



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OCT 31 1986

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: PP #1E2457. Vinclozolin (Ronilan) in or on Grapes;
re: Information from E. Johnson, 10/26/86, and F.
Sanders, 10/29/86

FROM: Charles L. Trichilo, Ph.D., Chief
Residue Chemistry Branch
Hazard Evaluation Division (TS-769) *R. Schmitt for*

TO: Anne Lindsay, Acting Deputy Director
Registration Division (TS-767c)

RCB has recently received a copy of a Note from E. Johnson to Anne Lindsay (dated 10/26/86, Attachment 1) and a 10/24/86 "Summary of Information on Vinclozolin" (Attachment 2) pertaining to the use of Ronilan on table grapes imported from Chile. RCB requested a processing study because our information indicates that Chile exported raisins and grape juice concentrate to the US. However, according to the information contained in the 10/26/86 note from E. Johnson, the Chilean Exporters claim that grape juice concentrate is not exported to the US from Chile. RCB sources indicate that the four Chilean export products are table grapes, wine, raisins, and grape juice concentrate.

RCB sources include the most recent import figures obtained from "U.S. Imports for Consumption and General Imports," which is published by the US Department of Commerce, Bureau of the Census. The export figures for grape juice concentrate and raisins, cited in RCB's memo of 9/23/86, came from the 1985 edition. Updated figures for 1986 are now available.

Although raisin exports may have decreased (only data through August are currently available), the export of grape juice concentrate through August has increased 30 fold over all of last year. Last year Chile exported 15,776 gallons of grape juice concentrate to the US. In the first 8 months of 1986, Chile has exported 450,708 gallons of grape juice concentrate to the US. RCB is unable to explain the difference between

the figures given by the Chilean Exporters (no grape juice concentrate exported to the US) and the US Customs figures from the Department of Commerce. The relevant pages from the 1985 and 1986 "US Imports for Consumption and General Imports" are attached (Attachment 3).

Item 2 of the E. Johnson Note states, "Grapes for wine are different varieties grape from table grape varieties. They are cultivated strictly for wine, and vinclozolin would not be used on wine grapes."

The Chilean label (Attachment 4) submitted to RCB with PP #1E2457 provides use directions for wine grapes ("Uvas Viniferas") as well as for table grapes ("Uvas de Mesas"). Therefore RCB contends that Ronilan could be used on wine grapes, which may be processed into grape juice concentrate. RCB does not believe that a label restriction against the use of vinclozolin on wine grapes would be practical. Since the use of this fungicide on table grapes would be permitted, it appears likely and practical that farmers faced with a Botrytis infection on wine grapes would ignore such a restriction.

RCB has consulted J. Anderson of Science Support Staff (Benefits and Use Division). Other fungicides which are active against Botrytis are: iprodione, Botran, and copper sulfate. These pesticides are registered for use on grapes grown in the US, although RCB does not know whether they are registered for use in Chile.

In order to conduct the research involved in writing RCB's memo of 9/23/86 (PP #1E2457), it was necessary to contact people in the grape industry. Representatives of the Table Grape Commission, the Desert Grape Grower League of California, The California Association of Wine Grape Growers, and the Grape and Tree Fruit League have complained to RCB that they feel that the establishment of a Ronilan tolerance on Chilean grapes is unfair if American farmers will not be able to use Ronilan also.

Once an import tolerance for Ronilan on grapes has been established, states may then request the issuance of 24(c)'s. RCB is concerned about the issuance of state labels, based solely on the prior existence of an import tolerance. Residue data generated in Chile may not be at all relevant to growing conditions in CA and NY. Also, the issuance of state labels could lead to the widespread use of Ronilan on domestic grapes used in processing, without the benefit of a food/feed additive tolerance if one is needed.

Thus, additional residue data on domestic grapes, processing studies, and animal feed and metabolism studies, if needed, should be required before Ronilan is used on US grapes. To avoid these problems, we suggest adding to the CFR language

which stipulates that import tolerances may not be used to justify the issuance of a 24(c) label. Similar wording is now used for tolerances with regional registration in the US.

Alternatively, another and preferred solution would be the submission of appropriate residue data as specified by RCB previously.

