Romakk Chemicals Pvt. Ltd.



ROSSARI BIOTECH LIMITED

Delivering Value As One Of India's Largest Specialty Chemical Manufacturers

Overall Portfolio for Agro



NP/OP Ethoxylate	
UNITOP NP	Nonyl Phenol Ethoxylates
UNITOP X	Octyl Phenol Ethoxylates

Fatty Alcohol Ethoxylates	
UNITOP HYDOL LA	Lauryl Myristyl Alcohol Ethoxylates
UNITOP CS	Cetyl Alcohol Ethoxylates
UNITOP CA	Cetyl Alcohol Ethoxylates
UNITOP SA	Stearyl Alcohol Ethoxylates
UNITOP BA	Behenyl Alcohol Ethoxylates

Synthetic Alcohol Ethoxylates	
UNITOP TDA	Iso Tri Decyl Alcohol Ethoxylates
UNITOP IDA	Iso Decyl Alcohol Ethoxylates
UNITOP PH	Propyl Heptanol Ethoxylates
UNITOP EH	2-Ethyl Hexanol Ethoxylates

Fatty Acid Ethoxylates	
UNITOP SA	Steric Acid Ethoxylates
UNITOP CFA	Coconut Fatty Acid Ethoxylates
UNITOP OPL	Oleic Acid Ethoxylates

Fatty Amine Ethoxylates	
UNITOP TA	Tallow Amine Ethoxylates
UNITOP OA	Oleyl Amine Ethoxylate
UNITOP EOST	Stearyl Amine Ethoxylates
UNITOP E	Coco Amine Ethoxylates

Fatty Oil Ethoxylates	
UNITOP FFT	Castor Oil Ethoxylates
UNITOP HCO	Hydrogenated Castor Oil Ethoxylates

Other Ethoxylates	
UNITOP W	Styrenated Phenol Ethoxylates
UNITOP BS	Bis Phenol Ethoxylates
UNITOP CP	Card Phenol Ethoxylates

Polysorbates	
UNITOP Polysorbates	Polysorbates



Overall Portfolio for Agro



Polymeric Surfactant		
UNITOP SC 4913	Acrylic Polymer	SC,FS,SE,CS,EW
UNITOP SC 4894	Nonionic proprietary surfactant blend	
UNITOP G5002L	EO-PO Co-Block polymer	
UN ITOP SC 3040	Blend of Acrylic based anionic & non-ionic dispersan	
UNITOP XD	EO-PO Co-Block polymer	
UNITOP PE 10500/10400		
UNITOP L-61/62		
UNITOP - XL		
UNITOP - XP-		
Green Solvents		
UNITOP Methyl Oleate	Methyl Oleate Ester	EC,EW,DC,SL,OD
UNISOL DM -10	N,N-dimethyldecanamide	
UNISOL DM -810	Mixture of N, N-dimethyloctanamide and N, Ndimethyldecanamide	
UNITOP NFM	N-Morphyline	

ROSSARI BIOTECH LIMITED

Delivering Value As One Of India's Largest Specialty Chemical Manufacturers

Overall Portfolio for Agro



PEG	
UNITOP PEG	Polyethylene glycol

Phosphated Ester	
UNITOP FL A	Ethoxylated Polyaryl Phenol Phosphate Ester
UNITOP FL	Tristyrylphenyl ether phosphate TEA salt
UNITOP FL K	Tristyrylphenyl ether phosphate potassium salt

Sulphosuccinates	
Dispertox- Series	Dioctyl Sulfosuccinates
	Laural Sulfosuccinates
	Laureth Sulfosuccinates

Sulfonates	
Dispertox WPM	Blend of naphthalene sulfonate
Dispertox D425	Alkyl naphthalene sulfonate formaldehyde condensate
Dispertox 800	Phenol sulfonate condensate
Dispertox 900	Phenol sulfonate condensate



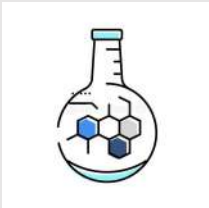

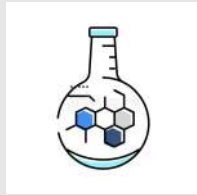







RENEWA (SOPHOROLIPID- BIOSURFACTANT)

WAY TOWARDS
THE GREENER
FUTURE



Surfactants Evolutions towards Biosurfactants

	Petrochemicals	Partially Bio-based	Bio-based	Biosurfactants
Technology				
Feedstock				
Examples	<ul style="list-style-type: none"> Linear Alkylbenzene sulfonate Synthetic alcohol ethoxylate 	<ul style="list-style-type: none"> Alkyl Ether sulfates Cocoamidopropyl Betaine 	<ul style="list-style-type: none"> Alkyl Polyglucoside (APG) Sodium Cocoyl glycinate 	<ul style="list-style-type: none"> Sophorolipid Rhamnolipid
Lack of Sustainability	<ul style="list-style-type: none"> Crude of feedstock CO2 footprint 	<ul style="list-style-type: none"> Mostly tropical oil based Often hazardous raw materials 	<ul style="list-style-type: none"> Mostly tropical oil based Often hazardous raw materials or process Performance gaps 	<ul style="list-style-type: none"> Fully biodegradable Natural fermentation process Skin friendly



