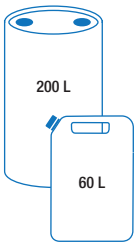
DRENCHER AND WATER TANK FUNGICIDES

COMMERCIAL NAME	CODE	% ACTIVE MATERIALS	DOSE USE % V/V	RECOMMENDATIONS
 IMACIDE® 7.5 LS	90	Imazalil 7.5 % (sulphate) w/v	0.5 - 0.6 %	A Soluble Liquid Formula (SL) ideal for the drencher, with very little stirring the Imazalil completely solubilizes. When an Emulsifiable Concentrate (EC) formula is used in such applications, active material may be lost due to emulsion breakdown.
 CITROCIL®	94	Imazalil 7.5 % (sulphate) w/v + Orthophenylphenol 10 % w/v	0.5 - 0.6 %	An ideal combination due to the broad spectrum of fungicidal activity and the sporulation control that Imazalil provides.
 PHILABUSTER 400 SC	1007	Pyrimethanil 20 % w/v + Imazalil 20 % w/v	0.2 - 0.25 %	Ideal combination for sporulation control and control of Imazalil resistant strains. Particularly suitable for cold storage and long distance shipments.
 CITROPYR®	1015	Pyrimethanil 19.2 % w/v + Clove Oil 18.5 % w/v	0.25 %	Very good control of ***Penicillium***. Excellent tool to combat strains resistant to Imazalil and other fungicides.
 CITROPYR® 40 SC	1022	Pyrimethanil 40 % w/v		
 CITRO-AL 80% WG	MP23	Fosetyl-Al 80 % w/w	0.3 - 0.4 % w/v	For use in the control of brown rot fungal decay (***Phytophtora spp***).
 ORTOCIL®	87	Orthophenylphenol 10 % w/v	1 - 2 %	Broad spectrum fungicide, very effective against wound pathogens and recommended for the control of ***Rhizopus spp*** and ***Geotrichum spp***.
 TIABENDAZOL 60	MP62	Thiabendazole 60 % w/v	- **Citrus Fruit:** 0.2 - 0.3 % - **Pome Fruit:** 0.15 - 0.2 % - **Papaya:** 0.075 % - **Banana:** 0.035 - 0.075 %	Broad spectrum fungicide for postharvest use on various fruits.
 FUNG-CID ORTO FOAM	82	Orthophenylphenol 13 % (sodium salt) w/v	0.12 - 0.15 L/Tm	For foam tank use in the hygienic washing of citrus fruit.
FUNG-CID GRAS SP	60	Food additive (E-202) 30% w/v[1]	1.5 - 7 %	E-202 formulation suitable for the control of citrus decay. Especially for addition to the treatment solutions when ***Geotrichum spp*** field inoculum is high.

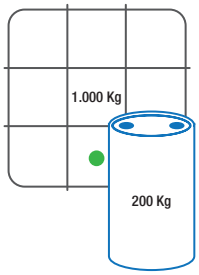
WAX FUNGICIDES

COMMERCIAL NAME	CODE	% ACTIVE MATERIALS	DOSE USE % V/V	RECOMMENDATIONS
 CITROSOL 500	75	Imazalil 50 % w/v	0.4 %	Formula used to incorporate Imazalil into the waxes as a fungicidal recall treatment.
 FECUNDAL 500 EC	MP198	Imazalil 50 % w/v		
 ORTOSOL 6500	64	Orthophenylphenol 28.6 % (sodium salt) w/v	1.25 %	Formulated to incorporate orthophenylphenol into the waxes as a fungicidal recall treatment. It prevents the formation of ***Cladosporium spp***, mold and other pathogens in the calyx during long distance shipments.

[1] Food additive specifically authorized by the EU for fruit.

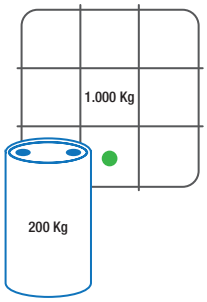
EU WAXES CITRUS

POLYETHYLENE WAXES



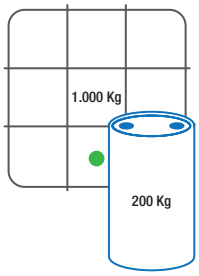
COMMERCIAL NAME	CODE	INGREDIENTS [2]	CHARACTERISTICS
CITROSOL® A V UE	613	Polyethylene + Shellac	De-greening wax, allows color development after application.
CITROSOL® A UE	653		Market wax, good shine and excellent control of weight loss.
CITROSOL® A LONG STORAGE UE	652		Very suitable for long storage periods and long shipments.
CITROSOL® A EXTRA UE	642		Superior shine as well as durability.

