

# Silicone Guide

**Zhermack**   
*Industrial*

## **RTV2 ADDITION (PLATINUM) SILICONE RUBBER INHIBITION**

Be aware that contact with certain material can inhibit the curing of the RTV2 poly-addition silicone rubber. Common contaminants to be avoided are:

- Natural or synthetic rubber vulcanized with sulphur derivates;
- Poly-condensation RTV catalysed with metallic salts;
- PVC stabilizing agents;
- Amine cured epoxies;
- Sulphur (plasticine based of sulphur), Tin and Amines derivates.
- In case of doubt it's recommended to carry out a small test by pouring the mixture onto a small area of the object.
- Be also aware of possible cross-contamination; it's highly recommended to use only dedicated gear when processing poly-addition RTVs (including degassing devices).
- Ensure that the packaging is hermetically sealed again each time it is used.

## **RTV2 ADDITION (PLATINUM) SILICONE RUBBER**

**Note:** The working time and setting time are reduced if the temperature exceeds 23°C (ex. If the temperature is 40°C, the working time is reduced and the setting time is approximately halved).

If the temperature is less than 23°C both the working time and setting time increase considerably. (ex. If the temperature is 4°C, the working time doubles and the Setting time increases three times the minutes indicated at 23°C ).

- ❖ Please consider the following changement of setting time in case of increase of temperature ( considering a standard silicone with 18/20 minutes of WT like HT 33 TRASPARENT ).
- TEMPERATURE 18°C: TWT 32 MIN. SETTING TIME 360 MIN
- TEMPERATURE 23°C: TWT 21 MIN. SETTING TIME 210 MIN
- TEMPERATURE 30°C: TWT 12 MIN. SETTING TIME 75 MIN
- TEMPERATURE 35°C: TWT 8 MIN. SETTING TIME 60 MIN
- TEMPERATURE 40°C: TWT 6 MIN. SETTING TIME 45 MIN

### **The silicone rubber RTV 2 could resist in general till**

- ❖ - 40 °C
- ❖ + 250 °C

We know that some silicone like ZA 32 LT ROSSO, ZA 35 MOULD FAST and ZA 50 LT could resist till 400°C for short periods.

# Application and Casting material – Suggested Products to use

<b>SPECIAL EFFECTS</b>	mixing ratio	WT	ST	hardness ShA	Viscosity CpS	Tear strength N/mm	Tensile strenght N/mm2	Elongation %	Resistanc e at Temperature °C
ZA OF1	1 : 1	10 ~ 13	1h	2 ~ 3	1000 ~ 1100				
ZA35-15 Glass (Inglobing material)	1 : 1	40 ~ 50	6h	20 ± 3	160 ~ 240				
ZA 4 LT TRANSLUCENT	1 : 1	10 ~ 13	1h30	2 ~ 3	1700 ~ 1800	7 ~ 8	1.5 ± 0.3	> 500%	
ZA 8 LT	1 : 1	15 ~ 18	2h	8	900 ~ 1100	3.0 – 3.5	1.4	280%	
SilSkin 10 + Deadner	1 : 1	6 ~ 8	30	10 ± 2	4000-5000	15 ± 2	4 ± 0.5	650 ± 30 %	
ZA 22 Thixo Body	1 : 1	6	15 ~ 20	22 ± 2	>50000	> 14 ± 1	3.0 ± 0.3	400 ± 20 %	
<b>SILICONE FOR MAKE WAX CANDLES OR SOAP</b>	mixing ratio	WT	ST	hardness ShA	Viscosity CpS	Tear strength N/mm	Tensile strenght N/mm2	Elongation %	Resistanc e at Temperature °C
ZA 10 ORANGE	1 : 1	13 ~ 16	90 ~ 120	13 ± 2	4000 ~ 5000	17 ± 1	3 ± 0.3	600 ± 30%	250°C
ZA 13 Mould WT45	1 : 1	40 ~ 50	6 ~ 7h	13±2	3900 ~ 5300	10	3.0 ± 0.2	450±20 %	250°C
<b>SILICONE FOR DECORAED OBJECTS IN CONTACT WITH GOOD QUALITY GYPSUM AND standard RESINS</b>	mixing ratio	WT	ST	hardness ShA	Viscosity CpS	Tear strength N/mm	Tensile strenght N/mm2	Elongation %	Resistanc e at Temperature °C
ZA 10 ORANGE	1 : 1	13 ~ 16	90 ~ 120	13 ± 2	4000 ~ 5000	17 ± 1	3 ± 0.3	600 ± 30%	250°C
ZA 22 Mould	1 : 1	14 ~ 17	1h	21 ± 2	4000 ± 300	20	4.0 ± 0.2	380±20 %	250°C
ZA TT 2240	1 : 1	45	4 h	21 ± 2	7000 ± 300	19±2	3,5±0.5	500±70 %	250°C
ZA 22-45 Mould Neutro	1 : 1	45	7h	22	4000	20	4.0 ± 0.2	380±20 %	250°C
HT 33 Transparent	1 : 1	20 ~ 22	3h	33±2	7000 ~ 8000	16±2	4,7	430%	250°C

