



**GRUPO SEGURA RUIZ**

GRUPO SEGURA RUIZ

# HISTORY



- Company established in 1955 and set up entirely with family capital
- Iberian Peninsula leader in the revaluation of tinsplate scrap

# LOCATION



**Seville**  
15.000 m<sup>2</sup>

**Valencia**  
10.000 m<sup>2</sup>

**Murcia**  
40.000 m<sup>2</sup>

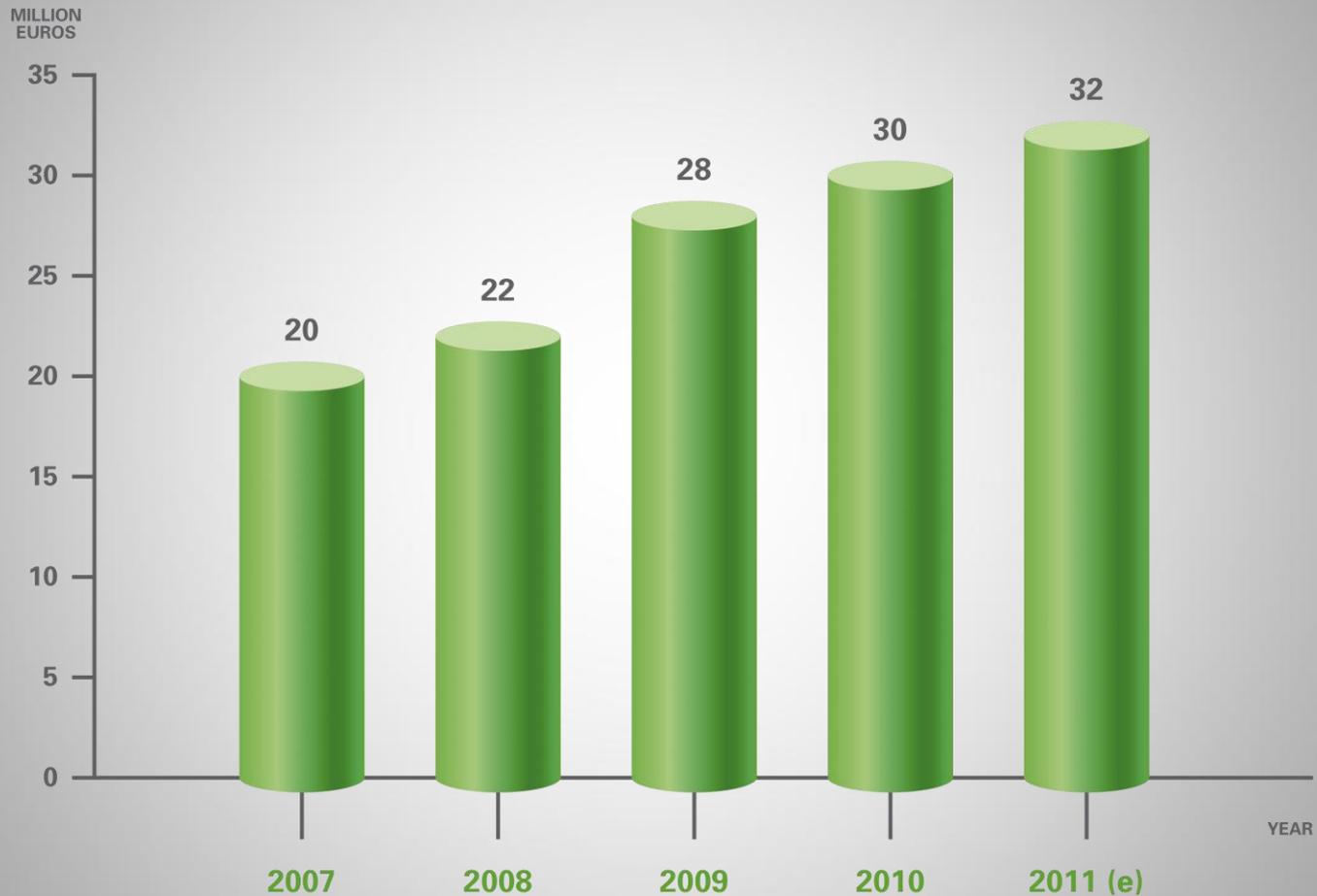
# SALES GEOGRAPHICAL DISTRIBUTION



Spain	80%
France	10%
Brazil	5%
Portugal	4%
Others	1%

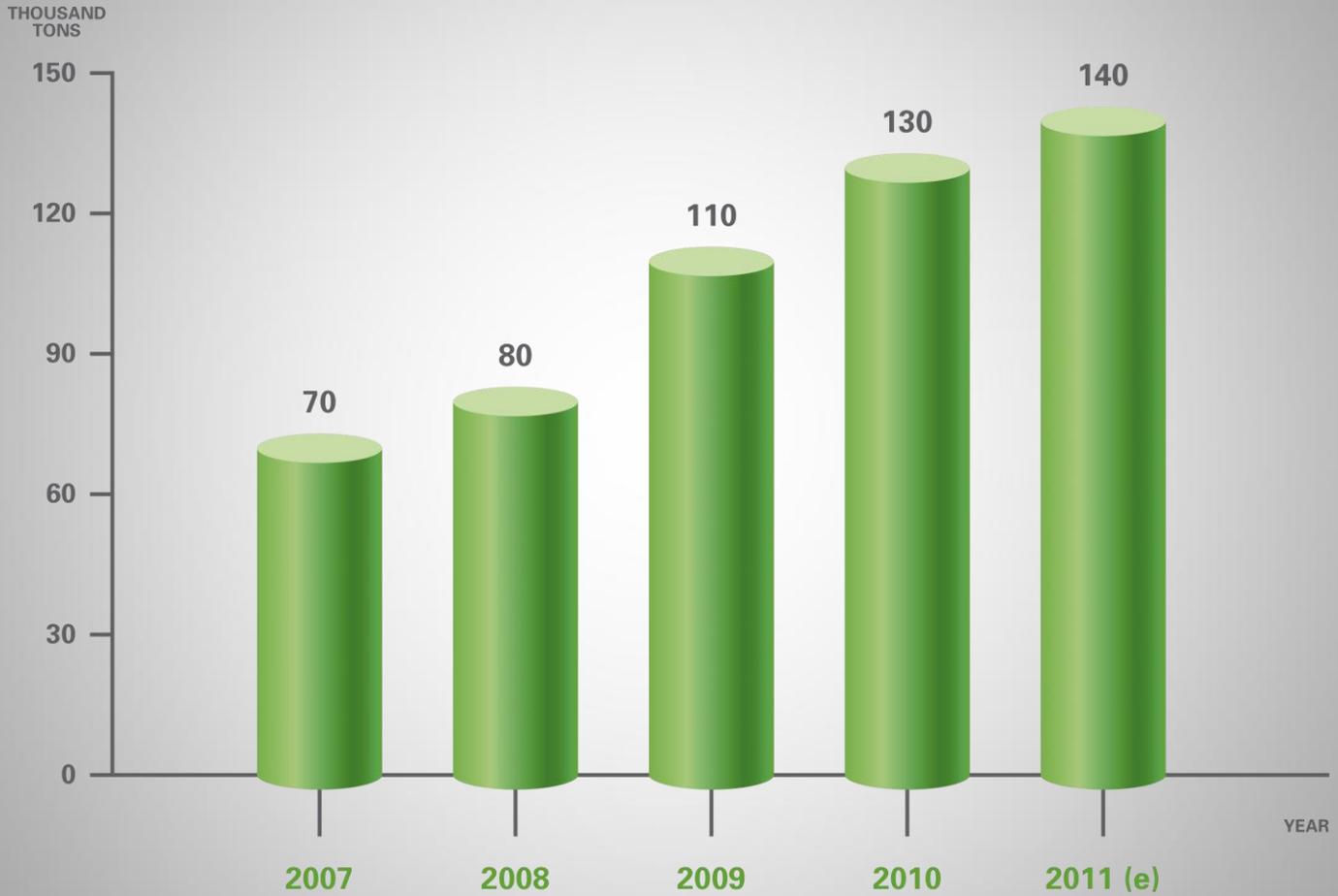
% GRUPO SEGURA RUIZ SALES IN EACH COUNTRY

