



## AGRO SOLUTIONS

We keep an eye on you growth

## ADJUVANTS & ADDITIVES

Auxiliaries for agrochemical formulations

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## YOUR COMPETENT PARTNER FOR AGROCHEMICAL FORMULATIONS

LEVACO Chemicals manufactures a wide range of additives and auxiliaries for agrochemical formulations. We have an experienced team with in-depth knowledge in the development, production and application of these products in various agrochemical formulation types.

At the Agro Solutions department of **LEVACO**; we focus on delivering products of high quality based on sustainability and innovation. Our portfolio includes dispersants, emulsifiers, wetting agents and defoamers manufactured at our on-site plant in the Chempark Leverkusen, Germany.

Working closely with our customers, who often require tailor-made solutions, is our key to building up relationships based on expertise and reliance. Under the trade names of **LUCRAMUL®**, **LUCRAFOAM®**, and **LUCROP®** we offer solutions for our customers in the agro business – worldwide.

With our branch office in Hong Kong, we also bring our know-how and experience as a high-quality chemical specialist directly to our customers in Asian countries.

LEVACO holds the following certificates:



# SUSPENSION CONCENTRATES (SC)

## DISPERSING AGENTS

Tradename	Chemistry	Property	EPA
LUCRAMUL® PS 16	TSP † ethoxylate	Nonionic dispersant	✓
LUCRAMUL® PS 29	TSP † ethoxylate	Nonionic dispersant	✓
LUCRAMUL® PS 54	TSP † ethoxylate	Nonionic dispersant	✓
LUCRAMUL® SPS 16	TSP † ethoxylate ether sulfate ammonium salt	Anionic dispersant	✓
LUCRAMUL® SPS 29	TSP † ethoxylate ether sulfate ammonium salt	Anionic dispersant	✓
LUCRAMUL® PPS K 16	TSP † ethoxylate phosphate potassium salt	Anionic dispersant	✓
LUCRAMUL® PPS A 16	TSP † ethoxylate phosphate triethanolamine salt	Anionic dispersant	✓
LUCRAMUL® PPS A 16/60	TSP† ethoxylate phosphate triethanolamine salt	Anionic dispersant	✓
LUCRAMUL® CHS	Alkyl ethoxylate, phosphate ester	Anionic dispersant	*
LUCRAMUL® GCP 01	Graft copolymer	Nonionic dispersant	✓
LUCRAMUL® GCP 02 A	Graft copolymer	Anionic dispersant	*
LUCRAMUL® GCP 04	Graft copolymer	Anionic dispersant	*
LUCRAMUL® AP	Phosponic acid ester	Anionic dispersant	*
LUCRAMUL® AG 201	TSP † alkoxyate	Nonionic dispersant	✓
LUCRAMUL® AG 202	TSP † alkoxyate	Nonionic dispersant	*
LUCRAMUL® AG 203	TSP † alkoxyate	Nonionic dispersant	*
LUCRAMUL® AG 411	Alkyl alkoxyate	Nonionic dispersant	*
LUCRAMUL® AG 433	Alkyl alkoxyate	Nonionic dispersant	✓
LUCRACHEM® EPC 07	EO/PO blockcopolymer	Nonionic dispersant	✓

† TSP = Tristyrylphenol

\* EPA can be submitted on request

## ADJUVANTS

Tradename	Chemistry	Property	EPA
LUCRAMUL® DWS	Surfactant blend	Matched pair dispersing and wetting agent	*
LUCRAMUL® AG 483	Surfactant blend	Matched pair co-dispersing and wetting agent	✓
LUCRAMUL® AG 497	Surfactant blend	Co-dispersant blend	*
LUCRAMUL® AG 499	Surfactant blend	Matched pair dispersing and wetting agent	*
LUCRACHEM® VIS 6	Magnesium aluminium silicate	Rheology modifier	*
LUCRAMUL® EXG	Natural polymer based	Rheology modifier	*

\* EPA can be submitted on request

## DEFOAMERS

Tradename	Chemistry	Property	EPA
LUCRAFOAM® S 01	Silicone containing	Low silicone content	*
LUCRAFOAM® S 06	Silicone containing	High silicone content	*
LUCRAFOAM® PDT	Mineral oil containing	Silicone free	*