# Application and Casting material – Suggested Products to use

SILICONE FOR CEMENT	mixing ratio	WT	ST	hardness ShA	Viscosity CpS	Tear strength N/mm	Tensile strenght N/mm2	Elongation %	Resistanc e at Temperature °C
ZA RTV 30-60	1 : 1	60 ~ 70	6 ~ 8h	30	5000 ~ 7000	> 18 ± 1	5.5 ± 0.2	500 ± 30 %	250°C
ZA 13 Mould WT45	1 : 1	40 ~ 50	6 ~ 7h	13±2	3900 ~ 5300	10	3.0 ± 0.2	450±20 %	250°C
SILICONE FOR VACCUM BAGGING	mixing ratio	WT	ST	hardness ShA	Viscosity CpS	Tear strength N/mm	Tensile strenght N/mm2	Elongation %	Resistanc e at Temperature °C
ZA 22 WT2 Spray	1 : 1	120 seconds	15	21 ± 3	4000	> 13	> 3	300 ± 50%	250°C
ZA 22 WT3 Spray	1 : 1	180 seconds	30	21 ± 3	4000	11	3	360 ± 50%	250°C
ZA 22 WT20 Spray Thixo	1 : 1	20 minutes	3h	20	35000	10	3,5	400%	250°C
SILICONE FOR GYPSUM CASTING	mixing ratio	WT	ST	hardness ShA	Viscosity CpS	Tear strength N/mm	Tensile strenght N/mm2	Elongation %	Resistanc e at Temperature °C
ZA 28 Mould	1 : 1	14 ~ 17	1h	28 - 30	3000 ~ 4500	8	4.5±0.2	500±20 %	300°C
ZA 35 Mould	1 : 1	14 ~ 17	1h	32 - 38	3000 ~ 4500	8	4.5±0.2	500±20 %	300°C
ZA 35 Mould Fast	1 : 1	6	20	35 ± 2	4100 ± 300	8	3.0±0.2	300±20 %	300°C
SILICONE FOR POLIURETHANE FOAM CONTACT	mixing ratio	WT	ST	hardness ShA	Viscosity CpS	Tear strength N/mm	Tensile strenght N/mm2	Elongation %	Resistanc e at Temperature °C
HT 45 Transparent	1 : 1	10 ~ 12	1h ~ 1h30	43 ± 3	< 8000	19.0 ± 2	3.5 ± 0.5	370±40 %	250°C
SiSkin 10 + Deadner	1 : 1	6 ~ 8	30	10 ± 2	4000-5000	15 ± 2	4 ± 0.5	650 ± 30 %	250°C