Attachment 1: 10/26/86 memo of E. Johnson

Attachment 2: Summary; of Information on Vinclozolin

Attachment 3: US Imports for Consumption and General Imports,
1985, 1986

Attachment 4: Proposed Chilean Ronilan label

cc (with attachments): RD PM#21, Lois Rossi, Anne Barton, F. Sanders
bcc: PP #1E2457, Deyrup, Onley, Circ., R.F., S.F.

Attachment # 1

October 26, 1986

To: DIR/RD. (EPA7340)
Cc: E.JOHNSON (EPA1080)
Cc: OPP (EPA7301)
Cc: HFB/RD (EPA7347)

From: E.JOHNSON (EPA1080) Posted: Mon 27-Oct-86 14:04 EST Sys 63 (55)

Subject: ATTN Anne Lindsay, Grapes Info

NOTE TO ANNE LINDSAY RE VINCLOZALIN:

Subsequent to our telephone conversation last week, I received the following information from the Chilean Exporters via John Wessel. It relates to the processing of grapes in Chile and the residue concentration question raised by Residue Chemistry which is holding up the issuance of a tolerance for vinclozalin on table grapes.

1. Grape juice concentrate is not exported to the US from Chile. Their three export products are table grapes, wine and raisins.
2. Grapes for wine are different varieties grape from table grape varieties. They are cultivated strictly for wine and vinclozalin would not be used on wine grapes.
3. Table grapes, the subject of the current tolerance action, are the main export product. They are shipped to the US from early Dec. until April or May.
4. Leftover (unexported) table grapes from the end of the season are made into raisins. Raisins would not be shipped to the US from the current crop until June or July 1987.
5. Vinclozalin needs to be used now but the growers are hesitant because it has not yet been cleared by EPA. There is ample time to check the raisin residues and a decision made as to whether the residues concentrate and how to handle the problem if indeed they do.

This information is to be conveyed in a letter from Roberto Gonzalez, Pesticide Advisor to the Exporters Assoc., however, given the late date as compared to the need to use a fungicide in Chile, I hope you will give every consideration to moving the tolerance on the basis of the above information. Since Chile is aware of the potential application of this tolerance to raisins and the possible need to deal with potential residue concentration, I believe it is fair to go with the table grape level and deal with the raisin issue separately.

In addition, I went over my notes from talks with Hank and with the Chileans regarding alternatives. Although not absolute, it does appear from those notes that there are no good alternatives for this use under Chilean conditions which also have tolerances in the US.

-2-

Please let me know if you have any questions or wish me to attempt to get additional information.

Ed Johnson

cc: Residue Chemistry Branch
Lois Rossi, HFB
Cathleen McInerney, PSP0

Attachment #2

ROUTING AND TRANSMITTAL SLIP

Date OCT 29 1986

SPECIAL

TO: (Name, office symbol, room number, building, Agency/Post)		Initials	Date
1. Chuck Trichilo			
2. (1) Jack			
3. Action Z			
4. want to comment			
5. on this to RD ASD			
Action	File	Note and Return	
Approval	For Clearance	Per Conversation	
As Requested	For Correction	Prepare Reply	
Circulate	For Your Information	See Me	
Comment	Investigate	Signature	
Coordination	Justify		

REMARKS

As you may recall, Doug asked RD to look into whether table grapes were diverted to raisins in Chile and subsequently shipped to the U.S. Attached is what we were able to find out regarding the diversion of table grapes to raisins.

It appears that only a small fraction of raisins are likely to be shipped to the U.S. based on information we received from John Wessel. If you have any questions let me know.

Doug is aware of our findings and if he want to be briefed, I'll let you know.

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
Frank T. Sanders, Chief, FHB/RD/OPTS	243
	Phone No.
	557-1650

5041-102

* U.S.G.P.O.: 1984 - 421-529/412

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

SUMMARY OF INFORMATION ON VINCLOZOLIN

I. Application

- ° Application rate: .67-.89 lb ai/A
Total of 4.45 lb/ai/A/season may be applied
- ° Frequency: 5 separate applications are recommended beginning at pre-bloom and ending just prior to bunch closing;
Last application to harvest interval: 21 days
- ° Approximately 33,000 lb. of vinclozolin is expected to be used per year on grapes in Chile.
- ° Chilean grapes treated in Nov.- Jan.; have not been treated yet.