# GROUP ANNUAL SALES

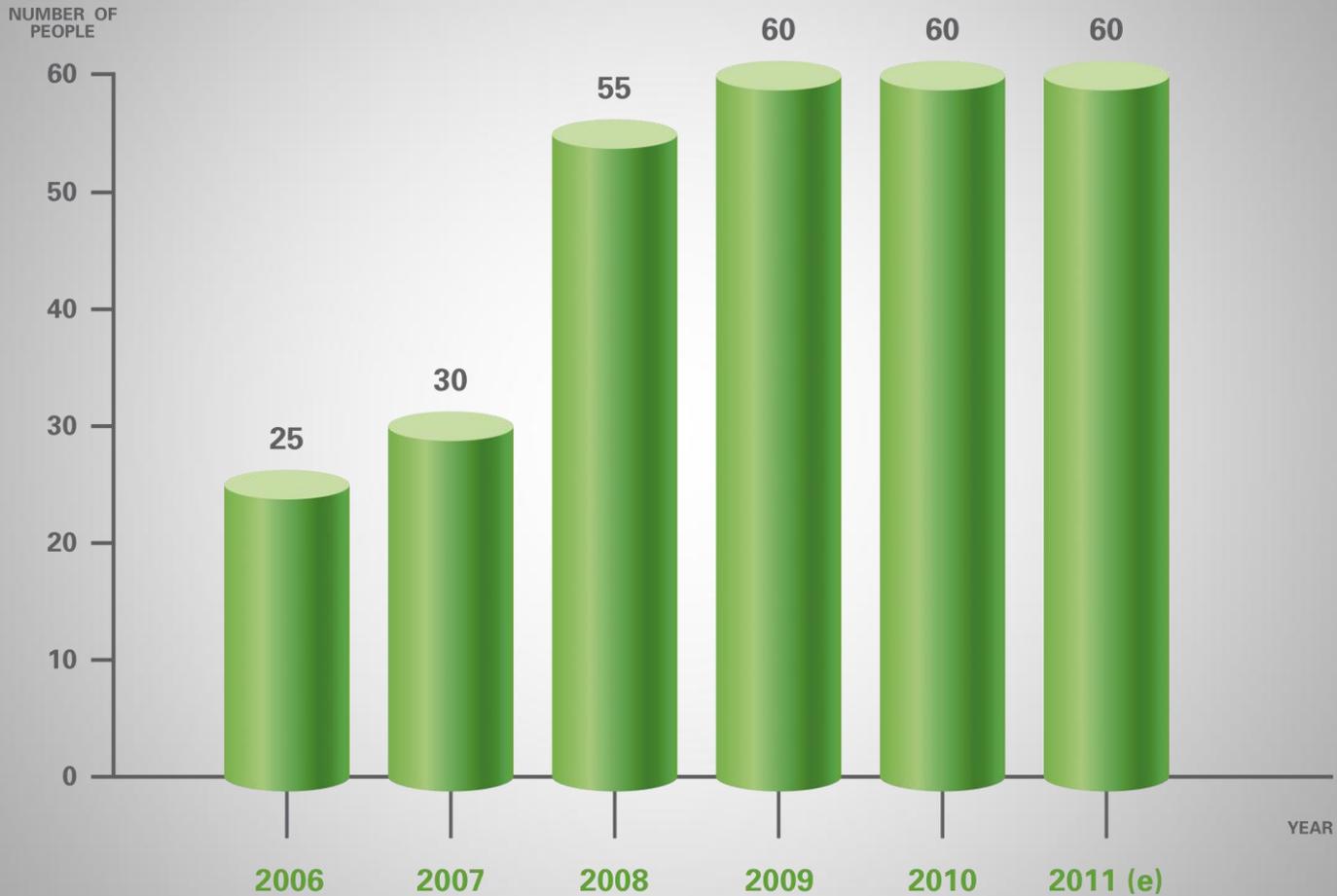


Total inversion in the last 10 years in **RESEARCH+DEVELOPMENT** = **5.500.000 €**

# VOLUME OF PROCESSED TONS



# STAFF



12 High Qualified Technical Experts

48 Specialized workers

# COMMERCIALIZED PRODUCTS & SERVICES



- Revaluation of metal scrap
- Iron
- Tin
- By-products (SEPOAN 601 TC)
- Applied technology

# GROUP COMPANIES



- Pedro Segura S.L.
- Chatarras y Metales Segura S.A.
- Segura Ruiz Troquelados S.L.
- Valfer S.L.
- Recibot S.L.
- G2 Flexodigital S.L.
- Metalmed S.L.
- Division Quimica Segura S.L.