LOW DRYING TEMPERATURE WAXES



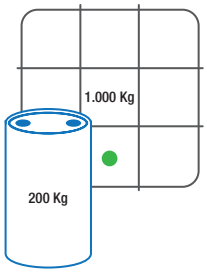
COMMERCIAL NAME	CODE	INGREDIENTS [2]	CHARACTERISTICS
CITROSOL® A V S UE	665	Polyethylene + Shellac	Low drying temperature de-greening wax.
CITROSOL® A S UE	666		Low drying temperature wax affording energy savings of 60-70 %; good shine.
CITROSOL® A S EXTRA UE	668		Low drying temperature wax especially for the waxing of citrus fruits marketed with leaves; superior shine.
CITROSOL SUNSEAL® UE	676		Low drying temperature wax (60-70 % energy saving) ideal for long duration maritime shipments. Good weight loss control, good shine and resistant to film breakage caused by condensation.
CITROSOL SUNSEAL® EXTRA UE	678		Low drying temperature wax (60-70 % energy saving) perfect for long duration maritime shipments. With enhanced shine and weight loss control over **CITROSOL SUNSEAL® UE**.

CARNAUBA WAXES



COMMERCIAL NAME	CODE	INGREDIENTS [2]	CHARACTERISTICS
CITROSOL® AK V UE	685	Carnauba + Shellac	Carnauba de-greening wax, allows color development after application.
CITROSOL® AK UE	686		Carnauba market wax, good shine.
CITROSOL® AK EXTRA UE	680		Carnauba market wax, superior shine.
CITROSOL® AK CAMARA UE	684		This Carnauba wax is ideal for longer term cold storage. Its excellent control over weight loss (45-50 %) is important in the mitigation of chilling injury and rind breakdown generally appears on the rind of citrus fruit both during and after cold storage and transport.

SPECIAL WAXES



COMMERCIAL NAME	CODE	INGREDIENTS [2]	CHARACTERISTICS
CITROSOL® A LIMES UE	644	Polyethylene + Shellac	Ideal to maintain the shine on and freshness of limes during prolonged refrigerated transport.
CITROSOL® A SPRAY UE	662	Food additives	Wax for spray application to enhance shine.

[2] Food additives specifically authorized by the EU for fruit in question.

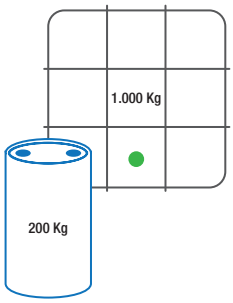
CI-CONTROL COATINGS[3]

New range of citrus fruit coatings specially formulated to offer enhanced performance that reduces, or even eliminates, spotting caused by chilling injury from prolonged refrigerated storage or shipments.
The coatings that we formulate with CI-CONTROL features are indicated in this Guide with the symbol: CIC

676CIC CITROSOL SUNSEAL CI-CONTROL UE
678CIC CITROSOL SUNSEAL ESPECIAL CI-CONTROL UE
652CIC CITROSOL A CAMARA CI-CONTROL UE
680CIC CITROSOL AK EXTRA UE CI-CONTROL UE

684CIC CITROSOL AK CAMARA CI-CONTROL UE
686CIC CITROSOL AK UE CI-CONTROL UE
710CIC PLANTSEAL CI-CONTROL
716CIC PLANTSEAL SHINE FREE CI-CONTROL