VARIANTS OF RENEWA

RENEWA SL- A

- High acidic Sophorolipid (80%)
- Oil/water emulsifier
- High Detergency and foam
- Solubilizing agents

RENEWA SL-L

- High lactone Sophorolipid (80%)
- Water/oil emulsifier
- Low foam
- Foam stabilization as a co-surfactant
- Grease cutting agents
- Antimicrobial

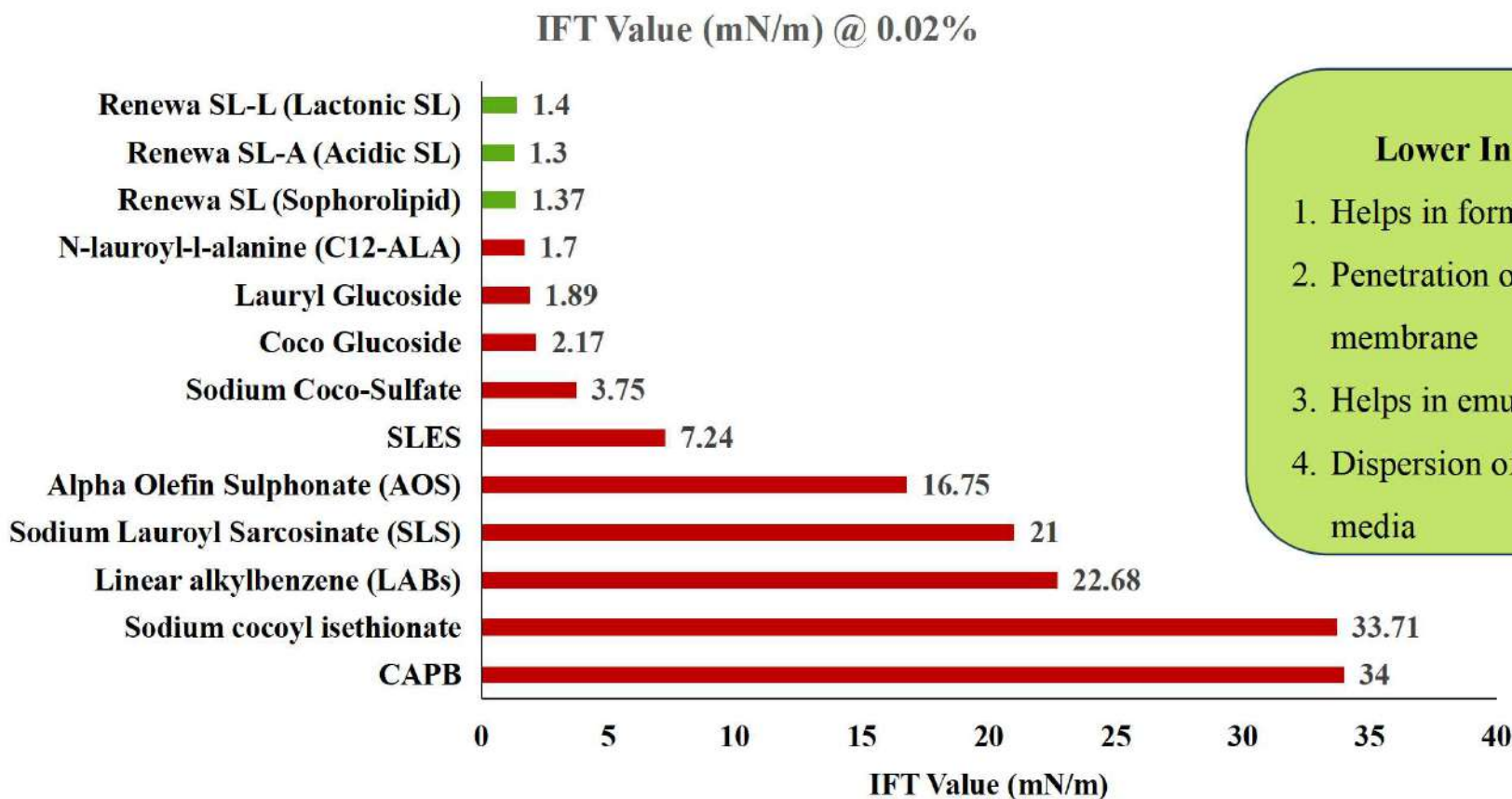


RENEWA SL

- Acid : Lactone (50:50)
- Detergents
- Emulsion agents (oil/water)
- Wetting and spreading agents
- Antimicrobial