II. Chilean Grape Production

- ° Chilean grapes generally enter the U.S. from Dec. to May.
- ° John Wessel, FDA, contacted Roberto Gonzalez, a consultant to the Chile Exporters Association, to determine if table grapes are diverted into raisins or grape concentrate in Chile and then exported to the U.S.
 - Mr. Gonzalez reported that grape juice concentrate is not produced in Chile but raisins are.
 - Grapes are grown in Chile for two purposes: wine and table grapes. The grapes grown for wine are never diverted into table grapes nor would they be treated with vinclozolin. The table grapes would primarily be sold and exported as table grapes but the grapes that have not been shipped by the end of the season would be diverted into raisins. The 1986 crop of raisins would be shipped to the U.S. in June or July of 1987.
 - Mr. Gonzalez is sending a letter to Doug Campt documenting this information.
- ° Table 1 presents the total amounts of table grapes and raisins that are exported by Chile as well as the amounts that are specifically exported into the U.S.

*we have
different
information
cite it*

III. Status of Data

- ° According to Jack Graham, BASF, the grape processing study has been completed and he will submit it to the Agency within the next two weeks.
- ° The animal feeding study will be submitted in 8 months.

TABLE 1

Amounts of Table Grapes and Raisins Exported by Chile^{1/}

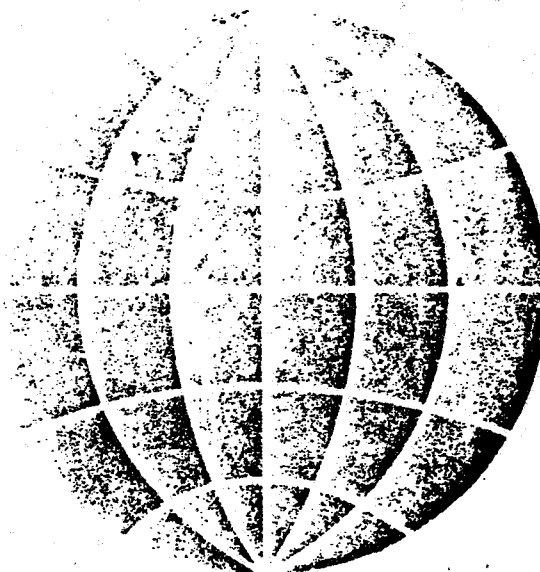
<u>Year</u>	<u>Table Grapes</u> (metric tons)	<u>Raisins</u> (metric tons)
<u>1986</u> (Jan.-June)		
Total	224,000	Not available yet
U.S.	175,000	since 1986 raisins would enter U.S. 6/87
<u>1985</u>		
Total	231,000	5700 ^{2/}
U.S.	181,600	-0-
<u>1984</u>		
Total	178,400	3400
U.S.	141,300	16
<u>1983</u>		
Total	(not available)	2800
U.S.	"	29

1/ 70-80% of the total Chilean grape production are exports
 2/ Exported to Peru and Brazil.