# Application and Casting material – Suggested Products to use



GENERAL CASTING	mixing ratio	WT	ST	hardness ShA	Viscosity CpS	Tear strength N/mm	Tensile strenght N/mm2	Elongation %	Resistanc e at Temperatura °C
ZA 32 LT		8 ~ 10	90	31 ~ 34	5000 ~ 6000	16	>3.0	> 400 %	250°C
ZA 50 LT	1 : 1	15 ~ 20	3h	50 ± 3	20000	12	4	320%	250°C
HT 42 Grigio	1 : 1	22 ~ 26	1h30 ~ 2h	40 ± 2	24000 ~ 25000	17±1	6,5	350%	250°C
SILICONE FOR RAPID PROTOTYPING	mixing ratio	WT	ST	hardness ShA	Viscosity CpS	Tear strength N/mm	Tensile strenght N/mm2	Elongation %	Resistanc e at Temperatura °C
XTX 45 Dry	10 : 1	70 ~ 90	15h	40 ± 3	50000	> 20	6.0 ± 0.5	350 ± 20%	250 ~ 300 °C
XTX 45 Oil Bleeding	10 : 1	90	15h	42	50000	> 20	6.0 ± 0.5	350 ± 20%	250 ~ 300 °C
SILICONE FOR EPOXY RESINS									
SiSkin 10 + Deadner	1 : 1	6 ~ 8	30	10 ± 2	4000-5000	15 ± 2	4 ± 0.5	650 ± 30 %	250°C
ZA 22-45 Mould Neutro	1 : 1	45	7h	22	4000	20	4.0 ± 0.2	380±20 %	250°C
ZAX 60	10 : 1	60	24h	60 ± 3	160000	> 10	50. ± 0.5	200 ± 20%	300°C
SILICONE FOR LIQUID POLIURETHANE	mixing ratio	WT	ST	hardness ShA	Viscosity CpS	Tear strength N/mm	Tensile strenght N/mm2	Elongation %	Resistanc e at Temperatura °C
ZA 22-45 Mould Neutro	1 : 1	45	7h	22	4000	20	4.0 ± 0.2	380±20 %	250°C

# Application and Casting material – Suggested Products to use

SILICONE IN PASTE / PUTTY	mixing ratio	WT	ST	hardness ShA	Viscosity CpS	Tear strength N/mm	Tensile strenght N/mm2	Elongation %	Resistanc e at Tempera
ZA 45 Putty FAST	1 : 1	1m10s	3m30s	47 ± 3	/	8,7 ± 0,2	2.49 ± 0.2	170 ± 10%	
ZA 25 Putty Fast	1 : 1	1 ~	3m30s ~	25 -30	/	8 ± 0,2	2.3 ± 0.2	170 ± 10%	
Mark Plus Putty	1 : 1	10 ~ 15	2h ~ 2h30	37 ± 3	/	6	1.8 ± 0.2	176 ± 10%	
ZA P025 (ZCAT G03)	3%	90	18 ~ 22	19 ± 3	/	6.8 ± 0.8	2.8 ± 0.3	150 ± 10%	
ZA P025 (Gel 95)	3%	2	6 ~8	19 ± 3	/	6.8 ± 0.8	2.7 ± 0.3	170 ± 10%	

CONDENSATION SILICONE FOR CASTING GYPSUM AND RESINS ( NO POLIURETHANE)	mixing ratio	WT	ST	hardness ShA	Viscosity CpS	Tear strength N/mm	Tensile strenght N/mm2	Elongation %	Resistanc e at Tempera ture °C
ZC 10-120 (ZC 120 CURING AGENT)	Base + 5% curing agent	50/60	24h	14 shA	<b>33000</b>	15-16	3	450%	200°C
ZC 20-120 (ZC 120 CURING AGENT)	Base + 5% curing agent	90	24h	21 shA	<b>24000</b>	15-17	3	400%	200°C
ZA 30-120 (ZC 120 CURING AGENT)	Base + 5% curing agent	90	24h	30 ± 2 Sha	<b>27000</b>	17	3	320%	200°C