**DIVISIÓN QUÍMICA**  
**GRUPO SEGURA RUIZ**

**CHEMICAL DIVISION**  
**OF GRUPO SEGURA RUIZ**



SEPOAN 601 TC





# SEPOAN 601 TC

$\text{SnCl}_4$  42%

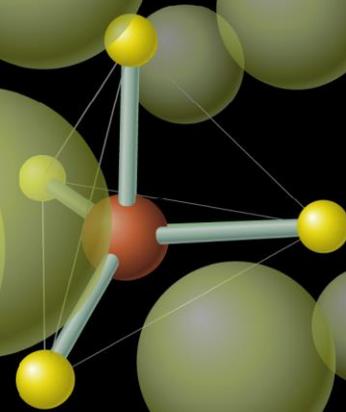
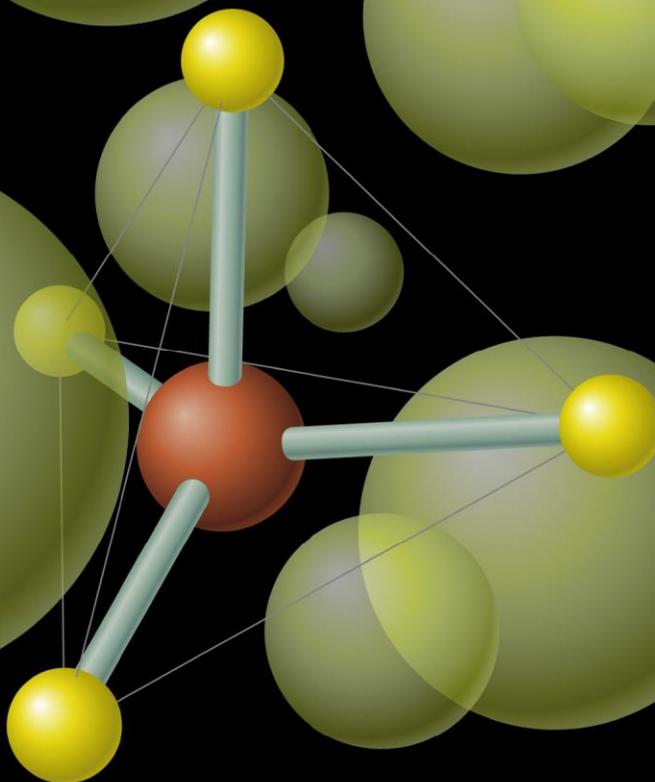
Aliphatic polyalcohols 45%

Hydrochloric acid 8%

Soluble Salts ~5%

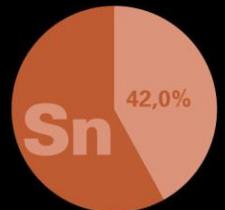
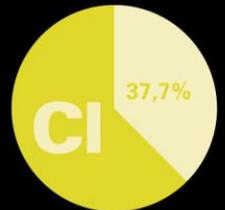
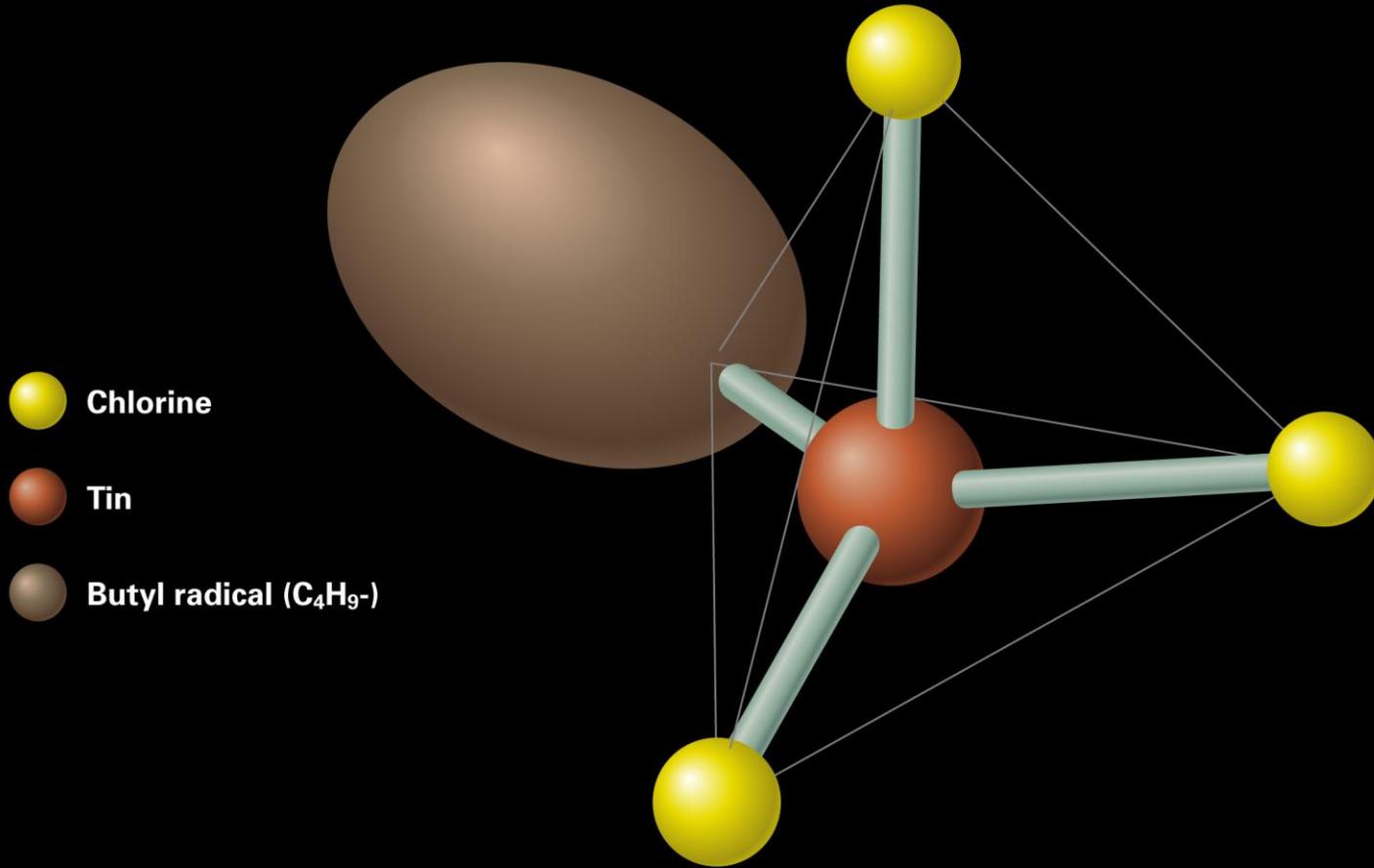
 Chlorine

