

# MAINTENANCE - LED LUMINAIRES



## IMPORTANT

Before commencing any maintenance work:

- Always turn off and lock out the branch circuit
- Ensure luminaires are completely cooled

## LUMINAIRES

All P.L. Light Systems' luminaires are designed (and rigorously tested) to provide the specified level of protection against moisture ingress in accordance with their certified IP rating according to IEC-60529 standards.

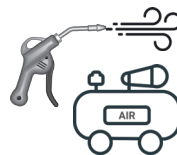
However, the real-world operating conditions within a horticultural environment are often more demanding than those specified under IEC-60529, which does not account for all potential effects of humidity, airborne pollutants and/or UV exposure within the CEA facility. As such, growers should take the following precautions to protect their luminaires against potential water ingress:

- Luminaires should ideally be removed from mounting structure when cleaning ceiling / walls of facility. If that's not possible, luminaires should be properly bagged to protect from ingress of any water / cleaning agents
- Ensure that all connectors on the luminaire are capped when not in use to ensure safe operation and maintain IP integrity.
- Do not expose the luminaire to:
  - » condensing humidity, heavy mist, fog or direct spray of any pressure level;
  - » (ambient) temperatures outside the specified range;
  - » dust and contamination.

Never use a luminaire if either the lamp or power cord are damaged. Replace the power cord only with original CSA or UL equivalent certified cords.

## LUMINAIRE CLEANING INSTRUCTIONS

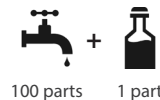
Check the product at regular intervals for build-up of dust and dirt. Clean the product if necessary. Contamination can lead to overheating and reduced performance.



Use low pressure compressed air to remove dust and/or debris between the heat fins on the driver housing and/or LED modules.



Wipe the luminaire housing down with a dry or slightly damp cloth.



To remove the build up of limescale on the lens, dampen a clean, soft cloth with a vinegar and water solution (1:100 ratio). Gently wipe lens with dampened cloth.



Allow luminaire to dry completely before powering on again.

### NOTES:

- For your safety, when cleaning luminaires, always maintain the correct ratio and never add other chemicals to solution. Wearing hand and eye protection is advised.
- Never clean the luminaire with corrosive cleaning agents, abrasives or other aggressive liquids.
- Any luminaire maintenance should always be performed in accordance with local and national building; electrical and/or safety codes.



# TESTED CHEMICAL SUBSTANCES\*



When using any chemical substance(s):

- Always follow the manufacturer prescribed concentrations, instructions for use and safety precautions.
- Always ensure that the chemicals are approved for use in your in your jurisdiction.

P.L. Light Systems' LED luminaires have been tested and assessed to be able to withstand the use of the following chemical substances inside a controlled greenhouse environment:

Abamectine  
Abamectine HF-G  
Abir  
Acarstin  
Acramite 50WS  
Acrobat Plus WG  
Actara  
Actara 25WG  
Actara insecticide  
Actinovate SP  
Addit  
Admiral  
Admire 240  
Admire WG  
Agral Gold  
Agrimec  
Agriphage CMM  
AGRITRAP  
Agrotek Vaporized Sulphur  
Agrozone  
Alar 64 SP  
Alar 85 SG  
Alias 240SC  
Aliette WG  
Allure PT4  
Altacor  
Altacor Insecticide  
AmberClean  
Ambionet  
Ambush 50 EC  
Ambush 500EC  
Amewash

Amistar  
Amistar top  
Ammoniumbifluoride  
Apollo SC  
Aprovia  
Apuron  
ARMICARB  
Arubarin water dispersible granules  
Asepta Carex  
Asepta Neemazal  
Avid 1.9% EC  
Bachisuta wettable powder  
Bactipal ELV  
BACTURA DF  
Beleaf 50SG  
Benkoze Flowable  
Benleate  
Berelex 40 SG  
BioCeres G WP  
Bioprotec 3P DF  
Bioprotec CAF  
Biosentry 904  
Biosoap  
Biosolve  
Biotracius Ca  
Biotracius K  
Bittersalt  
B-Nine SG  
Bonzi  
Borneo  
Botanigado ES  
BotaniGard 22 WP  
BotaniGard WP  
Bravo ZN  
Break-Thru  
Buzz Ultra DF  
Cabrio EG

\*The approved use of listed chemical substances applies only when chemicals are used in concentrations as prescribed by the manufacturer. The effects of any of the listed chemicals used in combination with other chemicals is unknown and cannot be guaranteed for safe use with P.L. Light Systems luminaires. Although this comprehensive list captures many of the crop protection, cleaning and other chemical agents commonly used in CEA environments, it should not be considered exhaustive and is subject to change as product formulas are altered and/or new products are introduced.