# Application and Casting material – Suggested Products to use



ALGINATE FOR BODY CASTING	mixing ratio	WT	ST	hardness ShA	Viscosity CpS	Tear strength N/mm	Tensile strenght N/mm2	Elongation %	Resistanc e at Temperature °C
AL PR	2 : 1 ( in weight)	2m30s ~ 3m30s		150 ~ 250					
AL MT	2 : 1 ( in weight)	9 ~ 13		150 ~ 250					



- LIST OF MAIN SILICONES, CHARACTERISTICS AND SUGGESTED APPLICATIONS

**ZA 13 MOULD WT 45** – suggested for mould making ( plaster, candles resins and concrete moulding)

**Vulcanized product**

<b>Mixing ratio</b>	<b>1 : 1</b>
<b>Viscosity of pre-catalyzed mixture</b>	<b>3900 - 5300 cP</b>
<b>Density of the Base component (g/cc)</b>	<b>1,06</b>
<b>Density of the Catalyst Component (g/cc)</b>	<b>1,06</b>
<b>Working time at 23 °C (73 °F)</b>	<b>WT= 40' – 50'</b>
<b>Setting time at 23 °C (73 °F)</b>	<b>ST= 6 – 7 h</b>
<b>Shore A hardness after 24 hours</b>	<b>13 ± 2 shA</b>
<b>Breaking load</b>	<b>3.0 ± 0.2 N/mm<sup>2</sup></b>
<b>Elongation at break</b>	<b>450±20 %</b>
<b>Tear strength (DIE B)</b>	<b>&gt;10 ± 1 N/mm</b>
<b>Tear strength (DIE C)</b>	<b>&gt;9 ± 1 N/mm</b>
<b>Reproduction details</b>	<b>2 micron</b>
<b>Dimensional variation after 24 hours</b>	<b>&lt; 0.05 %</b>

- Very fluid
- Dimensional Stability
- Long Pot life
- Great Elasticity
- Suitable for complicated geometry
- Long Setting time
- No oil inside
- Vacuum needed



**AVAILABLE PACKAGING**

- DT23741 1+1KG
- DT23451 5+5KG
- DT23452 25+25KG

• LIST OF MAIN SILICONES, CHARACTERISTICS AND SUGGESTED APPLICATIONS

**ZA 10 orange** – suggested for mould making ( plaster, candles)

Vulcanized product

Mixing ratio	1 : 1
Density of the Base component	1,10 g/cc
Density of the Base component	1,11 g/cc
Viscosity of pre-catalyzation mixture	4000 -5000 cP
Colour	Orange
Working time at 23 °C (73 °F)	WT= 13 -16 min
Setting time at 23 °C (73 °F)	ST= 90-120 min
Shore A hardness after 24 hours	13 ± 2 sh “A
Breaking load	3 ±0,3 N/mm <sup>2</sup>
Elongation at break	600 ± 30%
Tear strength	17.0± 1 N/mm
Tear Resistance (DIE B)	16 ± 1 N/mm
Tear Resistance (DIE C)	17 ± 1 N/mm
Reproduction of details	2 micron
Dimensional variation after 24 hours	-0.05 %

- Very fluid
- Dimensional Stability
- Long Pot life
- Great Elasticity
- Suitable for complicated geometry
- No oil inside
- No Vacuum needed

**AVAILABLE PACKAGING**

- DT23826 1+1kg
- DT23922 5+5KG
- DT23825 25+25KG



## ZA 22 MOULD

( available also in a longer version pot life 40 minutes,  
setting time 6/8 hours: ZA 22-45 MOULD NEUTRO)

Suggested for mould making (plaster and resins)



<b>Mixing ratio</b>	<b>1 : 1</b>
<b>Viscosity of pre-catalyzed mixture</b>	<b>4000 ± 300 cP</b>
<b>Density of the Base component (g/cc)</b>	<b>1,13</b>
<b>Density of the Catalyst component (g/cc)</b>	<b>1,13</b>
<b>Working time at 23 °C (73 °F)</b>	<b>WT= 14' – 17'</b>
<b>Setting time at 23 °C (73 °F)</b>	<b>ST= 60'</b>
<b>Shore A hardness after 24 hours</b>	<b>21 ± 2 shA</b>
<b>Breaking load</b>	<b>4.0 ± 0.2 N/mm<sup>2</sup></b>
<b>Elongation at break</b>	<b>380±20 %</b>
<b>Tear strength</b>	<b>&gt;20 ± 1 N/mm</b>
<b>Reproduction of details</b>	<b>2 micron</b>
<b>Dimensional variation after 24 hours</b>	<b>-0.05 %</b>