INTERFACIAL TENSION

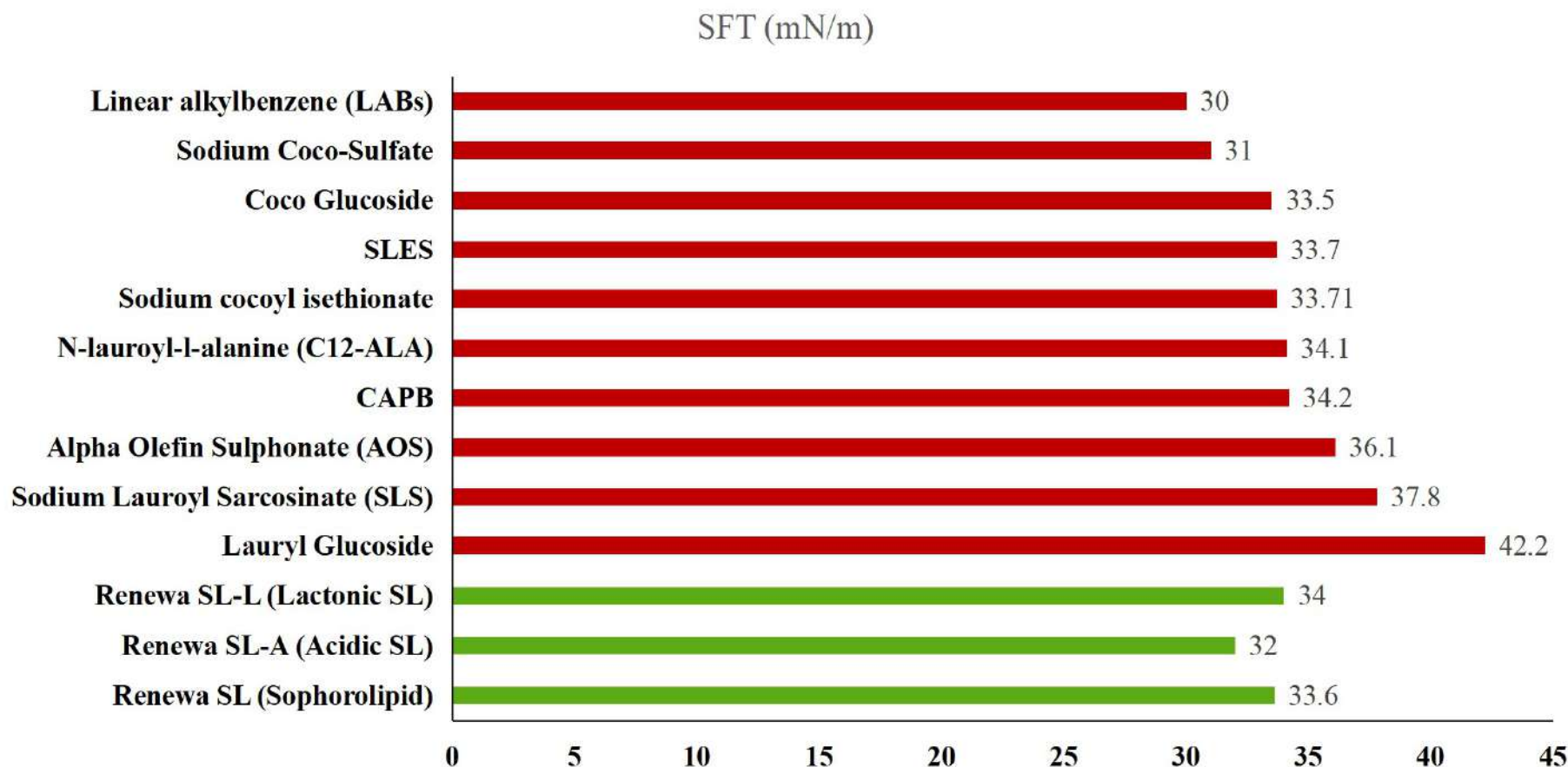


Lower Interfacial tensions helps

1. Helps in formation of nano-emulsions
2. Penetration of actives through biological membrane
3. Helps in emulsion and stability
4. Dispersion of solid molecule in liquid media