 Tin





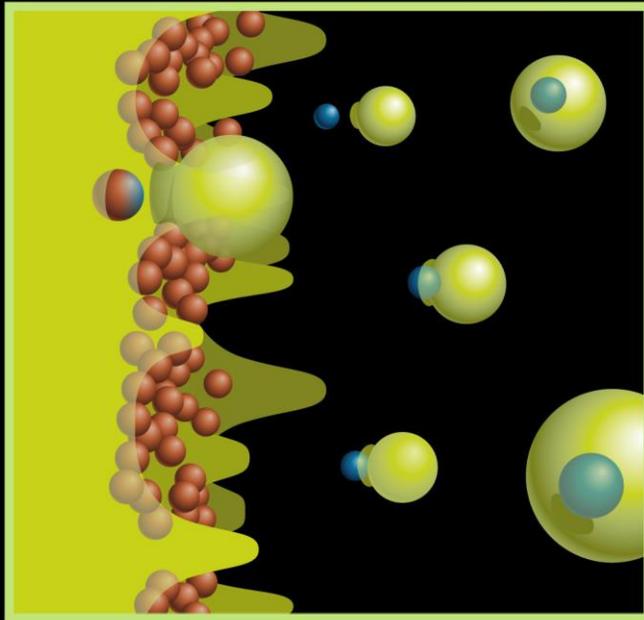
# TIN TRICHLORO MONOBUTYL



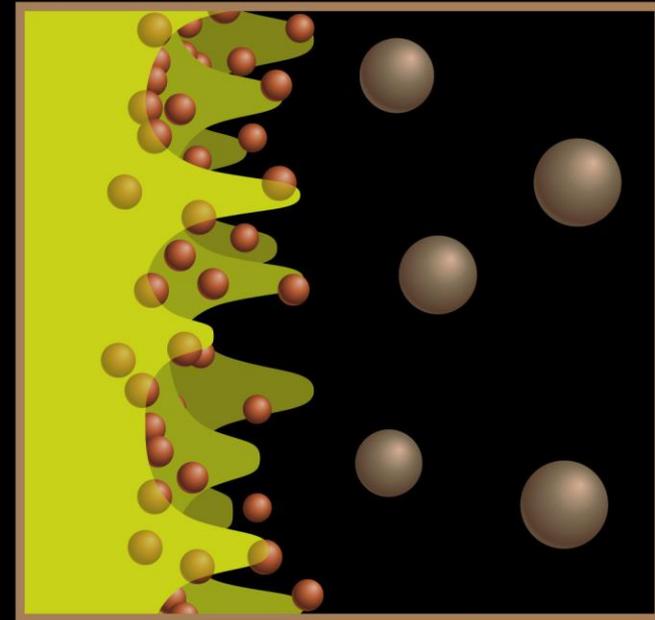


# MECHANISM OF ACTION COMPARISON

## SEPOAN 601 TC



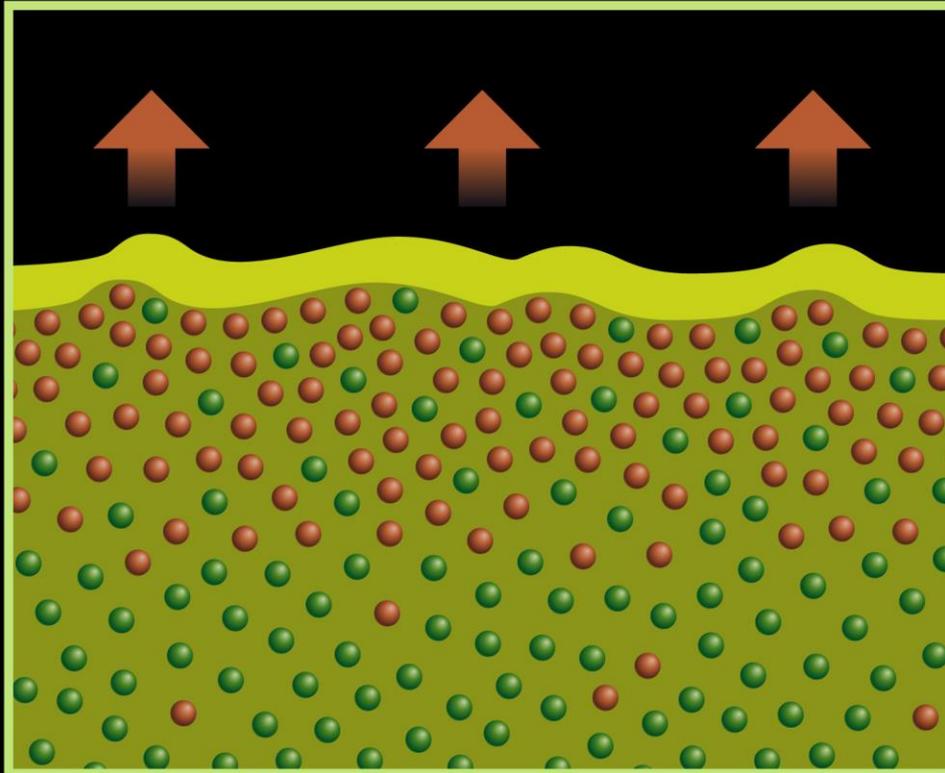
## TIN TRICHLORO MONOBUTYL



(especially designed to make the entrance of tin easier into the glass chemical structure)