Source: U.S. Embassy in Santiago

FT246/Annual 1985

**U.S. IMPORTS
FOR
CONSUMPTION
AND
GENERAL IMPORTS**



**TSUSA
Commodity
by
Country of Origin**

**U.S. Department of Commerce
BUREAU OF THE CENSUS**

IMPORTS IN 146 DEC	1985	CURRENT MONTH CONSUMPTION		DUTY & DUTY %	YEAR TO DATE CONSUMPTION		CAL DUTY	PA
		QUANTITY	DOLLAR VAL		QUANTITY	DOLLAR VAL		
2010 MEXICO					485	1098	1098	101
4230 BELGIUM					22732	51467	51467	5886
4270 FRANCE					57448	193590	193590	14356
4280 FR GERM				1400 6.7	18452	38673	38673	2615
4330 AUSTRIA				1678 8.1	2195	2195	2195	301
4410 SWITZLD					611	2937	2937	153
4700 SPAIN					4045	11988	11988	1161
4750 ITALY					35292	61940	61940	8824
5080 ISRAEL					2784	9093	9093	696
5830 CHINA T					661	1274	1274	165
5880 JAPAN					3152	2164	2164	788
6021 AUSTRAL					11943	55908	55908	2927
7010 REP SAF					5771	12084	12084	1443
16 158		35987	85268	8998 10.6	281045	733609	733609	78272
1634000 GRAPE JUICE CONCENTRATED, FRZ NOT MIXED, NOT OVER 1% ALCOHOL								
1220 CANADA					33722	30780	30780	8446
2010 MEXICO					3514	2761	2761	879
4280 FR GERM				178 4.6	713	3883	3883	178
4700 SPAIN					17684	20585	20585	4421
1 6		713	3883	178 4.6	55693	58009	58009	15924
1634000 GRAPE JUICE CONCENTRATE BT FZ NOT MIXED, NOT OVER 1% ALCOHOL								
1220 CANADA					148377	162551	162551	37096
2010 MEXICO					6817	20494	20494	1703
2484 ANTIGUA					36824	23158	23158	9219
3370 GERM						8096	8096	3944
3510 BRAZIL					1657770	1068703	1068703	41446
3570 ARGENT				16437 34.9	4008227	2230286	2230286	1152184
4090 DENMARK				28064 28.3	45	2583	2583	11
4120 W KING				11	384	1132	1132	96
4230 BELGIUM					507	1728	1728	FREE
4270 FRANCE					1584	8151	8151	396
4330 AUSTRIA				4140 33.9	153824	70777	70777	38956
4410 USSR					419	1276	1276	419
4700 SPAIN				8146 36.8	677682	395695	395695	16921
4750 ITALY					3915	4703	4703	979
5080 ISRAEL					1346	5100	5100	101
5880 JAPAN					100627	80764	80764	337
7010 REP SAF					7477077	4092704	4092704	40157
18 210		267047	220426	66763 30.3				1869467
1634000 PINEAPPLE JUICE, NOT								
2010 MEXICO					35213	145142	145142	11062
2050 GUATMAL				90 7.5	770	1704	1704	156
3510 BRAZIL				134 9.0	6498	5234	5234	1300
4230 BELGIUM					2564	4427	4427	307
4700 SPAIN				189 9.0	9281	22325	22325	1856
4750 ITALY					49183	127727	127727	9837
5490 THAILND				9600 18.0	21760	79872	79872	14352
5650 PHIL R				247572 17.9	5222049	5895546	5895546	104410
5880 JAPAN					3152	1530	1530	630
12 112		1288323	1439852	257665 17.9	5420472	6195523	6195507	1083088
1634000 PINEAPPLE JUICE, CONCENTRATED ETC NOV 1% ALCOHOL								
1220 CANADA					23660	35133	35133	1183
2010 MEXICO					932284	948942	948942	46615
2150 MONROIA					319251	265134	265134	15963

