



MATERIAL SAFETY DATA SHEET

according to the 1907/2006/CE Regulation

Review: 19/08/2010

Rev.#: 1

PRODUCT:

FESTIVAL



Replaces: 27/06/2005

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1.- IDENTIFICATION OF THE PRODUCT AND THE COMPANY

Company:	LAINCO, s.a.	Address:	Av. Compositor Bizet, 8-12; Pol. Ind. Can Jardí; 08191 RUBI (Barcelona) SPAIN		
Telephone:	(+34) 93 586 20 15	Fax:	(+34) 93 586 20 16	E-mail:	lainco@lainco.es
Commercial name:	FESTIVAL			Registration number:	23.743 (MAPYA - Spain)
Use of the product:	Fungicide.				
Real effect:	Protective and curative fungicide. In contact with water, it releases small amounts of copper ion, which is toxic for fungi. It inhibits the development of fungi and new infestations.				
Emergency telephone: NATIONAL INSTITUTE OF TOXICOLOGY (Schedule: 24 h.)				(+34) 91 562 04 20 (SPAIN)	

2.- HAZARDS IDENTIFICATION

SYMBOLS OF DANGER		
	Harmful	Dang. to the environment
Risk Phrases	R20: Harmful by inhalation. R41: Risk of serious damage to eyes. R43: May cause sensitization by skin contact. R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.	
Other Dangers	--	

3.- COMPOSITION / INFORMATION ON INGREDIENTS

General composition:	22,5% w/w Copper (as Copper-calcium Sulphate) + 3,0% w/w Cymoxanil + 7,0% w/w Coadjuvants + 6,6% w/w Inert and Impurities					
Hazardous components	Content (% w/w)	EINECS #	CAS #	Classification		OBSERVATIONS
				Symbols	Risk Phrases	
Copper-calcium Sulphate (Copper)	83,4% (22,5%)	--	8011-63-0	Xn, N	R20, R41, R50/53	--
Cymoxanil	3,0%	261-043-0	57966-95-7	Xn, N	R22, R43, R50/53	Annex I Index# 616-035-00-5

4.- FIRST AID MEASURES

	Symptoms and effects	Actions to carry out
Contact / Skin	Skin irritation. Irritant dermatitis.	Remove clothing contaminated with the product immediately. Wash it before using again. Wash the affected body zones with abundant water and soap, avoiding rubbing these zones.
Contact / Eyes	Eyes irritation. Tearing, conjunctivitis.	Wash the eyes with abundant water at least during 15 minutes. In order to be sure that the washing is complete, the eyelids must remain separated from the eyeball. Do not forget to retire the contact lenses in case the victim had them.
Ingestion	Mucous irritation. Nausea, vomiting, burning pain in mouth and oesophagus, abdominal pain, diarrhoea. Haemolysis. Liver failure symptoms with granuloma formation in liver and acute renal failure. Fever, asthenia, headache.	If the person is conscious, provoke the vomit. If the person is unconscious, lay him side down with the head lower than the rest of the body and the knees bended. Administer EDTA, BAL or Penicillamine. Place the victim into a rest position. Seek for medical attention in order to carry out a gastric washing.
Inhalation	Respiratory alterations, cough, rhinitis, dyspnea, increase of the mucous secretions. Febrile state called Brassfounder's ague.	Remove the person from the contaminated zone. Put him in rest position, nearly straight, with untied clothing. If necessary, apply artificial respiration.



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General advices:

- ✓ DO NOT LEAVE THE INTOXICATED PERSON ALONE AT ANY TIME.
- ✓ In case of symptoms due to inhalation, swallowing or contact of the product, seek medical advice and show the product's label or this material safety data sheet.

5.- FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Pulverized water, carbon dioxide (CO ₂) and chemical powder.
NON suitable extinguishing media:	Do not use water pressure jet.
Combustion products:	Sulphur oxides, nitrogen oxides, CO, CO ₂ .
Special measures to consider:	Cool the drums/containers by water spraying and in case there is an explosion keep a security distance. Maintain the zone free of people, keeping them at a minimum distance of security (100 metres). Avoid using great volumes of water, in order to minimize the extension of the product. Work always in favour of the wind or in right angle respect to it.
Specific hazards during fire fighting:	--
Protective equipment:	Wear the basic protective equipment for fire extinction. Suitable breathing device and protective clothing (suit, gloves of PVC and rubber boots).