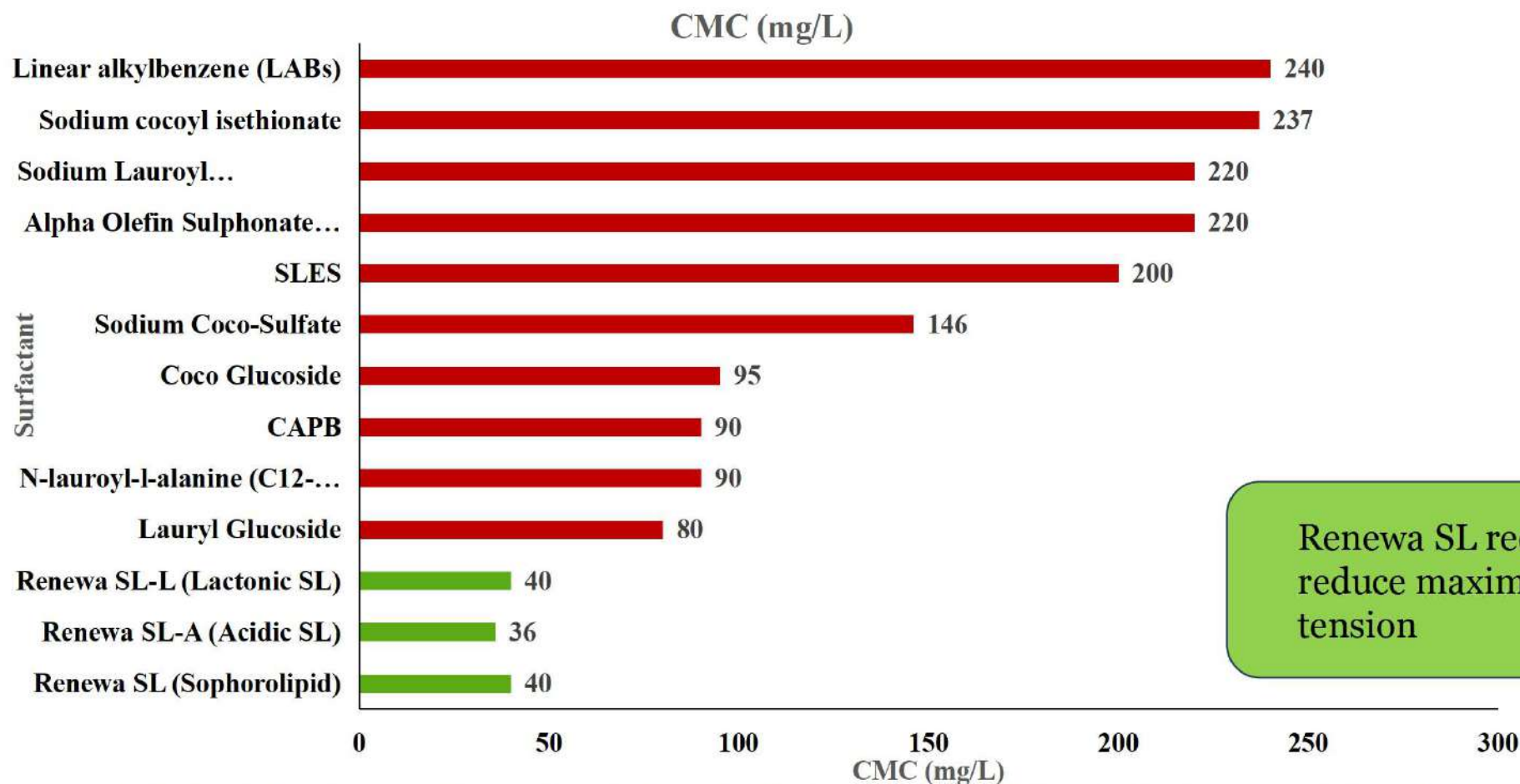
Interfacial Surface tension was determined at 25 °C using KYOWA Tensiometer (DY-300) using standard platinum ring as probe for measurement

SURFACE TENSION



Surface tension was determined at 25 °C using KYOWA Tensiometer (DY-300) using standard platinum ring as probe for measurement

CRITICAL MICELLE CONCENTRATION

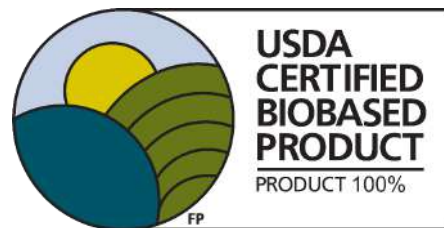


Renewa SL required lowest to reduce maximum surface tension

Method: Critical micelle concentration was determined using KYOWA Tensiometer (DY-300) with standard platinum plate (PL01) as probe for measurement

BENEFITS AT A GLANCE

- High sustainability profile
- 100% biodegradable and 100% natural (In=1.0)
- Low aquatic toxicity
- Green fermentation process
- 100% renewable raw materials
- Low Net carbon footprint
- Extremely mild to skin, eyes, and mucous membranes
- COSMOS / USDA/ HALAL compliant
- High rinseability
- Tailored foaming properties
- Easy to handle and Cold processable



PROPERTIES OF RENEWA SL



Test	Renewa SL	Renewa SL-A	Renewa SL-L
Physical Form	Yellow to Brown viscous liquid	Yellow to Brown viscous liquid	Yellow to Brown viscous liquid
Sophorolipid forms	Acidic: Lactone (50:50)	Acidic (>80%)	Lactone (>80%)
pH	6.5 ± 0.5	6.5 ± 0.5	6.5 ± 0.5
Sophorolipid Content	Min 50.00%	Min 45.00%	Min 50.00%
IFT (mN/m)	1.37	1.3	1.4
SFT (mN/m)	33.5	32	34
CMC (mg/L)	40	37	40
Detergency Scale	1.7	2	1
Foaming after 5 Mins (CM)	8	11	3
Emulsification Index (E24 (%))	67	54	75
HLB Value	10	11	9
Zein Value (Mg N/100ml)	0	0	0