WAXES EU WITH FUNGICIDE TREATMENT



COMMERCIAL NAME	CODE [5]	% ACTIVE MATERIALS	DOSE USE % V/V	RECOMMENDATIONS
CITROSOL® A IMAD 2	**Z 2**	**Waxes + Imazalil 0.2 % w/v**	**1 L / Tm**	The emulsification of Imazalil in the waxes through our production process guarantees that there are no variations in the concentration of Imazalil due to breakage of the emulsion. Breakage of the emulsion can cause accumulations of Imazalil in the bottom of the wax drum, causing a risk of exceeding the corresponding MRLs, and a decrease in the concentration of Imazalil within the rest of the wax which consequently decreases the efficacy of the wax in decay control.
CITROSOL® A IMAD 3	**Z 3**	**Waxes + Imazalil 0.3 % w/v**	**1 L / Tm**	
CITROSOL® A IMAD 2 TBZ 5	**Z 2 TBZ 5**	**Waxes + Imazalil 0.2 % w/v + Thiabendazole 0.5 % w/v**	**1 L / Tm**	
CITROSOL® A TBZ 5	**TBZ 5**	**Waxes + Thiabendazole 0.5 % w/v**	**1 L / Tm**	The emulsifiaction of TBZ in the waxes through our production process guarantee that there are no variations in the concentration of the fungicide. The waxes with TBZ reduce the incidence of chilling injury.
CITROSOL® A OPP	**0**	**Waxes + Orthophenylphenol 0.25 % w/v**	**1 L / Tm**	The emulsifiaction of OPP in the waxes through our production process guarantee that there are no variations in the concentration of the fungicide. The waxes with OPP prevent the formation of ***Cladosporium spp***, mold and other pathogens in the calyx during long distance shipments.

BIOCIDES / DISINFECTANTS

COMMERCIAL NAME	CODE	% ACTIVE MATERIALS	DOSE USE % V/V	RECOMMENDATIONS
 **QUACIDE PQ60 EC**	**39**	**Poly (hexamethylene-biguanide) 1 % w/w + N-(3-aminopropyl-N-dodecylpropane-1.3-diamine 1.5 % w/w**	**Manual washing / spraying:** 25 % in water. **Air disinfection with X3 Nebulizer:** 50 % in water.	Excellent broad spectrum disinfectant for disinfection of environments and surfaces, airborne by nebulization or manual washing and/or spraying.
 **FUMISPORE®**	**MP261**	**Hydroxyacetic acid (glycolic acid) 4 % w/w**	**Canister 50 g:** 50 -70 m^3 **Canister 400 g:** 350 - 500 m^3 **Canister 800 g:** 800 - 1000 m^3	Fumigant canister for environmental and surface airborne disinfection in packinghouses. Dry disinfection with a high biocidal efficacy.
 **DECTOCIDE CDB**	**31**	**N-(3-aminopropyl)-N-dodecylpropane-1.3-diamine1.20 % w/w**	**1 - 3 %**	Reduced foam alkaline detergent disinfectant especially for use in floor cleaning machines and field boxes and bins washing machines.
 **MIDASAN 334 MF**	**28**	**Propane-1-ol 34.30 % Isopropane 13.65 % Excipients q.s.p 100.00 %**	**Ready to use without dilution**	Fast-drying hydroalcoholic disinfectant, designed for direct application on packinghouse surfaces and equipment by spraying or immension.

[3] Please ask us for more information on other CITROSOL coatings with Ci-Control features.

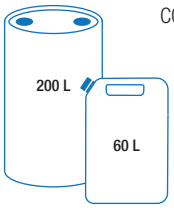
[5] The complete code for these waxes is the wax code plus the one established in the table. The waxes that are formulated with fungicides are: CITROSOL A, CITROSOL SUNSEAL, CITROSOL AK and CITROSOL A LIMES UE.

PROCESSING AIDS[6]

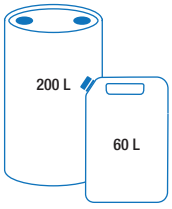
	COMMERCIAL NAME	CODE	% ACTIVE MATERIALS	DOSE USE % V/V	RECOMMENDATIONS
	CITROCIDE® PC [7]	49	Peracetic acid 5 % w/w + Oxygenated water 23 % w/w	0.6 %	Disinfectants for safe use on the hygienic washing of fruits and vegetables. They avoid microbiological cross-contamination in the washers and maintain the process water microbiologically clean.
	CITROCIDE® PLUS [8]	48	Peracetic acid 15 % w/w + Oxygenated water 23 % w/w	0.2 - 0.4 %	
	CITROBOOST	70	Anionic Tensioactives 27 % w/w	0.5 - 0.8 %	Processing aid, that maximizes the homogeneous washing of the entire surface of fruits and vegetables upon arrival to the packinghouse.

DETERGENTS

FOR CLEANING FRUIT

	COMMERCIAL NAME	CODE	% ACTIVE MATERIALS	DOSE USE % V/V	RECOMMENDATIONS
	ESSASOL	96	Biodegradable detergent 4 % w/v	0.6 - 0.8 %	Detergent for postharvest cleaning of citrus fruit.
	DETERSOL	99	Biodegradable detergent 4 % w/v	0.6 - 0.8 %	Detergent for posthaverst cleaning of citrus fruit.
	NEGROL	68	Detergent 10 % w/v	0.5 - 1 %	Especially suitable for cleaning fruit affected by sooty mold.