6.- ACCIDENTAL RELEASE MEASURES

Personal precautions	Environmental Precautions	Attention
Avoid long contact with the product and contaminated clothes. Keep a minimum safety distance of 50 meters.	Avoid the entry of the product into the water course or the sewers network as well as in zones with vegetation. Warn the competent authorities in case the spill enters into the sewage system or the water course.	Do not spray ground with water.
Personal protection	Detoxification and cleaning up	Neutralization
Wear protective clothes (suit, gloves and plastic boots). Carry an appropriate breathing device.	Place broken packing in a suitable position in order to minimize the leak. Dampen first the spill to avoid the dispersion of the dust. Sweep the spilled product. All the residues will be placed in cans that will be sealed and transported to a safe place to proceed with their elimination.	DNP

7.- HANDLING AND STORAGE

Handling	
General precautions: <ul style="list-style-type: none">- Handle the product container with care, avoiding, during its transport, crushes with heavier products and not letting it fall down.- Before applying the product, be sure that the equipment you will use is the proper one and it is in perfect state.- Follow the instructions for the product preparation indicated on the label of the container.- Mark the treated zones, forbidding people not wearing appropriate protective equipment to enter.	
Specific conditions: <ul style="list-style-type: none">- Due to its toxicity to aquatic fauna, it must be carefully applied in zones near rivers, ponds..- The product must not be directly poured on water, nor must be applied when the climatic conditions would favour the dripping of the product from treated zones.- Do not contaminate the water by cleaning the working clothes or by disposing off residues.- Do not apply in cold and wet weather.- Do not mix with Maneb neither alkaline products.	
Storage	
Temperature:	Store at room temperature.
Decomposition products:	DNP
Dangerous reactions:	None.
Storage conditions:	Store it in the original recipient, perfectly closed, in a cold, dry and ventilated place. Avoid high temperatures because it accelerates decomposition of the product.
Incompatible materials:	It is incompatible with products as organophosphorate compounds, carbamates and with strongly alkaline pesticides as Lime sulphur. It must not be prepared or conserved in metallic packages.

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Specific uses

Authorized uses indicated in the label of the product. Reserved use to agriculturists and professional applicators.

8.- EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure limit values**

VLA-ED:	Copper (dust): 1 mg/m ³ * Kaolin: 2 mg/m ³ (<i>Breathing fraction</i>)	VLA-EC:	--	VLB:	--
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Occupational exposure controls**OCCUPATIONAL EXPOSURE CONTROLS**

Respiratory protection:	Suitable respiratory device. In case of fire autonomous breathing equipment must be used.
Hand protection:	PVC gloves.
Eye protection:	Protective glasses or facial mask of total protection.
Skin protection:	Suit. Rubber boots (with the trousers on the boots).

Other protections:	Have in hand the appropriate devices to wash eyes or skin in case of an accident. Work in places with appropriate ventilation and far from possible ignition sources. Work always in favour of the wind. Avoid the skin contact with the product and inhalation of the powder. Do not eat, drink, or smoke during the handling of the product. Take off the stained or soaked clothing with product immediately and wash with water and soap before using it again. Do not put dirty rags, stained with the product in the pockets. Avoid the contact with the product.
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ENVIRONMENTAL EXPOSURE CONTROLS

Observe the normal precautions when working with this kind of products.