# SEPOAN 601 TC ATOMS CONTENT



**IT CONTRIBUTES  
TO THE  
DISAPPEARANCE  
OF LATTICE DEFECTS**

**IT FAVORS  
THE OCCUPATION  
OF ACTIVE  
CENTERS**

**IT INCREASES  
THE CHEMICAL  
AFFINITY UNDER  
MOLECULAR LEVEL**

 Sn

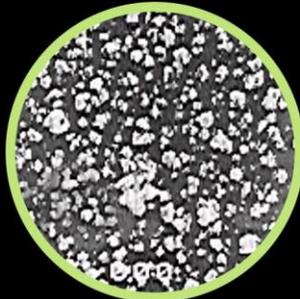
 Si

# GLASS SURFACE

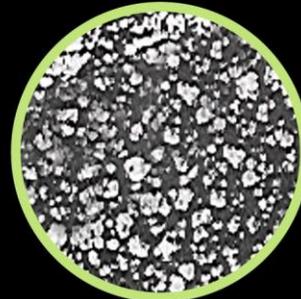


## SEPOAN 601 TC

SCANNING ELECTRON MICROSCOPE

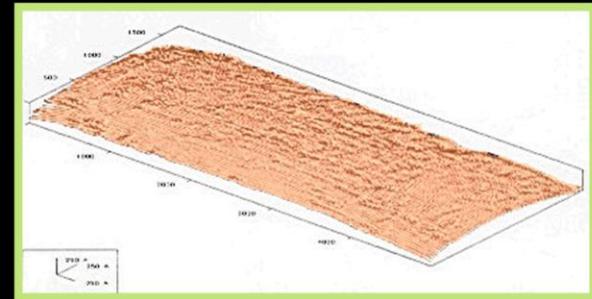


SAMPLE 1



SAMPLE 2

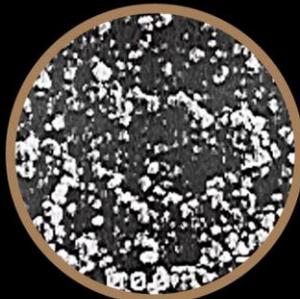
SCANNING TUNNELING MICROSCOPE



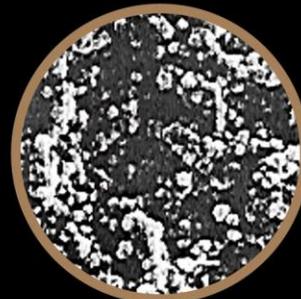
SAMPLE 3

## TIN TRICHLORO MONOBUTYL

SCANNING ELECTRON MICROSCOPE

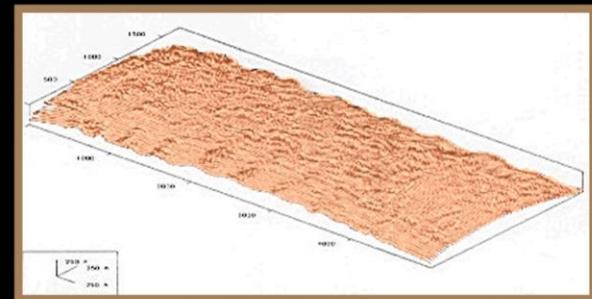


SAMPLE 1



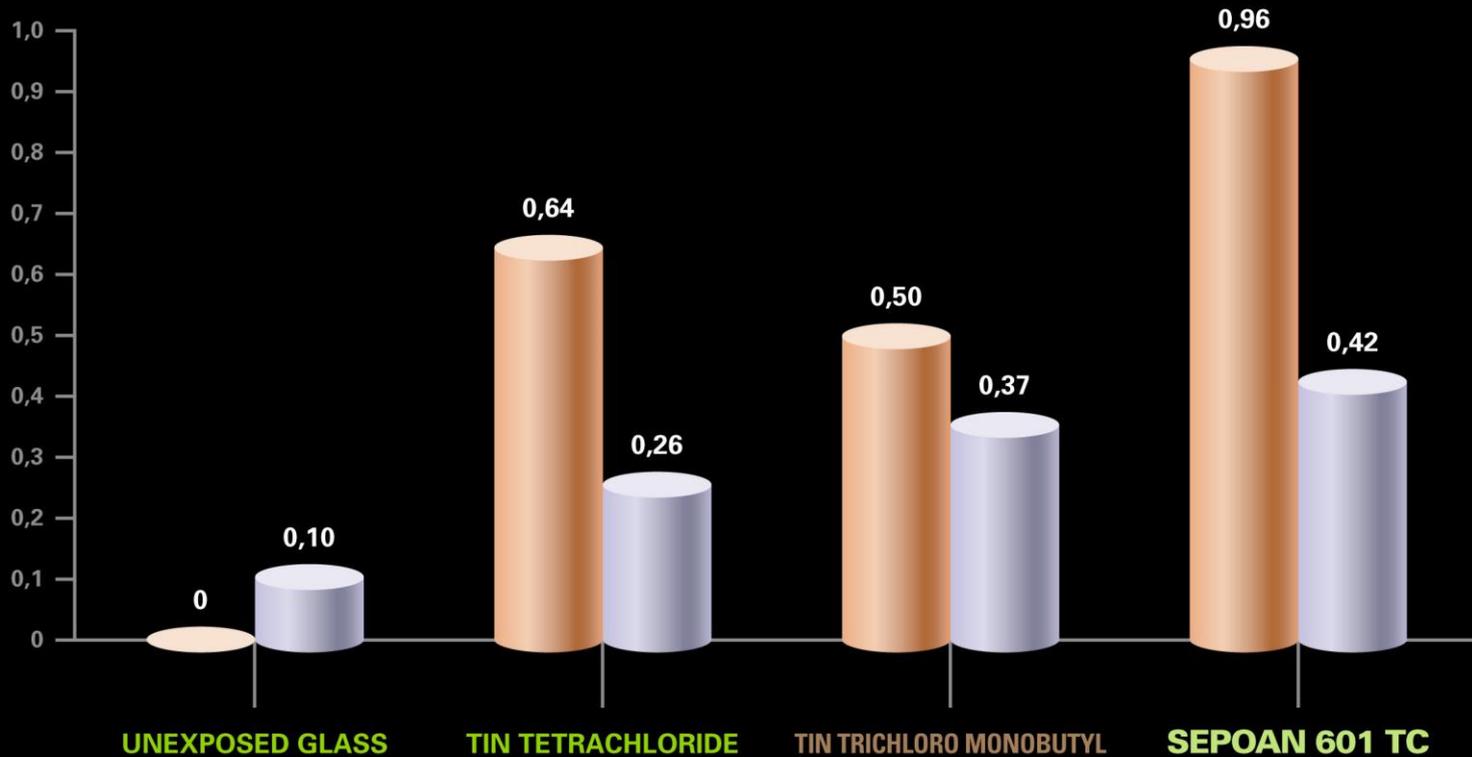
SAMPLE 2

SCANNING TUNNELING MICROSCOPE



SAMPLE 3

# SUPERFICIAL ATOMIC RELATIONS



Sn/Si



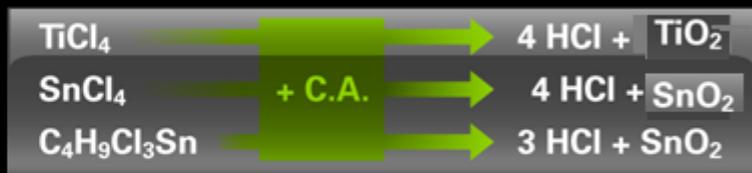
Ca/Si



# HEALTH AND SAFETY



# CALCULATION OF STOICHIOMETRIC HIGHER QUANTITIES



Tested products (1.000 g)	Expelled products (g)		
	HCl	SnO <sub>2</sub>	TiO <sub>2</sub>
TiCl <sub>4</sub>	768,83	-	420,75
SnCl <sub>4</sub>	560,03	578,06	-
TIN TRICHLORO MONOBUTYL	388,02	534,02	-
SEPOAN 601 TC	263,21	242,78	-

Per day

(Air flow 8 m<sup>3</sup>/min)

**SnCl<sub>4</sub>** (1,00Kg/día)

560.030 mg HCl / 11.520 m<sup>3</sup>/día = 48,6 mg/Nm<sup>3</sup> HCl