FOR CLEANING EQUIPMENT AND PREMISES

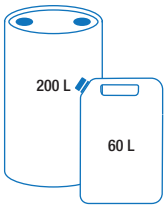
	COMMERCIAL NAME	CODE	% ACTIVE MATERIALS	DOSE USE % V/V	RECOMMENDATIONS
	BETELENE NS 160	34	Nitric acid ≥ 25 % - < 50 % w/w	1 - 2 %	Higly acidic low foam detergent for the elimination of fungicide residues from surfaces and field boxes and bins in the horticulture industry.
	ESSASOL AC	33	Non-ionic detergents 3.5 % w/v	0.5 - 1.5 %	Especial acid detergent for cleaning field boxes and bins. Eliminates incrustations and facilitates the disinfecting action of various biocides.
	FNG CLEANER	95	Phosphoric acid < 70 % w/v Non-ionic surfactants < 5 % w/v	1 %	Highly acidic, low-foam detergent, ideal for removal of fungicide residues from surfaces and field crates in the fruit and vegetable industry. Highly effective, low corrosion Formula.

[6] The evaluation of Safe Use for processing aids is mandatory according to national and EU legislation to establish the innocuousness of the use of a chemical in food processing.

[7] Evaluation of Safe Use Reference AESAN-2013-002

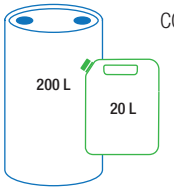
[8] Evaluation of Safe Use Reference AECOSAN-2016-00

PHYTO-PROTECTORS



COMMERCIAL NAME	CODE	% ACTIVE MATERIALS	DOSE USE % V/V	RECOMMENDATIONS
CITROPROTECT	**687**	**Food Additives 19 % w/v**	**2 % Drencher**	Protects the fruit by controlling, or reducing, the appearance of phytotoxicities, and physiological disorders, in postharvest citrus fruit, manifest in the form of spotting.

BIOSTIMULANTS



COMMERCIAL NAME	CODE	% ACTIVE MATERIALS	DOSE USE % V/V	RECOMMENDATIONS
FORTISOL® Ca	**62**	**Water-soluble calcium salts (CaO), sodium (Na_2O) and phosphorus (P_2O_5) 14.44 % w/w in total**	**0.8 - 2 %**	Bioestimulant for postharvest use in citrus fruit, improves resistance to postharvest physiological disorders such as rind disorders and chilling injury.
TOPPER	**MP257**	**Triclopyr at 10% (w/w)**	**2 tablets of TOPPER in 100 L water.**	Phyto regulator that prevents senescence, blackening and the subsequent drop of the calyx, in oranges, lemons and tangerines that especially takes place when the fruit has been degreened.

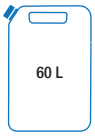
BIOCARE by CITROSOL

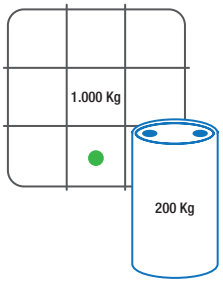
The first complete range of products for citrus postharvest treatment EU certified for organic production.

CAAE INSUMO PARA LA PRODUCCIÓN ECOLÓGICA

BIO CHAIN FOR ECO PRODUCTION[9]

Our post-harvest treatment products with EU certification for organic produce.





COMMERCIAL NAME	CODE	% ACTIVE MATERIALS	DOSE USE % V/V	RECOMMENDATIONS
CITROCIDE® PC [7]	**49**	**Peracetic acid 5 % w/w + Oxygenated water 23 % w/w**	**0.6 %**	Disinfectants for safe use on the hygienic washing of fruits and vegetables. They avoid microbiological cross-contamination in the washers and maintain the process water microbiologically clean. Authorized for use in organic farming.
CITROCIDE® PLUS [8]	**48**	**Peracetic acid 15 % w/w + Oxygenated water 23 % w/w**	**0.2 - 0.4 %**	
FUNG-CID BIO BNa	**69**	**Sodium bicarbonate 8,5% w/v**	**6 - 18 %**	Fungistatic for decay control in citrus fruit. Its application in hot water increases efficiency. Authorized for use in organic farming.
PLANTSEAL® [10]	**710**	**Carnauba**	**1 L / Tm**	Plant coatings for the postharvest treatment of citrus, apples and tropical fruits. Excellent control over weight loss, delaying the aging of fruit by reducing transpiration and respiration. Both give the fruit a natural sheen and in the case of PlantSeal Shine-Free the gloss is imperceptible, similar to an UN-waxed fruit.
PLANTSEAL® [10] *Shine-Free*	**716**			
PLANTSEAL® [11] *Tropical Fruits*	**713**	**Carnauba**	**1 L / Tm**	Plant coatings for the postharvest treatment of mangos and avocados.