Applications of RENEWA in Agriculture



- 1. Enhanced Bioavailability of Agrochemicals:** Renewa act as **natural adjuvants**. Improve spreading and wetting of pesticides, Increase penetration of foliar sprays, Reduce chemical dosage required
- 2. Seed Treatment and Bio-Priming:** Protect seeds from soil-borne pathogens, Improve seedling vigor, Enhance early root colonization by beneficial microbes
- 3. Induced Systemic Resistance (ISR):** Biosurfactants can **trigger plant defense pathways**.
- 4. Biopesticides and Biocontrol Agents-** Lactonic variant of Sophorolipid can **suppress plant pathogens** (fungi, bacteria, nematodes).
- 5. Plant Growth Promotion-** Biosurfactants enhance **nutrient availability and root development**.
- 6. Soil Health Improvement-** Improvement of soil structure and aeration



Green Solvents (Fatty acids & Morpholine-based)



Chemistry	Product Name	Product Description	Offerings for
Fatty acid amide	UNISOL DM-10	N,N-dimethyldecanamide	Tebuconazole 23.9% EC, Novaluron, Propanil, Triclopyr butyl ester, Clomazone etc
	UNISOL DM-810	Mixture of N, N-dimethyloctanamide and N, N-dimethyldecanamide,	
Formylmorpholine	UNITOP-NFM	N-Formylmorpholine	Co-solvent for EC, SL ,DC & SE Formulations



UNISOL DM-10 / UNISOL DM 810: High-Efficiency Green Solvent for Agrochemical Formulations

Versatile Applications: Suitable for use as a solvent in various agrochemical formulations, including Emulsifiable Concentrate (EC), Microemulsion (ME) & Emulsion in water (EW)..

Typical Properties

- Biodegradable: Readily biodegradable in standard testing (>80% in 28 days).
- Low Volatile Organic Compounds (VOC).
- Excellent solubility of Triazole fungicides, Propanil herbicide & other active agro ingredients.
- Crystal growth inhibition at lower temperature.
- Low Water Solubility.
- Higher Flash Point.
- Minimal Health Hazard.



Chemical Analysis & its Properties



- **Identification & Purity:**

1. Identity confirmed by GC-MS & IR.
2. Purity: >98% by GC.

- **Physico-Chemical Properties:**

1. **Appearance:** Clear, colourless to slightly yellowish liquid.
2. **Molecular Weight:** 199.34 g/mol
3. **Boiling Point:** 290-295°C
4. **Density:** 0.89 g/ml at 20°C



Solubility Data of Active Ingredients

No.	Ingredients
1	Trifloxystrobin
2	Tebuconazole
3	Difenoconazole
4	2, 4-D acid
5	Amitraz
6	Bifenthrin
7	Tebuconazole/Trifloxystrobin
8	Fluroxypyr
9	Cyhalofop-butyl
10	Fenbuconazole

Guide Formulations



Tebuconazole 25.9% (w/w) EC

No.	Name of Ingredients	Unitop Recipe (% w/w)
1	Tebuconazole Tech. 95% purity	27.26
2	Unitop: TEBU 40	10
3	UNISOL DM-10	62.74
	Total	100.00

Novaluron 10% (w/w) EC

No.	Name of Ingredients	Unitop Recipe (% w/w)
1	Novaluron Tech. 98% purity	10.20
2	Solvent NMP	10
3	UNISOL DM-10	25.00
4	Solvent C-9	44.80
5	Emulsifier- NOVA-A	5.0
6	Emulsifier- NOVA-B	5.0
	Total	100.00

A

B



A: Tebuconazole 25% EC with Solvesso 200

B: Tebuconazole 25% EC with UNISOL DM-10

ROSSARI BIOTECH LIMITED

Delivering Value As One Of India's Largest Specialty Chemical Manufacturers

Formulation Guide Recipes:



No.	Name of Ingredients	Propanil 36 + Triclopyr 7.2% (w/w)	Propanil 35% (w/w)	Lambda 15% + Emamectin 4% (w/w)
1	Active ingredients (w/w)	45.00	36.4	20
2	Emulsifier	12	12	14
3	Solvent Isophorone	23.0	26.6	--
4	UNISOL DM-10	25	25	15
5	NMP	--	--	15
6	C-9			Q.S.
	Total	100.00	100.00	100.00



UNITOP-NFM: N-Formyl Morpholine Co-Solvent for Agrochemical Formulations

- An effective co-solvent for EC, DC, SE and SL formulations.
- Enhance solubility of actives like Imidacloprid, Bifenthrin, Pendimethalin, Difenconazole etc.
- Improves low and high temperature stability of formulations.
- Overcome issues of crystallization, particularly in EC, DC and SL formulations.
- .Avoid crystallization upon dilution in water like Pendimethalin 50% EC.
- Alternative for conventional crystal growth inhibitor solvent i.e. N-Methylpyrrolidone (NMP)

Typical Properties

- Biodegradable: Certain degree of biodegradability.
- Low Volatile Organic Compounds (VOC).
- Excellent solubility of active Ingredients.
- Crystal growth inhibition at lower temperature.
- High Water & Polar solvent Solubility.
- Higher Flash Point.