578.060 mg SnO<sub>2</sub> / 11.520 m<sup>3</sup>/día = 50,2 mg/Nm<sup>3</sup> SnO<sub>2</sub>

**TIN TRICHLORO MONOBUTYL** (1,00Kg/día)

388.020 mg HCl / 11.520 m<sup>3</sup>/día = 33,7 mg/Nm<sup>3</sup> HCl

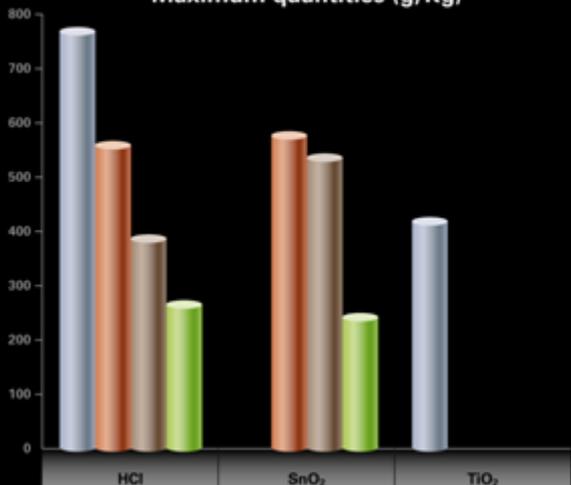
534.020 mg SnO<sub>2</sub> / 11.520 m<sup>3</sup>/día = 46,4 mg/Nm<sup>3</sup> SnO<sub>2</sub>

**SEPOAN 601 TC** (1,00Kg/día)

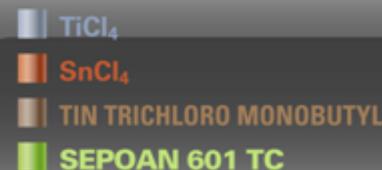
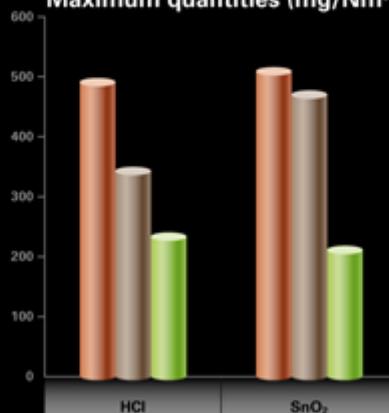
263.210 mg HCl / 11.520 m<sup>3</sup>/día = 22,8 mg/Nm<sup>3</sup> HCl

242.780 mg SnO<sub>2</sub> / 11.520 m<sup>3</sup>/día = 21,1 mg/Nm<sup>3</sup> SnO<sub>2</sub>

Maximum quantities (g/Kg)



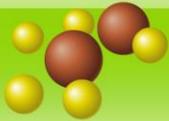
Maximum quantities (mg/Nm<sup>3</sup>)



# COMPARATIVE TABLE



## SEPOAN 601 TC



LOWER QUANTITY  
OF  $\text{Sn}_y \text{Cl}^-$



LESS SMELL  
AROUND  
THE TUNNEL

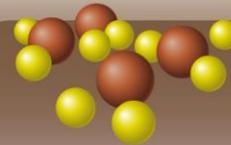


LESS AGGRESSIVE  
FOR THE HANDLER  
(does not dry skin and lips)



NO ORGANOMETALLIC  
BY-PRODUCTS

## TIN TRICHLORO MONOBUTYL



HIGHER QUANTITY  
OF  $\text{Sn}_y \text{Cl}^-$



MORE SMELL  
AROUND  
THE TUNNEL



MORE AGGRESSIVE  
FOR THE HANDLER

DIBUTYL  
TRIBUTYL  
TETRABUTYL

POSSIBLE APPEARANCE  
OF DANGEROUS  
ORGANOMETALLIC  
BY-PRODUCTS



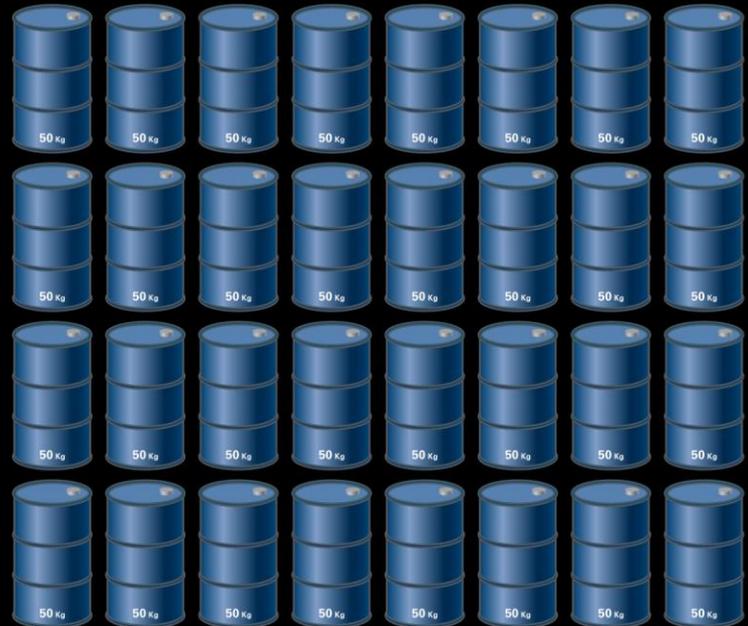
# STORAGE (1.600 kg)