1634020-1634080

NO GAL 112A

1652700 CITRUS FRT JUICE NSPF UNMIXO CONCENTRATED NOV 12 ETHYL

1652700-1653680

IMPORTS IM146 AUG 1986	CURRENT MONTH CONSUMPTION		DUTY & DUTY %	YEAR TO DATE CONSUMPTION		CAL DUTY	PAGE	237
	QUANTITY	DOLLAR VAL		QUANTITY	DOLLAR VAL			
2010 MEXICO	1546627	923576	541319 58.6	3922219	2554796	1372775	53.7	08
2080 BELIZE				379577	436427	132852	30.4	08
2080 9 BELIZE				832591	907997		FREE	08
2150 9 HONDURA				232292	204686		FREE	08
2410 JAMAICA				1996	7464	699	9.4	08
2410 9 JAMAICA				365587	738268		FREE	08
2470 9 DOM REP				20198	141891		FREE	08
2486 DOMINICA				1422	8072	498	6.2	08
2486 9 DOMINICA				56310	120999		FREE	08
3070 VENEZ				76320	57113	26712	46.8	08
3510 BRAZIL	449916	335647	157471 46.9	2775286	2744982	971350	35.4	08
3570 ARGENT	76945	53530	26931 50.3	103768	71710	36319	50.6	08
4270 FRANCE	19675	69000	6886 10.0	19675	69000	6886	10.0	08
4280 FR GERM	86100	328410	30135 9.2	380759	1411572	133266	9.4	08
4730 ITALY				873	1986	306	15.4	08
4910 CYPRUS				10	1092	4		08
5080 1 ISRAEL	107058	82080	FREE	107058	82080		FREE	08
5080 ISRAEL	502682	357529	175939 49.2	952369	696399	333330	47.9	08
5880 JAPAN	77	1023	27 2.6	77	1023	27	2.6	08
6141 N ZEAL	109098	59082	38184 64.6	109098	59082	38184	64.6	08
72 221	2898178	2127797	976892 45.9	10337685	10316639	3053208	37.6	08
1654020 GRAPE JUICE NOT CONCENTRATED, NOT MIXED, NOT OVER 12 ALCOHOL GAL 112A								
1220 CANADA	10873	31126	2718 8.7	89932	197027	22485	11.4	08
4000 ICELAND				2063	7150	516	7.2	08
4120 U KING				612	2508		FREE	08
4230 BELGIUM	903	2594	131 10.4	7501	19677	1622	9.5	08
4270 FRANCE	2358	10986	590 5.4	37649	169478	9416	5.6	08
4280 FR GERM	475	1923	119 6.2	10724	33245	2683	8.1	08
4330 AUSTRIA				20377	42145	5095	12.1	08
4410 SWITZLD	3051	17636	763 4.3	3711	21003	928	4.4	08
4700 SPAIN	820	2251	205 9.1	4935	12682	1234	9.7	08
4710 PORTUGL	2021	6262	505 8.1	18143	4502	410	9.1	08
4750 ITALY				63961	59111	4537	7.7	08
5080 1 ISRAEL				5389	64238		FREE	08
5080 ISRAEL	384	3208	96 3.0	4980	18069	1245	6.9	08
5880 JAPAN				7761	6347	1941	30.6	08
7910 REP SAF	20885	75986	5127 6.9	281378	675184	52112	8.9	08
14 117								
1654040 GRAPE JUICE CONCENTRATED, FRZ NOT MIXED, NOT OVER 12 ALCOHOL GAL 112A								
1220 CANADA	27456	22125	6864 31.0	3395	15550	1349	8.7	08
3510 BRAZIL				41756	25149	10439	41.5	08
3570 ARGENT				15180	8391	3795	45.2	08
5700 CHINA M				4366	14200	1092	7.7	08
				66697	63290	16675	26.3	08
1654060 GRAPE JUICE CONCENTRATE NT FZ NOT MIXED, NOT OVER 12 ALCOHOL GAL 112A								
1220 CANADA	27456	22125	6864 31.0	3395	15550	1349	8.7	08
2230 C RICA				32080	15681	8020	51.1	08
2484 ANTIGUA				30604	30604	16040	52.4	08
3370 SMILE	128064	81641	32016 39.2	278414	278414	112677	40.5	08
3510 BRAZIL	72809	96508	18202 18.9	1414038	1414038	513981	36.3	08
3570 ARGENT	534222	283352	133556 47.1	856063	856063	410239	47.9	08
4120 U KING				872	1120	218	19.5	08
4230 BELGIUM				748	2123	187	8.8	08
				50	1251	13	1.0	08

Ronilan

FUNGICIDA POLVO MOJABLE

DESTRUYA EL HONGOS EN LA PLANTA
ANTES DE USAR
SIN LA ETIQUETA ANTES DE USAR
DESTRUYA EL HONGOS EN LA PLANTA
ANTES DE USAR

Ingrediente Activo: Vinclozolin 50%
3(3,5 diclorofenil)-5-metil-5-vinil-
1,3-oxazolidin - 2,4-diona 50%
Ingredientes inertes: 50%
100%

Venta autorizada por la División de Protección Agrícola
Ministerio de Agricultura y Fomento
República de Chile
Santiago
Representante en Chile
ANILQUIMICA S.A.
Las Américas 580 Casilla 3238 Teléfono 57.165



PRODUCTOS PARA LA AGRICULTURA

BASF

GENERALIDADES:

Ronilan es un fungicida orgánico de contacto desarrollado por BASF contra la Botrytis en parronales, viñas, fruticultura, horticuultura, plantas ornamentales etc.

Ronilan es especialmente indicado para controlar Botrytis y Sclerotinia (Monilia).

Ronilan ataca los hongos en diferentes fases de desarrollo e impide la germinación de conidias. Es preventivo, curativo y erradicante.