Formulation Developed with Unitop NFM Solubility Data



Imidacloprid 17.8% SL

No.	Name of Ingredients	Function	Concentration
1	Imidacloprid	Active Ingredient	17.8% w/w
2	Unitox AB-91 (M)	Wetting agent	4.0 % w/w
3	UNITOP-NFM	Solvent	Q.S

Acetamiprid 20% SL

No.	Name of Ingredients	Function	Concentration
1	Acetamiprid	Active Ingredient	17.8% w/w
2	Unitop-W	Wetting agent	2.5 % w/w
3	UNITOP-NFM	Solvent	Q.S

UNITOP-NFM - Miscible with:

No.	Polar Solvents
1	N-butanol
2	Dimethyl Sulfoxide
3	Dimethyl Formamide
4	2-Ethyl Hexanol
5	N-hexanol
6	Propylene Glycol
7	Diethylene Glycol
8	Water

No.	Non-Polar Solvents
1	Solvesso 150
2	Solvesso 200
3	Solvent C-9
4	Xylene
5	Vegetable Oils
6	N,N-Dimethyl Decanamide



ROSSARI BIOTECH LIMITED

Delivering Value As One Of India's Largest Specialty Chemical Manufacturers

Formulation Developed with Unitop NFM



1. Pendimethalin 50% EC

No.	Name of Ingredients	Function	Concentration
1	Pendimethalin	Active Ingredient	17.8% w/w
2	Unitox AB-91 (M)	Wetting agent	4.0 % w/w
3	UNITOP-NFM	Co-Solvent	8% w/w
4	Xylene	Solvent	Q.S.

2. Novaluron 10% EC

No.	Name of Ingredients	Function	Concentration
1	Novaluron	Active Ingredient	10.2% w/w
2	UNISOL-DD-10	Solvent	25 % w/w
3	UNITOP-NFM	Co-solvent	10%
4	UNITOX-NOVA-A	Emulsifier	5.0%
5	UNITOX-NOVA-B	Emulsifier	5.0%
6	Solvesso-200/C-9	Solvent	Q.S.



Formulation Developed with Unitop NFM



Difenoconazole 25% DC

No.	Name of Ingredients	Function	Concentration
1	Difenoconazole	Active Ingredient	17.8% w/w
2	Unitox FFT & Unicabs	Emulsifiers	4.0 % w/w
3	UNITOP-NFM	Solvent	Q.S

Tolfenpyrad 15% + Bifenthrin 50% SE

No.	Name of Ingredients	Function	Concentration
1	Tolfenpyrad	Active Ingredient	10.2% w/w
2	Bifenthrin	Active Ingredient	25 % w/w
3	Propylene Glycol	Anti-freezing agent	5%
4	UNITOP-FL, 203, SC-3040	Emulsifier & Dispersants	7%
5	UNITOP-NFM	Co-Solvent	3.0%
6	Xanthan gum	Rheology Modifier	3.0%
7	Water	Carrier	Q.S.

ROSSARI BIOTECH LIMITED

Delivering Value As One Of India's Largest Specialty Chemical Manufacturers

Polymeric Surfactants Unitop SC 4913 and Unitop SC 4894



Recipes Developed

1. Azoxystobin 11% + Tebuconazole 18.30% SC
2. Azoxystrobin 18.20% + Difenconazole 11.40% SC
3. Tricyclazole 33.3% + Azoxystobin 16.7% SC
4. Azoxystobin 6.8% SC + Tricyclazole 20.4% SC
5. Novaluron 5.25 + Indoxacarb 4.5% SC
6. Fipronil 15% + Imidacloprid 5% SC
7. Thifluzamide 24% SC
8. Bifenthrin 8% + Clothianidin 20% SC
9. Imidacloprid 30.5 % SC
10. Tricyclazole 18% + Tebuconazole 14.40% SC



UNITOP SC-4913 Acrylate base effective Dispersant



- Recent advances in polymer technology.
- Excellent Suspensibility, flowability
- Ability to adhere well on fine particles of active ingredient and stabilized the dispersion.

Importance of Polymers in Agroformulation:

- Reduced or stop crystal growth.
- Effective at lower dosage.
- Also work as Grinding aid during process.
- Effective formulation stability in long storage and various temperature conditions.

Parameters	UNITOP SC-4913
Appearance	Reddish to brown liquid
Solubility in Water	Completely soluble
Chemical class	Polymethacrylate
Acid Number (mg/g)	< 12.0
Dry Substance	32-36
pH (5% aqueous)	3.0-4.0
Specific gravity (at 25°)	1.05-1.08



ROSSARI BIOTECH LIMITED

Delivering Value As One Of India's Largest Specialty Chemical Manufacturers

UNITOP SC-4894

Alcoxylate based effective Wetting agent

- Recent advances in ethoxylation technology.
- Excellent wetting properties
- NPE-free grinding aid and promote wetting of spray droplets during spraying application

Importance of Alkoxylates in AG:

- Excellent Wetting property.
- Higher HLB and water solubility.
- Also work as Grinding aid during process.
- Non-ionic NPE free Surfactant to provide better formulation stability of aqueous formulations.