41 Brockley Drive, Hamilton, ON, Canada, L8E 3C3  
Phone: 905.563.4133 Fax: 905.563.0455 Web: pllight.com



P.L. LIGHT SYSTEMS

# TESTED CHEMICAL SUBSTANCES\*



Calcium Carbonate	Daconil 500
Calcium chloride	Danitron flowable
Calypto 480 SC	DDVP 20% EC
Cantack	Decis 2,5 EC
Cantus WDG	Decis 5 EC
Captan 50WP	Decis EC
Captan 80 WG	Decree 50 WDG
Captan 80WDP	Delegate
Captan 83 WP	Delegate WG
Captan flow	Desbest 400
Captosan 500 SC	Desogerme Bactibio
Captosan 500 SC (5%)	Desogerme Microchoc plus
Caramba	Desogerme Microserre
Carex 100SC	Desogerme SP vegetaux
Carex 10SC	Diana SC
Cease	Dimanin
Champ DP Dry Prill	Dinoterfuran 20SG
Champion++	DiPel 2X DF
Chess WG	Dipel DF
ciro clean 55	Distance
Cleanbest 1120	Dithane DG New Tec
Cleanbest 1220	Dithane M45
Clear Saar flowable	Dithane Neotec
Codacide	Dithane Rainshield
Codacide 2%	Double Nickel 55
Collis	Double Nickel LC
Colt	Dynamec
Concept	Dynasty 100 FS
Confidor 70 WG	Dyno-mite WP
Confirm 240 F	Echo 90DF
Conserve SC	Eko-mist
Contans WG	Elasto G5
Copper 53W	Electrolysed water
Copper oxychloride	Emblem
Copper skin (Kasumin Bordeaux)	Endeavor 50 WG
Copper spray	En-strip
Coppercide WP	Entrust
Coragen	Entrust 80 WG
COSAVET DF	Entrust SC
COSAVET Garden	Envidor
Cueva	Envidor 2 SC
Cuprokylt	Envidor 240 SC
Cuprozin progress	Eradicoat
Cyclone	ERII
Daconil 1000	Ethanol

\*The approved use of listed chemical substances applies only when chemicals are used in concentrations as prescribed by the manufacturer. The effects of any of the listed chemicals used in combination with other chemicals is unknown and cannot be guaranteed for safe use with P.L. Light Systems luminaires. Although this comprehensive list captures many of the crop protection, cleaning and other chemical agents commonly used in CEA environments, it should not be considered exhaustive and is subject to change as product formulas are altered and/or new products are introduced.

41 Brockley Drive, Hamilton, ON, Canada, L8E 3C3  
Phone: 905.563.4133 Fax: 905.563.0455 Web: pllight.com



P.L. LIGHT SYSTEMS

# TESTED CHEMICAL SUBSTANCES\*

Ethanolamine  
Ethephon classic  
Ethoxylated alcohols 0.5%  
Ethoxylated alcohols 1.0%  
Ethrel A  
Exalt 60 SC  
Explicit  
Fado  
Fairy Liquid  
Fame  
Fantasista water dispersible granules  
Farbanet plus  
Fenomenal  
Flint 50 WG  
Flipper  
Flonicamid  
Floramite 240 SC  
Floramite SC  
Flordimex 420  
Flusol Forte  
Folicur 430 SC  
Folicur SC  
Folio Gold  
Folpan 80 WDG  
FONGIL FL  
Foray 48BA  
Forbid 240 SC  
Formaline  
Fortafol-S  
Forum  
Freebac  
Fromalin  
Frupica SC  
Frupika flowable  
Full Pika flowable  
Fungafash  
fungaflor 100 EC  
Fungei Bordeaux  
Gazelle SG  
Germany Bordeaux A  
Getter  
Gibberellin Kyowa solutions  
Greenhouse Glassclean  
Grapple2  
Greenstim  
Grisu  
GS4  
Hachi Hachi Emulsion  
Headlandcopper  
Heritage Fungicide  
Hermosan 80 WG  
Huwa San TR-50  
Huwa San TR-50 (0.3%)  
Huwa San TR-50 (theory)  
Hydrochloric acid  
Hydrogen peroxide  
Hydrogen peroxide 1%  
Hydrosan Sinq  
Insegar 25 WG  
Intra Hydrocare  
Intrepid  
Intruder  
Iprodione 4L AG  
Ishihara tomato tone  
ISK  
Isopropanol  
Jet 5  
Kanemite SC  
Kara Green  
KARATE ZEON  
Karma  
Kasumin 2L  
KleenGrow  
Kelpak bioactivator  
Kenbyo FL  
Kentan DF  
Kickstart  
Kenocid 210  
Kocide 2000  
Kocide 3000 DF  
Kopa insecticidal soap  
Koromaito emulsion  
Kumar (via Karma)  
Kumulus S/DF  
Lan Man flowable  
Lazulie  
Lepinox plus  
Limocide  
Luna Privilege  
Luna Sensation