Ronilan actúa como curativo hasta 36 horas después de inicio de la infección.

Ronilan también controla en forma muy eficaz razas de Botrytis resistentes a fungicidas de la familia de los benzimidazoles.

Por ser producto de contacto, la pulverización de Ronilan tiene que mojar bien los escobajos y las bayas para lograr una buena protección.

Ronilan puede aplicarse vía líquido o vía polvo.

Ronilan no tiene efecto ninguno sobre la fermentación.

Ronilan tiene buena adherencia sobre la planta, sin embargo después de lluvias intensas y prolongadas será necesario repetir la aplicación.

RECOMENDACIONES DE USO:

Uvas de Mesa: Contra Botrytis cinerea aplicar 100 - 150 grs. por 100 lts. de agua o 1,5 kg/há. en los siguientes estados:

- 1º Inicio de flor
- 2º 12 días después, es decir con 80% de flor
- 3º Máximo 48 horas después del manipuleo del racimo
- 4º Pinta o cuando existan las condiciones favorables al desarrollo de la Botrytis.

A partir del segundo tratamiento puede aplicarse Ronilan vía polvo mezclado con azufre; debe elegirse un azufre de buena calidad para lograr el mejor cubrimiento posible. La mezcla tendrá que ser perfecta, siempre con dosis de 1,5 kgs. de Ronilan más la dosis de azufre recomendada por el fabricante.

Uvas Viníferas: Contra Botrytis cinerea aplicar 100 - 150 grs. por 100 lts. de agua o 1,5 kg/há. en los siguientes estados:

- Inicio de flor
- 12 días después, es decir 80% de flor
- Antes de apretarse el racimo
- Pinta
- 20 días antes de la cosecha o cuando existan las condiciones favorables al desarrollo de Botrytis.

Frutillas: Contra Botrytis cinerea.

Dosis: 2 kg/há. al inicio, plena flor y final de la floración.

En variedades con floración prolongada; aplicar en

Attachment #4

intervalos de 10 a 14 días la dosis de 1,5 a 2 kg/há. según el grado de infección.

Frutales de Carozo:

Dosis: de 1 a 2 kg/há. en 1.000 a 2.000 lts. de agua según el tamaño del árbol.

Hortalizas:

Dosis: 0,75 - 2 kg/há.

Maravilla:

Dosis: 1,5 a 2 kg/há.

Plantas ornamentales:

a) Por inmersión para bulbos y tubérculos; durante 15 minutos en una solución concentrada con 0,1 a 10% de Ronilan.

b) Por riego con 2,5 gr. por 100 lts. de agua regando 2 litros de solución por m² de suelo, dosis que no debe sobrepasarse.

c) Por pulverización; 100 grs. de Ronilan en 100 litros de agua.

Para mayor información sobre usos y dosis, consulte con un Agrónomo en Anilquímica Ltda.

COMPATIBILIDAD:

Ronilan es compatible con la mayoría de los pesticidas de uso común excepto con aquellos de reacción alcalina.

Ronilan es compatible con Activo.

Ronilan es compatible con Azufre mojeable o de espolvoreo.

TOXICIDAD:

Seguindo nuestras recomendaciones Ronilan no es peligroso para el hombre ni para el ganado.

Toxicidad oral: LD 50 16.000 mg/kg. en ratas.

Ronilan no es perjudicial para las abejas.

MEDIDAS DE PRECAUCION:

En el empleo de Ronilan deben seguirse las precauciones normales para los productos fitosanitarios en general. Debe evitarse la inhalación de la neblina pulverizadora, así como un contacto prolongado con la piel y los ojos.

NOTA AL COMPRADOR:

Por medio de pruebas cuidadosas se ha demostrado que el producto al aplicarse según las instrucciones se presta para los fines recomendados. Sin embargo, ya que la aplicación está fuera de nuestro control y no podemos prever todas las condiciones de empleo, no aceptamos responsabilidad alguna por daños eventuales que puedan producirse por cualquier causa a consecuencia del uso, aun cuando se hayan cumplido nuestras instrucciones de empleo. Nos hacemos responsables de la calidad constante del producto, pero no asumimos los riesgos relacionados con su aplicación.

CEPCO LTDA.