[7] Evaluation of Safe Use Reference AESAN-2013-002

[8] Evaluation of Safe Use Reference AECOSAN-2016-002

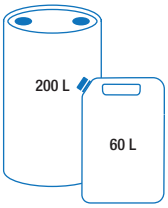
[9] CAAE Compliance Certificate number CE-005644-2019

[10] PLANTSEAL® and PLANTSEAL® *Shine-Free* coatings formulated with CI-Control performance are not certified as inputs for use in organic farming.

[11] PLANTSEAL® *Tropical Fruits* pending registration.

PRODUCTS THAT COMPLY WITH OTHER LEGISLATIONS

FUNGICIDES

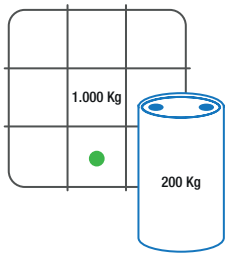
	COMMERCIAL NAME	CODE	% ACTIVE MATERIALS	DOSE USE % V/V	RECOMMENDATIONS
	CITROTEC 45 SC	MP238	Thiabendazole 45% w/v	**Citrus** Drencher: 0.25 % - 0.40 % Wax: 1 % - 1.2 % **Pome Fruit** Drencher: 0.25 % - 0.40 % **Plantain/Banana** Drencher or immersion: 0.05 % - 0.10 % **Avocado/Palta** Drencher or immersion: 0.30 % **Papaya** Drencher or immersion: 0.1 %	Broad spectrum fungicide to be used for various fruits post-harvest.
	CITROSOL® 7.5 LS	92	Imazalil 7.5% (sulphate) w/v	**0.5 - 0.6 %**	A Soluble Liquid Formula (SL) ideal for the drencher, with very little stirring the Imazalil completely solubilizes. When an Emulsifiable Concentrate (EC) formula is used in such applications, active material may be lost due to emulsion breakdown.
	FUNG CID ORTO	79	Orthophenylphenol 13 % w/v	**5 %**	Only to be used for dip tank treatments.
	ORTOSOL	1	Orthophenylphenol 20 % w/v	**0.5 - 1 %**	Broad spectrum fungicide, ideally suited to control wound phatogens, and recommended for control of ***Rhizopus spp*** and ***Geotrichum spp***.
	CITROXONIL 23 SC	1026	Fluidoxonil 23 % w/v	**Citrus:** 0.2 - 0.3 % **Cherries:** 0.2 % **Mangos:** 0.12 % **Pomegranate:** 0.2 - 0.3 % **Avocados:** 0.25 %* (*) Only shipping to the USA	Broad spectrum fungicide used post-harvest for various fruits: citrus against ***Penicillium*** and ***Diplodia spp***; mango against Anthracnose; pomegranate against ***Botritys spp*** and avocado against Anthracnose and stem decay.
	CITROSOL® PYR 360 SC	1027	Pyrimethanil 36 % w/v	**Drencher and tank:** 0.28 % **Mix with wax:** 0.84 %	Very good control over ***Penicillium***. Excellent tool to control strains resistant to Imazalil and other fungicides.

BIOCIDES

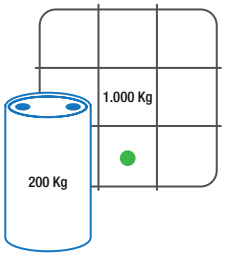
	COMMERCIAL NAME	CODE	% ACTIVE MATERIALS	DOSE USE % V/V	RECOMMENDATIONS
	GLOCUAT	40	Didecyldimethylammonium Chloride 25% w/v	**2 %**	Excellent disinfectant for installations, floors and walls.
	GLOCUAT PC	41	Benzalkonium Chloride 0.625 % w/v + Didecyldimethylammonium Chloride 0.625 % w/v	**Ready to use, apply undiluted via Air Disinfection with the X3 Nebulizer**	Excellent broad spectrum disinfectant for the disinfection of environments and surfaces; airborne by nebulization, manual washing or spraying.
	CITROGUANIDA LU	38	Poly(hexamethylene biguanide) 0.75 % w/v + N-(3-aminopropyl)-N-dodecylpropane-1.3-diamine 0.60 % w/v	**Ready to use, apply undiluted via Air Disinfection with the X3 Nebulizer**	Broad spectrum disinfectant biocide for the disinfection of environments and surfaces; airborne by nebulization, manual washing or spraying.