\* EPA can be submitted on request

# EMULSIFIABLE CONCENTRATES (EC)

## EMULSIFIERS

Tradename	Chemistry	Property	EPA
LUCRAMUL® L 10	Alkyl ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® C 13/8	Branched alkyl ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® PS 16	TSP † ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® SPS 16	TSP † ethoxylate ether sulfate ammonium salt	Anionic emulsifier	✓
LUCRAMUL® CO 30	Castor oil ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® CO 35 A	Castor oil ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® CO 40	Castor oil ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® SMO 20	Sorbitan monooleate ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® SML 20	Sorbitan monolaurate ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® STO 20 W	Sorbitan trioleate ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® SO 21	Soybean oil ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® DBA B	Calcium dodecyl benzene sulfonate in <i>n</i> -butanol	Anionic emulsifier	✓
LUCRAMUL® DBIB	Calcium dodecyl benzene sulfonate in <i>i</i> -butanol	Anionic emulsifier	✓
LUCRAMUL® DBIB-I	Branched calcium dodecyl benzene sulfonate in <i>i</i> -butanol	Anionic emulsifier	✓
LUCRAMUL® DBO	Branched calcium dodecyl benzene sulfonate in octanol	Anionic emulsifier	✓
LUCRAMUL® DBEH 57%	Calcium dodecyl benzene sulfonate in 2-ethylhexanol	Anionic emulsifier	✓
LUCRAMUL® ECCO 1	Anionic/nonionic emulsifier blend	Matched pair - low HLB	*
LUCRAMUL® ECCO 2	Anionic/nonionic emulsifier blend	Matched pair - high HLB	*
LUCRAMUL® ECCO 4	Anionic/nonionic emulsifier blend	Matched pair - high HLB	*
LUCRAMUL® ECCO 5	Anionic/nonionic emulsifier blend	Matched pair - low HLB	*
LUCRAMUL® ECCO 6	Anionic/nonionic emulsifier blend	Matched pair - high HLB	*
LUCRAMUL® ECCO 7	Anionic/nonionic emulsifier blend	Matched pair - high HLB	*
LUCRAMUL® ECCO M	Anionic/nonionic emulsifier blend	Matched pair - high HLB	*
LUCRAMUL® ECCO P	Anionic/nonionic emulsifier blend	Matched pair - high HLB	*
LUCRAMUL® ECCO T	Anionic/nonionic emulsifier blend	Matched pair - high HLB	*

† TSP = Tristyrylphenol

\* EPA can be submitted on request

## ADJUVANTS

Tradename	Chemistry	Property	EPA
LUCRAMUL® AG 411	Alkyl alkoxyate	Humectant /additive for polar solvents	✓
LUCRAMUL® AG 433	Alkyl alkoxyate	Humectant/additive for polar solvents	✓



## SOLUBLE LIQUID (SL)

### BUILT IN SOLUTION

Tradename	Chemistry	Property	EPA
LUCRAMUL® AG 4802	Aqueous surfactant blend (TFA free)	Compatible with glyphosate/glufosinate	*
LUCRAMUL® AG 4820	Aqueous surfactant blend (TFA free)	Compatible with glyphosate/glufosinate	*
LUCRAMUL® LOFO 1	Low foaming aqueous surfactant blend (TFA free)	Compatible with glyphosate/glufosinate	*
LUCRAMUL® LOFO 2	Low foaming aqueous surfactant blend (TFA free)	Compatible with glyphosate/glufosinate	*

\* EPA can be submitted on request

### WETTING AGENTS

Tradename	Chemistry	Property	EPA
LUCRAMUL® AMO X	Decylamine oxide	Compatible with glyphosate/glufosinate	*
LUCRAMUL® AMO T	Lauramine oxide	Compatible with glyphosate/glufosinate	*
LUCRAMUL® APG 225	Alkyl polyglucoside	Compatible with glyphosate/glufosinate	*
LUCRAMUL® SLES 370	Sodium lauryl ether sulfate	Anionic wetting agent	*
LUCRAMUL® KFA 05	Coco amine ethoxylate	Cationic wetting agent	*

\* EPA can be submitted on request

## SUSPO-EMULSION (SE)

### DISPERSING AGENTS

Tradename	Chemistry	Property	EPA
LUCRAMUL® PS 16	TSP † ethoxylate	Nonionic dispersant	✓
LUCRAMUL® PPS K 16	TSP † ethoxylate phosphate potassium salt	Anionic dispersant	✓
LUCRAMUL® GCP 01	Graft copolymer	Nonionic dispersant	✓
LUCRAMUL® GCP 02 A	Graft copolymer	Anionic dispersant	*
LUCRAMUL® GCP 04	Graft copolymer	Anionic dispersant	*
LUCRAMUL® AG 433	Alkyl alkoxylate	Nonionic dispersant	✓
LUCRAMUL® AG 483	Surfactant blend	Matched pair co-dispersing and wetting agent	✓
LUCRAMUL® AG 990	Surfactant blend	Matched pair dispersing and emulsifying agent	*