- Very fluid
- Dimensional Stability
- Great Elasticity
- Suitable for complicated geometry
- Fast Setting time
- No oil inside
- No Vacuum needed

### AVAILABLE PACKAGING

- DT23341 1+1KG
- DT23342 5+5KG
- DT23342 25+25KG

## HT 33 TRANSPARENT

Available also in a fast version HT 33 FAST and in red color HT 33 Rosso for Jewelry ( not loose the 3<sup>rd</sup> dimension).

Suggested for mould making, concrete molding and Jewelry (for beginners to see the mould inside)



<b>Mixing ratio</b>	<b>1 : 1</b>
<b>Viscosity of pre-catalyzation mixture</b>	<b>7000 -8000 cP</b>
<b>Density of the Base component (g/cc)</b>	<b>1,09</b>
<b>Density of the Catalyst component (g/cc)</b>	<b>1,09</b>
<b>Working time at 23 °C (73 °F)</b>	<b>WT= 20' – 22'</b>
<b>Setting time at 23 °C (73 °F)</b>	<b>ST= 180'</b>
<b>Shore A hardness after 24 hours</b>	<b>33±2 shA</b>
<b>Tensile Strength</b>	<b>4.7 N/mm<sup>2</sup></b>
<b>Elongation at break</b>	<b>430 %</b>
<b>Tear strength</b>	<b>16±2 N/mm</b>
<b>Reproduction of details</b>	<b>2 micron</b>
<b>Dimensional variation after 24 hours</b>	<b>-0.05 %</b>

- Dimensional Stability
- Great Elasticity
- Used for simple/ not complicated geometries
- No oil inside
- Vacuum needed

### AVAILABLE PACKAGING

- DT23171 1+1KG
- DT23172 5+5KG
- DT23173 25+25KG

## ZA RTV 30 60

Available also in a fast version **ZA RTV 30 FAST**

Suggested for mould making and concrete moulding.



- Dimensional Stability
- Great Elasticity
- Good fluidity
- Long Pot life and setting time
- No oil inside
- No Vacuum, very good auto degasing

<b>Mixing ratio</b>	<b>1 : 1</b>
<b>Viscosity of pre-catalyzation mixture</b>	<b>5000 - 7000 cP</b>
<b>Density of the Base component (g/cc)</b>	<b>1,13</b>
<b>Density of the Catalyst component (g/cc)</b>	<b>1,14</b>
<b>Working time at 23 °C (73 °F)</b>	<b>WT= 70-90'</b>
<b>Setting time at 23 °C (73 °F)</b>	<b>ST= 6/8 hours</b>
<b>Shore A hardness after 24 hours</b>	<b>30 ± 2 shA</b>
<b>Breaking load</b>	<b>5.5 ± 0.2 N/mm<sup>2</sup></b>
<b>Elongation at break</b>	<b>500 ± 30 %</b>
<b>Tear strength</b>	<b>&gt;18 ± 1 N/mm</b>
<b>Reproduction of details</b>	<b>2 micron</b>
<b>Dimensional variation after 24 hours</b>	<b>-0.05 %</b>