WAXES FOR CITRUS FRUIT[12]

WATER WAXES



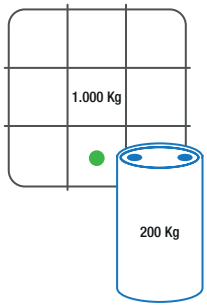
COMMERCIAL NAME	CODE	INGREDIENTS [12]	CHARACTERISTICS
CITROSOL® A V	522		Degreening wax, allows color development after application.
CITROSOL® A	512	Rosin + Polyethylene	Market wax, good shine and weight loss control.
CITROSOL® A EXTRA	513		Superior shine and shine durability.
CITROSOL® AK V	518		Carnauba vegetable wax for degreened fruit.
CITROSOL® AK	514	Rosin + Carnauba	High shine carnauba vegetable wax.
CITROSOL® AK 22	815		Carnauba vegetable wax with superior shine and shine durability.
CITROSOL® A FD	811	Rosin + Polyethylene + Morpholine	Low temperature drying wax.
CITROSOL® A FD EXTRA	817		Low temperature drying wax with superior shine.
CITROSOL® A LONG STORAGE	554	Rosin + Polyethylene + Shellac	Wax excellently suited to long periods of storage and extended refrigerated transport with a high shine and good control over weight loss.



SOLVENT WAXES

COMMERCIAL NAME	CODE	INGREDIENTS [12]	CHARACTERISTICS
CITROSOL® R	528		High shine wax for spray application.
CITROSOL® R EXTRA	532	Coumarona-indene solvent wax	High shine wax for spray application with superior finish.
CITROSOL® R SUPERIOR	529		High shine wax for spray application with exceptional finish .

WAXES FOR CITRUS FUNGICIDE TREATMENT[12]



COMMERCIAL NAME	CODE[13]	% ACTIVE MATERIALS	DOSE USE % V/V	RECOMMENDATIONS
CITROSOL® A IMAD 2	Z 2	Waxes + Imazalil 0.2 % w/v	1 L / Tm	The emulsification of Imazalil in the waxes through our production process guarantees that there are no variations in the concentration of Imazalil due to breakage of the emulsion. Breakage of the emulsion can cause accumulations of Imazalil in the bottom of the wax drum, or 1.000 kg GRG, causing a risk of exceeding the corresponding MRLs, and a decrease in the concentration of Imazalil within the rest of the wax which consequently decreases the efficacy of the wax in decay control.
CITROSOL® A IMAD 3	Z 3	Waxes + Imazalil 0.3 % w/v	1 L / Tm	
CITROSOL® A IMAD 2 TBZ 5	Z 2 TBZ 5	Waxes + Imazalil 0.2 % w/v + Thiabendazole 0.5 % w/v	1 L / Tm	
CITROSOL® A TBZ 5	TBZ 5	Waxes + Thiabendazole 0.5 % w/v	1 L / Tm	The emulsifiaction of TBZ in the waxes through our production process guarantee that there are no variations in the concentration of the fungicide. The waxes with TBZ reduce the incidence of chilling injury.
CITROSOL® A OPP	0	Waxes + Orthophenylphenol 0.25 % w/v	1 L / Tm	The emulsifiaction of OPP in the waxes through our production process guarantee that there are no variations in the concentration of the fungicide. The waxes with OPP prevent the formation of ***Cladosporium spp***, mold and other pathogens in the calyx during long distance shipments.

[12] Waxes that do not comply with European legislation can not therefore be used for waxing and coating of citrus fruit destined for the European Union. Check with your Citrosol representative regarding conformity of theses waxes with other food additive legislation. All water-based waxes comply with US and Canadian legislation and, in many cases, with the legislation of Japan and South Korea for citrus coating waxes.

[13] To obtain the complete code of these products, add the wax code to theses ones. The waxes that are formulated with fungicides are CITROSOL A, CITROSOL AK, CITROSOL A FD and CITROSOL R.