† TSP = Tristyrylphenol

\* EPA can be submitted on request

# OIL DISPERSION (OD)

## EMULSIFIERS

Tradename	Chemistry	Property	EPA
LUCRAMUL® L 03	Alkyl ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® L 05	Alkyl ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® 1819 DB	Oleyl ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® CO 08	Castor oil ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® CO 30	Castor oil ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® SO 21	Soy oil ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® SMO 20	Sorbitan monooleate ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® SML 20	Sorbitan monolaurate ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® STO 20	Sorbitan trioleate ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® ADD 01	Modified vegetable oil ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® ADD 02	Modified vegetable oil ethoxylate	Nonionic emulsifier	✓
LUCRAMUL® OSE 04	Emulsifier blend	Matched pair	*
LUCRAMUL® DBA B	Calcium dodecyl benzene sulfonate in <i>n</i> -butanol	Anionic emulsifier	✓

\* EPA can be submitted on request

## ADJUVANTS

Tradename	Chemistry	Property	EPA
LUCRAMUL® AG 101	Alkyl alkoxyolate	Ultra-fast spreading, penetrating	✓
LUCRAMUL® AG 103	Alkyl alkoxyolate	Spreading, penetrating	✓
LUCRAMUL® AG 131	Alkyl alkoxyolate	Spreading, penetrating	✓
LUCRAMUL® SIL 04	Precipitated amorphous silica	Anti-settling agent	*

\* EPA can be submitted on request

# SPECIALITIES

## WETTING AGENTS

Tradename	Chemistry	Property	EPA
LUCRAMUL® AG 101	Alkyl alkoxyolate	Ultra-fast spreading, penetrating	✓
LUCRAMUL® AG 103	Alkyl alkoxyolate	Spreading, penetrating	✓
LUCRAMUL® AG 104	Alkyl alkoxyolate	Spreading, penetrating	✓
LUCRAMUL® AG 131 90%	Alkyl alkoxyolate	Spreading, penetrating	✓
LUCRAMUL® AG 108	Alkyl alkoxyolate	Spreading, penetrating	✓

# WETTABLE POWDERS (WP) & WATER DISPERSIBLE GRANULES (WDG/WG)

## DISPERSING AGENTS

Tradename	Chemistry	Property	EPA
LUCRAMUL® DAC 211	Condensed ketone sulfonate	Solid dispersing agent	*
LUCRAMUL® DAC 220	Condensed naphthalene sulfonate	Solid dispersing agent	✓
LUCRAMUL® DAC 230	Condensed naphthalene sulfonate	Solid dispersing agent	✓
LUCRAMUL® DAC 240	Alkyl naphthalene sulfonate	Solid dispersing agent	*

\* EPA can be submitted on request

## ADJUVANTS

Tradename	Chemistry	Property	EPA
LUCRAFOAM® DDF	Sodium alkylate	Solid defoamer	✓
LUCRAMUL® SOS 46	Sodium olefin sulfonate	Wetting agent	*

\* EPA can be submitted on request

# TANK MIX ADJUVANTS

## ADJUVANTS

Tradename	Chemistry	Property	EPA
LUCROP® BAN	Complex blend	Wetting/spreading, sticking	*
LUCROP® ADA	Blend of renewable polymer and mineral oil	Drift control, sticking	*
LUCROP® HPP	Complex blend	Wetting/spreading, penetration; UAV ‡ approved	*
LUCROP® SURF 1	Fatty alcohol alkoxyate	Wetting/spreading, penetration	*
LUCROP® SW	Silicone based	Super-wetting/spreading, penetration	*
LUCROP® SWEP	Complex blend, silicone containing	Super-wetting/spreading, penetration	*
LUCROP® SWEP L	Complex blend, silicone containing	Wetting/spreading, penetration	*
LUCROP® SPREAD 24	Silicone based	Super-wetting/spreading, penetration	*
LUCROP® ROIL	Complex blend, fatty ester derivative based	Wetting/spreading, enhanced penetration	*
LUCROP® SRF	Complex blend	Wetting/spreading, sticking, rainfastness	*

\* EPA can be submitted on request

‡ UAV = unmanned aerial vehicle



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