## SEPOAN 601 TC



EASIER, FUNCTIONAL AND SAFER STORAGE

## TIN TRICHLORO MONOBUTYL





# APPLICATION

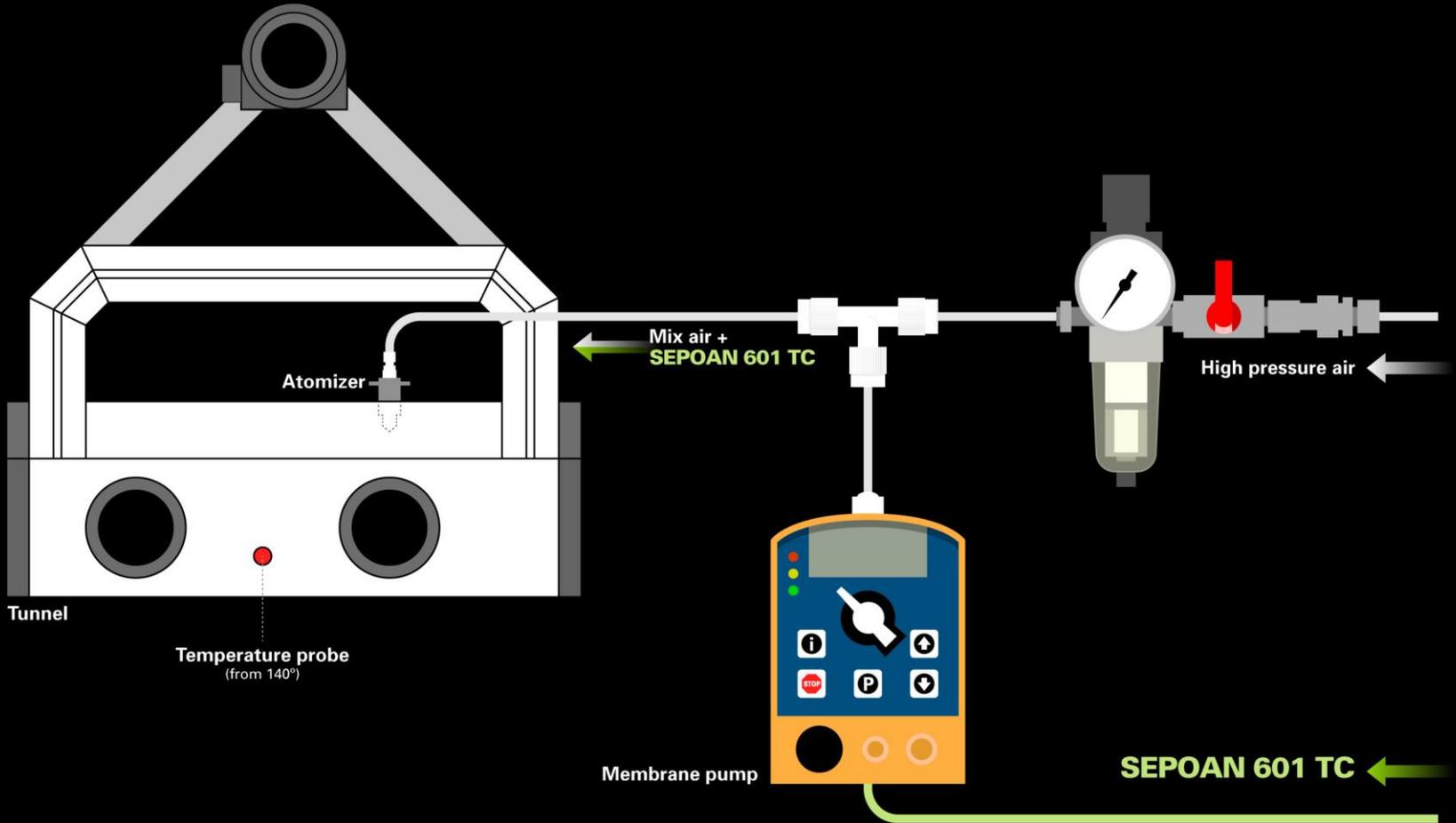


# **SEPOAN** **KIT COATING SYSTEM**

## **SEPOAN 601 TC** **NEW APPLICATION SYSTEM**

- **Easy to use**
- **It goes for any type of tunnel**
- **Homogeneity**
- **Best performance in the market**

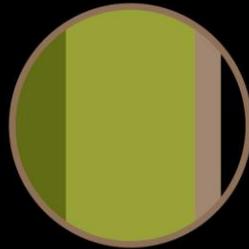
# APPLICATION GENERAL DIAGRAM



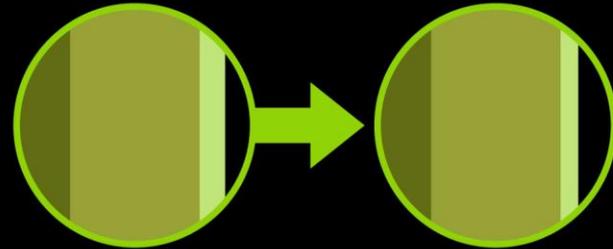


# RESISTANCE TESTS

After testing the resistance to scratch and abrasion, **SEPOAN 601 TC** was found to offer 10% more of resistance to scratch. This fact allows us to reduce CTU from 40-50 to 30-40.