Parameters	UNITOP SC-4894
Appearance	Colorless to hazy liquid
Solubility in Water	Completely soluble
Chemical class	Alkoxylated alcohol
Moisture Content (%)	< 15.0
Dry Substance (%)	80-85
pH (10% aqueous)	5.5-7.50
Specific gravity (at 25° C)	1.04-1.08



ROSSARI BIOTECH LIMITED

Delivering Value As One Of India's Largest Specialty Chemical Manufacturers

UNITOP SC-3040 Single Polymeric blend product for SC formulations

- Proven performance in high loading SC, EW & SE formulations.
- Good crystal growth inhibition properties.
- Recommend for solo as well mixed type of SC formulations.
- Improved Stability of Mixed & high loading Formulations
- Recommend with wetting agents like UNITOP SC-617, BIPS-2301 etc.
- Act as a processing aid during milling of the premix slurry.

Suspension Concentrate (SC) Formulations	Dispersant	Co-surfactant
Metribuzin 52.8% SC	5%	2% SC-617
Zinc Oxide 39.5% SC	4%	2% BIPS-2301
Imidacloprid 30.5% SC	3%	1% UNITOP-425
Azoxystrobin 4.8% + Chlorothalonil 40%	5%	--
Azoxystrobin 18.2% + Difenoconazole 11.4%	5%	ENS-500- 2%
Buprofezin 22% + Fipronil 3%	4%	--
Sulphur 40% SC	5%	--
Diafenthiuron 47.8% SC	4%	2% SC-617

Solution for Oil Dispersion (OD)



Product Name	Chemistry	Function	Dosage (%)	Formulations
UNITOP-MSO	Methyl ester of Soyabean Oil	Non-aqueous Carrier phase	45-55	Indoxacarb 15%, Indoxacarb 14.5% + Acetamiprid 7.7%
UNITOP-AOD	Inbuilt surfactant and adjuvant system	Single component with in-built surfactants)	85-90	Penoxsulam 2.67%, Penoxsulam 1.02%+ Cyhalofop butyl 5.10 %
UNITOP-175	Proprietary blend	Emulsifier & dispersing agent	6.00	Indoxacarb 15%, Indoxacarb 14.5% + Acetamiprid 7.7%
UNITOP-FLA	Polyarylphenyl ether phosphate	Emulsifier	1.0-1.5	Penoxsulam 2.67%, Penoxsulam 1.02%+ Cyhalofop butyl 5.10 %
UNICAL-65 BR	Calcium salt of alkylarylbenzene sulfonate	Emulsifier	6.00	Indoxacarb 15%, Indoxacarb 14.5% + Acetamiprid 7.7%
UNIGEL-50	Inorganic silicates	Rheology Modifier	2.00-3.00	All recommended formulations.
ROSS-SILICA- P(S)	Hydrophilic silica	Thickener or structuring agent	4.00	Penoxsulam 2.67%, Penoxsulam 1.02%+ Cyhalofop butyl 5.10 %
ROSS - SILICA - 508	Fumed silica	High surface thickening agent	1.0-2.0	As per application
UNITOP-MRO	Methylated Rapeseed oil	Non-aqueous Carrier phase	50-80	As per application
UNITOP-POLYSORBATE 85	Ethoxylated Sorbitan trioleate	Emulsifier	5.00-7.00	As per application
UNITOP-G-5002L	Polyalkylene oxide block copolymer	Emulsifier	4.0-6.0	As per application
UNITOP-TD-05	Alkoylated alcohol	Emulsifier	3.00-5.00	As per application



Solution for Suspoemulsion



AZOXYSTROBIN 28.2% + METALAXYL-M 10.9% (w/w) SE

Sr No.	Ingredient	Function	% (w/w)
1	Azoxystrobin Technical (98% purity)	Active Ingredient	28.78
2	Metalaxyl-M Technical (98% purity)	Active Ingredient	11.10
3	Propylene Glycol	Anti-freezing agent	3.36
4	*UNITOP DF-1572	Antifoam	0.65
5	* UNITOP SE-2810	Adjuvant system	18.88
6	* UNITOP SC-3040	Wetting cum Dispersing agent	2.36
7	*UNITOP-425	Dispersing agent	2.36
8	Xanthan/Rhodopol gum (2% pregel)	Rheology Miodifier	2.85
9	Water	Continuous Phase	29.66
	Total		100