* Contains 6,5% w/w of Kaolin

9.- PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Impalpable greenish powder	Boiling point/range:	DNP
Odour:	Characteristic	Vapour pressure:	Insignificant at 20°C
pH (1% water solution):	5,0 - 8,0	Melting point:	--
Density:	0,30 - 0,40 g/ml	Flash point:	DNP
Water solubility:	Dispersible in water	Flammability (solid-gas):	Non flammable
Explosive properties:	Non explosive	Auto-flammability:	DNP
Solvent-oil solubility:	Copper-calcium sulphate has very low solubility in usual solvents as Ketones or Ethers.	Oxidising properties:	Non oxidising
Partition coef. (n-octanol/water):	--	Viscosity:	--
Other information:	--		

10.- STABILITY AND REACTIVITY

Stability:	The product stored in its original packing and in normal conditions keeps its initial properties during a minimum period of 2 years.
Conditions to avoid:	Heat, acids and strong alkaline substances (due to Copper-calcium Sulphate) and alkaline conditions and direct light (due to Cymoxanil)
Materials to avoid:	Incompatible with carbamates, organophosphorous substances and strong alkaline pesticides as sulphur.
Hazardous decomposition products:	--



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11.- TOXICOLOGICAL INFORMATION

Routes of exposure:	By ingestion, eye and skin contact and inhalation.				
Acute and chronic effects:	LD₅₀ (oral-rat): > 2000 mg/Kg	LD₅₀ (dermal-rabbit): > 2000 mg/Kg	LD₅₀ (inhalation-rat): < 10 mg/L (4h)		
Irritation:	Skin: Non irritant.	Eyes: Irritant.	Respiratory System: Non irritant.		
Sensitisation:	May cause sensitization by skin contact.				
Carcinogenicity:	No evidence known.				
Mutagenicity:	No evidence known.				
Reproductive toxicity:	No evidence known.				
Narcosis:	Data not available.				
Other information:	ADI Cymoxanil: 0,013 mg/Kg ADI Bordeaux broth: 0,5 mg/Kg				

12.- ECOLOGICAL INFORMATION

* Ecotoxicity		
Toxicity to birds: LD ₅₀ , oral, in <i>Quail</i> : > 500 mg/Kg		
Toxicity to fish and aquatic organisms: LC ₅₀ , 96h, in <i>Rainbow Trout</i> : 10 - 100 mg/l	EC ₅₀ , 48h, in <i>Daphnia Magna</i> : 1 - 10 mg/Kg	
	ErC ₅₀ , 24h, in <i>Algae</i> : < 1 mg/Kg	
Toxicity to bees: Non toxic for bees		
Mobility / Bioaccumulation		
✓ Copper, when added to the ground, is fixed on the organic matter. The content of organic matter in ground and the pH of itself determines the availability degree of copper.		
✓ Due to the strong fixation towards several components of the ground, the lixiviation of copper is extremely low. Mobility in deep layers of the ground is insignificant.		
✓ Copper is not bioaccumulated. The organisms give off copper by natural form.		
✓ Cymoxanil penetrates in the plant and gets up as constituent of proteins and sugars in the plant.		
Persistence / Degradability		
✓ The Bordeaux mixture, due to its irregular and porous structure (amorphous), is the copper compound that displays a greater adhesion, and, consequently, a greater persistence in the plant. This will also imply a greater resistance to the rain washing.		
✓ Copper is strongly absorbed by grounds and it is not degradable.		
✓ Cymoxanil has an average life lower than 2 weeks (3 days in conservatory) and is quickly degraded in plants.		
✓ Cymoxanil is degraded quickly in the ground in aerobic or anaerobic conditions. It is degraded by effect of the light.		
Other information:	Theoretical COD: No data available.	Theoretical TOC: No data available.

* Data calculated using de information about the active matters: Cymoxanil and Copper (Bordeaux broth)

13.- DISPOSAL CONSIDERATIONS

Disposal of the product:	No residues will remain due to the use of the product if the empty packaging is washed 3 times with water, adding this water to the solution.
Disposal of used containers:	The package, washed as above mentioned, may be disposed according to the local legislation, in a no contaminant place.
Provisions on waste disposal:	According to all the local and national legislation about the elimination of residues.