**TIN TRICHLORO MONOBUTYL**



**SEPOAN 601 TC**

Very homogeneous cold treatment.  
Manual application, bottle by bottle, with modified polyethylene wax.  
Modified scratching equipment that reaches values higher than 30 kgf (30x2 kgf)  
Fixed sliding angle: 11°  
Number of tested bottles: 100

CTU	SCRATCHING RESISTANCE (kgf)		DIFFERENTIAL (%)
	TIN TRICHLORO MONOBUTYL	SEPOAN 601 TC	
0	1	1	0
10	7	8	+14
20	13	15	+15
25	22	23	+5
30	30	33	+10
40	55	59	+7
60	>60	>60	-



# ENVIRONMENT

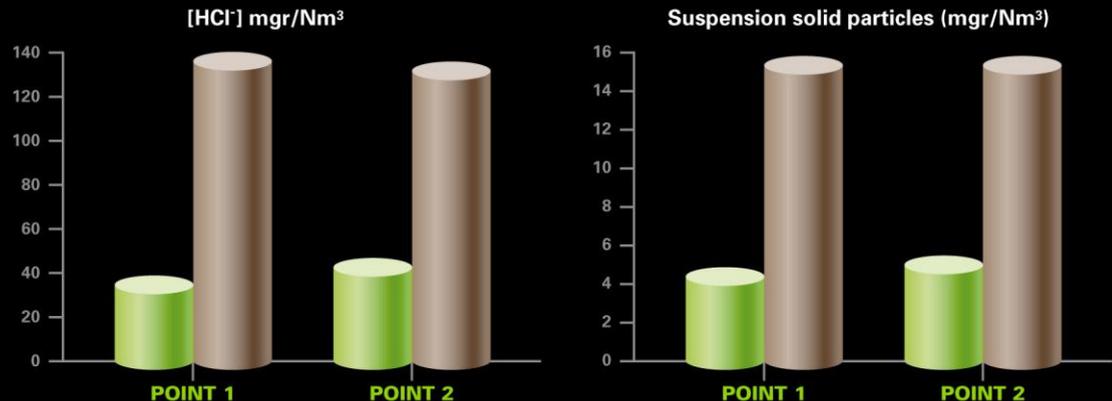


# ENVIRONMENTAL COMMITMENT

In keeping with our environmental policy and considering sustainable evolution, we have created **SEPOAN 601 TC**, product that emits the lower quantity of HCl and SnO<sub>2</sub> in the market.

POINT 1	TIN TRICHLORO MONOBUTYL			SEPOAN 601 TC		
	SAMPLE	[Cl] mgr/Nm <sup>3</sup>	SUSPENSION SOLID PARTICLES (mgr/Nm <sup>3</sup> )	SAMPLE	[Cl] mgr/Nm <sup>3</sup>	SUSPENSION SOLID PARTICLES (mgr/Nm <sup>3</sup> )
	1,M1	131,6	12,3	1,S1	35,8	4,0
	1,M2	138,9	12,5	1,S2	32,3	5,0
	1,M3	141,5	15,1	1,S3	39,9	4,2
	Average [Cl] = 137,3 mgr/Nm <sup>3</sup>			Average [Cl] = 36,0 mgr/Nm <sup>3</sup>		
Particles Average [Cl] = 13,3 mgr/Nm <sup>3</sup>			Particles Average [Cl] = 4,4 mgr/Nm <sup>3</sup>			
POINT 2	TIN TRICHLORO MONOBUTYL			SEPOAN 601 TC		
	SAMPLE	[Cl] mgr/Nm <sup>3</sup>	SUSPENSION SOLID PARTICLES (mgr/Nm <sup>3</sup> )	SAMPLE	[Cl] mgr/Nm <sup>3</sup>	SUSPENSION SOLID PARTICLES (mgr/Nm <sup>3</sup> )
	2,M1	145,5	15,6	2,S1	43,5	4,8
	2,M2	129,3	12,2	2,S2	40,6	5,0
	2,M3	128,6	14,8	2,S3	38,5	4,5
	Average [Cl] = 134,5 mgr/Nm <sup>3</sup>			Average [Cl] = 40,9 mgr/Nm <sup>3</sup>		
Particles Average [Cl] = 14,2 mgr/Nm <sup>3</sup>			Particles Average [Cl] = 4,8 mgr/Nm <sup>3</sup>			

## GASES ANALYTICAL Comparative research





# FULL RECYCLING PLAN

A REVOLUTION IN GLASS TREATMENT

# NO WASTES FOR THE GLASS MANUFACTURER

We take away, with no additional expense:



Solid waste in  
tunnels and tubes  
( $\text{SnO}_2$  + hydroxides + chloride)



Empty  
containers



# **CHRONOLOGY AND LOCATION**

# SEPOAN 601 TC CHRONOLOGY



- 1996** → Start of laboratory tests
- 2000** → Start of semi-industrial works
- 2001** → Start of industrial application
- 2006** → Industrial application (50tm)
- 2008** → product release to the market



# SEPOAN 601 TC IN THE WORLD





# SEPOAN 601 TC

**Top quality and no waste producer product**



**Easy industrial application product**



**A product improved in health and safety at work.**



**A product adapted to the needs of the customer.**



**A product specifically created for the treatment  
of glass containers**



**A product that improves the quality of processed containers**



# **REGULATIONS AND CERTIFICATES**



- **Quality Management Certificate** according to **UNE Regulation ISO 9001**
- **Standardization Certificate** issued by **ECOEMBES**
- **Standardization Certificate** issued by **ECOACERO**
- **Waste Management and Haulage Certificate** issued by The Government of Murcia

## **SEPOAN 601 TC**

- **Safety Data Sheet**
- **Technical Data Sheet**
- **Alimentary Certificate.**
- **Registro General Sanitario de Alimentos (Alimentary Register)**



**GRUPO SEGURA RUIZ**

GRUPO SEGURA RUIZ

# OBJETIVES



- Our priority is the satisfaction of our customers
- Our economical success depends heavily on our customers trust in us
- Continuous improvement in every working process
  - More safety
  - Respect for the environment
  - Natural resources preservation and protection
- Competitive prices and quality



## **1. Standardization of processes and products**

- People responsible for the process quality control
- Team work
- Continuing training program
- End product quality program
- Quality systems audit

## **2- Company standardization**

- Quality control policy
- Quality objectives are detailed in quality plans for every level of the company

# OUR EXPERIENCE



## Specialist in process and product

- Own technology

## Experience in customer management

- Built-in technical service for customer support

# OUR PROPOSAL FOR BUSINESS SERVICES



## Product experience

- Quality Assurance Certificate

## Customer Support technical service

- Help/recommendation for the control of the process

## “*Glocal*” supply

- Global and local

THANK YOU VERY MUCH



**GRUPO SEGURA RUIZ**