AZOXYSTROBIN 7.10% + PROPICONAZOLE 12.9% (w/w) SE

Sr No.	Ingredient	Function	% (w/w)
1	Azoxystrobin Technical (98% purity)	Active Ingredient	7.25
2	Propiconazole Technical (95% purity)	Active Ingredient	13.58
3	Propylene Glycol	Anti-freezing agent	4.00
4	*UNITOP DF-1572	Antifoam	0.17
5	* UNITOP SE-1279	Adjuvant system	29.42
6	* UNITOP SC-3040	Wetting cum Dispersing agent	0.60
7	*UNITOP-425	Dispersing agent	0.60
8	Xanthan/Rhodopol gum (2% pregel)	Rheology Miodifier	4.00
9	DM Water	Continuous Phase	40.38
	Total		100

Offerings for Micronutrients & FCO Formulations



Class	Fomulation Name	Offerings
Micronutrients & Fertilizers	Zinc Oxide 39.5% SC	UNITOP SC-3040 & BIPS-2301
	Magnesium Oxide 34% SC	UNITOP SC-4894 & SC-4913
	Calcium Carbonate 34% SC	UNITOP SC-4894, SC-4913 & DISPERTOX BS (SPL)
	CaO 21%+ Zn 1.5% + B 0.1%	UNITOP SC-4894, SC-4913 & DISPERTOX BS (SPL)
	N, P, K, Boron, Zn combintions	Under developments
Biostimulants	Gibberllic acid 0.001% L+ Micronutrients	UNITOP HA-16
	Humic acid 8, 10 & 12% SL (Humic & Fulvic mixture)	UNITOP HA-16
	Seaweed 5% SL, Paclobutrazol 40% SC	Unitop FL and UNITOP-425
	Aminoacids, Vitamins, Protein hydrolized	Under developments



Defoamer - Unitop DF 1572



Silicone base Effective Antifoam for Aqueous base Formulations (SC, CS, ZC, SE, EW, ZE, ZW etc)

Importance of Antifoams in Agroformulations:

- Reduced foaming in production, F&P etc.
- Avoid interruption of Knapsack spraying nozzles.
- Non-ionic PDMS base for system to be defoamed.
- Effective foam control in long storage and various temperature condition



Parameters	UNITOP DF 1572
Appearance	Viscous white liquid
Chemical class	Silicone base
Solid Content (%)	35.00
pH (5% aqueous)	7.85
Specific gravity	1.02
Viscosity at 25°C	1300-1400 cP



Silicon based Superspreader



Parameters	Superwet-521	Superwet-208
Appearance	Pale yellow to clear liquid	Pale yellow to clear
Surface tension,mN/m (0.1% wt%)	20.32	21.00
Solubility in water	Dispersible	Dispersible
pH (5% aqueous)	6.90	6.75
Density	1.02	1.04
Viscosity	35	40



**Superwet - 521 -
1000 ppm**

**Superwet - 208 -
1000 ppm**



Dose: suggested 250-350ml/ha (0.05% to 0.1% of water use)

Crops: Fruit trees, Citrus trees, Vegetable crops, Wheat, Ornamental plants

Compatible with: Plant growth regulators, Herbicide, Insecticide, Fungicide, Fertilizers and micronutrients

ROSSARI BIOTECH LIMITED

Delivering Value As One Of India's Largest Specialty Chemical Manufacturers

Compatibility of Living species with co-formulant



Products	Function	<i>Trichoderma harzianum</i>	<i>Metarhizium anisopliae</i>	<i>Bacillus Subtilis</i>	<i>Pseudomonas fluorescens</i>
UNITOP SC-3040	<i>Dispersants</i> <i>Wetting for SC/WP/WG</i>	20,00%	20,00%	20,00%	20,00%
DISPERTOX-WG-800		20,00%	20,00%	20,00%	20,00%
DISPERTOX-WG-900		20,00%	20,00%	20,00%	20,00%
DISPERTOX-LS		5,00%	20,00%	5,00%	<0,02%
DISPERTOX-ANS-60		20,00%	20,00%	10,00%	20,00%
Disperox-ACZ		20,00%	10,00%	<0,02%	<0,02%
Disperox-ANZ-6040		<0,02%	<0,02%	20,00%	<0,02%
UNITOP-FL		20,00%	20,00%	20,00%	20,00%
Unitop-FFT-40		20,00%	20,00%	20,00%	20,00%
UNITOP-SOE-10		20,00%	20,00%	20,00%	20,00%
Unispred-805	<i>Tank-Mix Adjuvants</i>	20,00%	10,00%	10,00%	1,00%
GFS-35		<0,02%	5,00%	5,00%	5,00%
Glypho-550		1,00%	5,00%	10,00%	1,00%
Unitox-AB-91 (M)	Solubilizers	20,00%	20,00%	20,00%	20,00%
Polysorbate-80		20,00%	20,00%	20,00%	20,00%
Unitop-MSO	Carriers for Oil	20,00%	20,00%	20,00%	20,00%
Unitop-MRO	Dispersions (OD)	20,00%	20,00%	20,00%	20,00%



THANK YOU.

We look forward to
collaborate and cultivate
the future of sustainable
agriculture together.

**Visit our booth Number 76
& 77 for more detail**