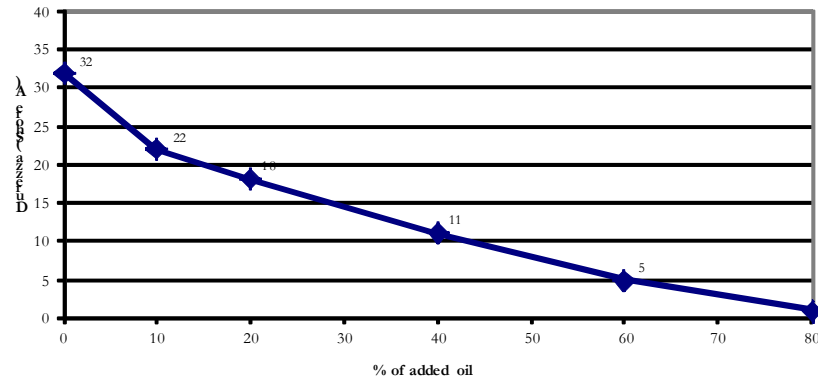
### AVAILABLE PACKAGING

- DT24070 1+1KG
- DT24071 5+5KG
- DT24072 25+25KG

## ZA 32 LT

Suggested for pad printing

Changement of the hardness  
Hardness (shA) after 24 h a 23 C



<b>Mixing ratio</b>	<b>1 : 1</b>
<b>Viscosity of pre-catalyzation mixture</b>	<b>5000 - 6000 cP</b>
<b>Specific weight</b>	<b>1.24 g/cc</b>
<b>Mixing time at 23 °C (73 °F)</b>	<b>1'</b>
<b>Working time at 23 °C (73 °F)</b>	<b>WT= 8' - 10'</b>
<b>Setting time at 23 °C (73 °F)</b>	<b>ST= 90'</b>
<b>Shore A hardness after 24 hours</b>	<b>31-34 shA</b>
<b>Tensile strenght</b>	<b>&gt;3.0 N/mm<sup>2</sup></b>
<b>Elongation at break</b>	<b>&gt; 400 %</b>
<b>Tear strength</b>	<b>&gt; 16 N/mm</b>
<b>Reproduction of details</b>	<b>2 micron</b>
<b>Dimensional variation after 24 hours</b>	<b>-0.05 %</b>

- Dimensional Stability
- Great Elasticity
- Good fluidity



**IMPORTANT INFORMATION :** The addition silicone is much more suggested in pad printing than the condensation silicone, because the surface of the pad need to be less cleaned than the condensation silicone's pad. In fact the condensation is more oily and release more substances on the surface. To well transfer the ink the pad need to be often cleaned.

#### AVAILABLE PACKAGING

- DT23026 1+1KG
- DT23027 5+5KG
- DT23028 25+25KG





**ZA 35 MOULD - ZA 35 MOULD FAST ( FAST  
VERSION)** Suggested to realize mother molds.



Mixing ratio	1 : 1
Density	1.16-1.18 g/cc
Viscosity of pre-catalization mixture	3000 -4500 cP
Working time at 23 °C (73 °F)	14' – 17'
Setting time at 23 °C (73 °F)	60'
Shore A hardness after 24 hours	32 - 38 shA
Breaking load	4.5±0.2 N/mm <sup>2</sup>
Elongation at break	500±20 %
Tear strength DIE B	10±1 N/mm
Tear strength DIE C	13±1 N/mm

**AVAILABLE PACKAGING**

- DT23312 5+5KG

- Very fluid
- Very fast
- Used for simple/ not complicated geometries
- No oil inside
- No Vacuum needed

Mixing ratio	1 : 1
Specific weight	1.16-1.18 g/cc
Viscosity of pre-catalization mixture	4100 ± 300 cP
Mixing time at 23 °C (73 °F)	1'
Working time at 23 °C (73 °F)	WT= 6'
Setting time at 23 °C (73 °F)	ST= 20'
Shore A hardness after 24 hours	35 ± 2 shA
Breaking load	3.0±0.2 N/mm <sup>2</sup>
Elongation at break	300±20 %
Tear strength DIE B	7±1 N/mm
Tear strength DIE C	9±1 N/mm