14.- TRANSPORT INFORMATION

Labelling for transport:	9 + environmentally hazardous substance						
ADR:	Proper Shipping Name:		ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper-calcium Sulphate and Cymoxanil in mixture)				
	UN #:	3077	Classification Code:	M7	Transport Categ. (Tunnel restriction code):	3 (E)	
	Class:	9	Packing group:	III	Hazard No.:	90	Secondary Risk: Environmentally hazardous substance



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RID:	Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper-calcium Sulphate and Cymoxanil in mixture)
IMDG:	Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper-calcium Sulphate and Cymoxanil in mixture)
	Nº FEm: F-A, S-F	Secondary Risk: Marine Pollutant
IATA:	Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper-calcium Sulphate and Cymoxanil in mixture)
Special precautions:		Do not load foods along with. Avoid high temperatures. Verify that the packing is in good state and that the labels are not damaged before the distribution.

15.- REGULATORY INFORMATION

Hazardous product symbol:	Xn, N
Toxicity	Toxicology classification (RD 255/2003): Harmful. Hazardous for environment.
Environmental risks reduction:	Mammals: A Low danger to mammals. Birds: A Low danger to birds. Fish: B Medium danger to fish. Bees: Non toxic for bees.
R-phrases:	
R20: Harmful by inhalation. R41: Risk of serious damage to eyes. R43: May cause sensitization by skin contact. R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.	
S-phrases:	
S2: Keep out of the reach of children. S13: Keep away from food, drink and animal feeding stuffs. S22: Do not breathe dust. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39: Wear suitable protective clothing, gloves and eye/face protection. S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).	
Special S-phrases:	
SP1: <u>Do not contaminate the water with the product nor with its package</u> (Do not clean the application equipment of the product near superficial waters. Avoid the contamination through the systems of water evacuation of the operations or the ways).	
Other information:	
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16.- OTHER INFORMATION

Consulted data bases:
✓ Agro-Research. Agrochemical Directory and Hazard Response Handbook. Agro-Research enterprise Ltd. ✓ RTECS (Registry of Toxic Effects of Chemical Substances). U.S. Department of Health and Human Services (1981-82). ✓ ESIS. European chemical Substances Information System. ✓ The Pesticide Manual, Fourteenth Edition (2006). Editor: C D S Tomlin. ✓ Farmacología vegetal, Carlos De Liñan y Vicente. 3ª Edición. Ediciones Agrotécnicas, S.L. ✓ Manual Toxicológico de Productos Fitosanitarios para Uso Sanitario.
Other R and S-phrases:
R22: Harmful if swallowed.
Glossary:
CAS: Chemical Abstract Service. EINECS: European Inventory of Existing Chemical Substances. VLA-ED: Occupational Limit Value - Daily Exposure. Maximum concentration to which it is believed, that the majority of workers may be exposed 8 hours a day, 40 hours a week throughout their working life, without suffering adverse effects on their health.



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VLA-EC: Occupational Limit Value - Short Time Exposure. Maximum concentration of the chemical agent in the worker's breathing zone, measured or calculated for any 15-minute period throughout the working day, except for those chemical agents for which a lower reference period is specified in the list of Limit Values.

VLB: Biological limit value for professional exposure.

DNP: Does not Proceed. **NC:** Not classified.

LD₅₀: Average Lethal Dose.

ADI: Acceptable Daily Intakes.

NOEL: No Observed Effect Level

LC₅₀: Average Lethal Concentration.

EC₅₀: Average Effective Concentration.

ErC₅₀: EC₅₀ (growth rate)

COD: Chemical oxygen demand.

TOC: Total organic carbon.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

RID: European Agreement concerning the transport of dangerous goods by rail.

IMDG: International Maritime Dangerous Goods Code.

Nº FEm: Emergency Card Number.

IATA: International Air Transport Association.

RD 255/2003: Real Decree 255/2003, of 28th of February of 2003, by that the Regulation is approved on classification, packaging and labelling of dangerous preparations. BOE no. 54, of 4th of March.

Changes:

REACH format actualization.

The data and information of the present document are based on our current knowledge and other existing sources, according to the current regulations about classification, packing and labelling of dangerous products. Due to the fact that during manipulation a lot of factors are out of our control, **LAINCO, S.A.** is not responsible that the information is enough or correct in its application in all cases.