\*The approved use of listed chemical substances applies only when chemicals are used in concentrations as prescribed by the manufacturer. The effects of any of the listed chemicals used in combination with other chemicals is unknown and cannot be guaranteed for safe use with P.L Light Systems luminaires. Although this comprehensive list captures many of the crop protection, cleaning and other chemical agents commonly used in CEA environments, it should not be considered exhaustive and is subject to change as product formulas are altered and/or new products are introduced.

41 Brockley Drive, Hamilton, ON, Canada, L8E 3C3  
Phone: 905.563.4133 Fax: 905.563.0455 Web: pllight.com



# TESTED CHEMICAL SUBSTANCES\*

Luna tranquility  
Maestro 80DF  
MAGISTER SC  
Magnesium Nitrate  
Magnesiumsulphate  
Majestik SL  
Manfil 75 WG  
Manfil 80 WG  
Manzate 200 WP  
Manzate DF  
Manzate Pro Stick  
Manzate Pro-Stick  
Matador 120EC  
Match  
Meltatox  
Menno Clean  
Menno Florades  
Menno ter forte  
Microthiol special  
Milbeknock  
Milbemectin  
MilStop  
Mimic 2LV  
Minecto duo 40WG  
Mirage plus 570 SC  
Mospilan SG  
Motto  
Mushirappu  
Mycostop  
MYCOTAL  
Naphtha light aromatic  
Naturalis L  
Neemazal TS  
Nemathorin 10G  
Nenchaku-kun  
Nimezal  
Nimrod  
Nissorun  
Nocturn  
Nomolt  
Nu-Cop 50 DF  
Nu-Cop HB  
Oberon  
Oleate  
Olie-H

Omega 500F  
Ordoval  
Ortiva  
Ortiva 0.2%  
Ortiva 0.3%  
Ortiva 0.4%  
Ortiva 0.5%  
Ortiva 1.0%  
Ortiva 2.0%  
Ortiva 5.0%  
Oxydate 2  
Palladium WG  
Paraat WP  
Parasol WG  
Penncozeb 75 DF  
Pirimor G  
Pirimor spuitkorrel  
Plenum 50 wg  
Pleo flowable  
Pomarsol WG  
Potassium bicarbonate  
Potassium hydroxide  
Potassiumhydrogencarbonate  
PREFERAL WG  
Prestop  
Prestop mix  
Prev Magnum  
Prev-AM  
PREV-B2  
PREV-B2 12%  
previcur energy  
Previcur N  
Pristine WG  
PRM 12 RP  
Procure 480 SC  
ProFortum  
prolectus  
Proplant  
Protect DF  
Pyrethrum 5EC  
Quadris  
ranman Top  
Reflect  
Reglone  
Revus

\*The approved use of listed chemical substances applies only when chemicals are used in concentrations as prescribed by the manufacturer. The effects of any of the listed chemicals used in combination with other chemicals is unknown and cannot be guaranteed for safe use with P.L Light Systems luminaires. Although this comprehensive list captures many of the crop protection, cleaning and other chemical agents commonly used in CEA environments, it should not be considered exhaustive and is subject to change as product formulas are altered and/or new products are introduced.

41 Brockley Drive, Hamilton, ON, Canada, L8E 3C3  
Phone: 905.563.4133 Fax: 905.563.0455 Web: pflight.com



# MAINTENANCE - LED LUMINAIRES

Revus 250 s.k.  
Rhapsody  
Ridomil Gold 480 EC  
Ridomil gold MZ 68 WG  
Rimon10EC  
Rizolex Vloeibaar  
Rocket EC  
Rovral Aquaflo  
Rovral WG  
Rudis  
Runner 240 SC  
Sanidate 5.0  
San Might flowable  
Sankei gardening Bordeaux  
Sankei kumurasu  
SanMite WP  
Sanprox-P  
Savior Flowable 20  
Savologic 1%  
Savona  
Savona 20%  
SB Plant Invigorator  
SBInstant  
Scala SC  
SCHWEFAL® Schwefel-Linsen  
Score 250 EC  
Scurea Flowable  
Serenade ASO  
Serenade Opti  
Serenade SC  
Serenade soil  
Serifel  
Shirlan flow  
Shuttle 15 SC  
Signum  
silwet gold  
Silwett L77  
Sodium hypochlorite 0.3%  
Sodium hypochlorite 5.0%  
Sonoma 40WSP  
Spintor 480 SC  
Spirato 480 FS  
Sporgon 50 WP  
Sportak EW  
Spruzit  
Spuitzwavel granulaat  
Spuitzwavel poeder  
Squad  
Squash  
Steward  
StorOx  
Strip-it (homemade mix)  
Stuifzwavel  
Success  
Success 4  
Sulphur  
Sumicidin super  
Sumicidin super (1%)  
sunmite Flowable  
Superoxid 15  
Supra Captan 80 WDG  
Supra Captan 80WDP  
Switch  
Switch 62.5 WG  
Systhane 20 EW  
Systhane 24 EC  
Systhane max  
Taegro WP  
Takumi SC  
Talius  
Teldor  
Teppeki WG  
Terraguard  
Tetrasan 5 WDG  
Thiram granuflo  
Thuricide  
Tianwangwei  
Tilt 250 EC  
Tivano  
Tomatotone  
Topas  
Topaz 100 EC  
Topcleaner  
Topcleaner 10%  
Topsin M ultra  
Torrent 400SC  
Tracer 480 SC  
Transfer flowable  
Transform WG  
Trend 90

*\*The approved use of listed chemical substances applies only when chemicals are used in concentrations as prescribed by the manufacturer. The effects of any of the listed chemicals used in combination with other chemicals is unknown and cannot be guaranteed for safe use with P.L. Light Systems luminaires. Although this comprehensive list captures many of the crop protection, cleaning and other chemical agents commonly used in CEA environments, it should not be considered exhaustive and is subject to change as product formulas are altered and/or new products are introduced.*

41 Brockley Drive, Hamilton, ON, Canada, L8E 3C3  
Phone: 905.563.4133 Fax: 905.563.0455 Web: pllight.com



# MAINTENANCE - LED LUMINAIRES

Trigard 100 sl  
TRIGARD 75 WP  
Triggered solutions  
Turex wp  
ultiflora  
Unifect-G  
Urara DF  
Vectine Plus  
Vectobac 600L  
Veni Biosulfur  
Vertimec 018 EC  
Vertimec Gold  
Viragri plus VT49  
virkon S  
Virocid  
Vivando SC  
Voliam Xpress  
Water  
Wetcit  
White Spirit  
XENTARI WG  
Z Bordeaux  
ZAL PERAX II  
ZAL PERAX II (1%)  
ZAL PERAX II (2%)  
ZAL PERAX II (3%)  
ZAL PERAX II (40%)  
Zipper

*\*The approved use of listed chemical substances applies only when chemicals are used in concentrations as prescribed by the manufacturer. The effects of any of the listed chemicals used in combination with other chemicals is unknown and cannot be guaranteed for safe use with P.L. Light Systems luminaires. Although this comprehensive list captures many of the crop protection, cleaning and other chemical agents commonly used in CEA environments, it should not be considered exhaustive and is subject to change as product formulas are altered and/or new products are introduced.*



The following chemical substances are NOT safe for use with P.L. Light Systems luminaires.

## DO NOT USE:

Ethylene chloride  
Glycerin  
Methanol  
Methyl ethyl ketone  
Methylamine  
Methylene chloride  
N-propanol  
Ozone, 1% in air

Potassium hydroxide, 1% in water  
Sodium hydroxide (caustic soda), 1% in water  
Styrene  
Tetrachloroethane  
Tetrachloroethylene  
Trichloroethylene  
Tricresyl phosphate  
Xylene