**AVAILABLE PACKAGING**

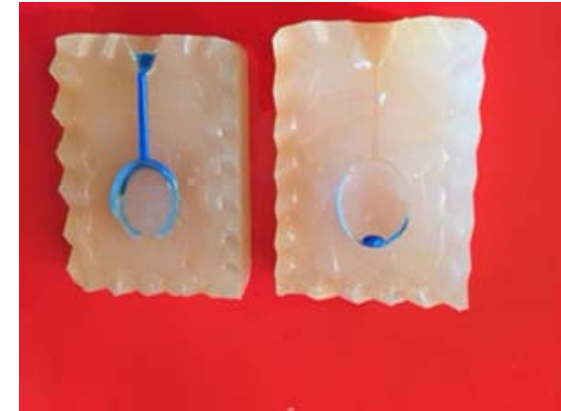
- DT23462 5+5KG



## HT 45 TRASPARENTE

Used in jewelry and also in rapid prototyping (small objects).

Mixing ratio	1 : 1
Viscosity of pre-catalyzation mixture	< 8'000 cP
Density	1,1 g/cc
Working time at 23 °C (73 °F)	WT= 10' - 12'
Setting time at 23 °C (73 °F)	ST= 60' - 90'
Shore A hardness after 24 hours	43 ± 3 shA
Breaking load	3.5 ± 0.5 N/mm <sup>2</sup>
Elongation at break (%)	370±40 %
Tear strength	19.0 ± 2.0 N/mm



### AVAILABLE PACKAGING

- DT23831 1+1KG
- DT23832 5+5KG
- DT23833 25+25KG

- Used for simple/ not complicated geometries
- No oil inside
- Vacuum needed
- Lower viscosity

## HT 42 GRIGIO

Used in jewelry.

<b>Mixing ratio</b>	<b>1 : 1</b>
<b>Viscosity of pre-catalyzation mixture</b>	<b>24000-25000 cP</b>
<b>Mixing time at 23 °C (73 °F)</b>	<b>1'</b>
<b>Working time at 23 °C (73 °F)</b>	<b>WT= 22' – 26'</b>
<b>Setting time at 23 °C (73 °F)</b>	<b>ST=1'30 h - 2'00 h</b>
<b>Shore A hardness after 24 hours</b>	<b>40 ± 2 shA</b>
<b>Tensil Strenght</b>	<b>6.5 N/mm<sup>2</sup></b>
<b>Elongation at break</b>	<b>350 %</b>
<b>Tear strength</b>	<b>17±1 N/mm</b>
<b>Reproduction of details</b>	<b>2 micron</b>
<b>Dimensional variation after 24 hours</b>	<b>-0.05 %</b>

- High Viscosity
- Used for simple/ not complicated geometries
- No oil inside
- Vacuum needed

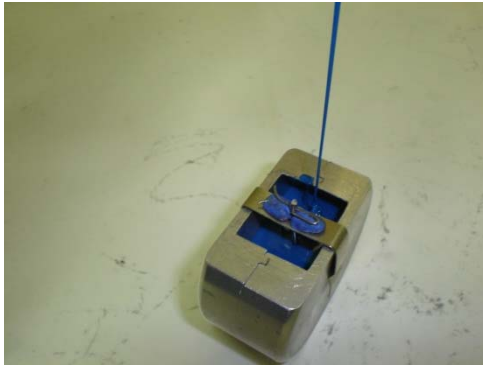


### AVAILABLE PACKAGING

- DT23731 1+1KG
- DT23732 5+5KG
- DT23733 25+25KG

## ZA 50 LT

Used in Jewelry and mould making.



- High viscosity
- Used for simple/ not complicated geometries
- No oil inside
- Vacuum needed
- Could resist to aggressive formulation of resins

### AVAILABLE PACKAGING

- DT23191 1+1KG
- DT23192 5+5KG
- DT23193 25+25KG

<b>Mixing ratio</b>	<b>1 : 1</b>
<b>Viscosity of pre-catalyzation mixture</b>	<b>≈ 20000 cP</b>
<b>Total Working time at 23 °C (73 °F)</b>	<b>WT= 15' – 20'</b>
<b>Setting time at 23 °C (73 °F)</b>	<b>ST= 180'</b>
<b>Shore A hardness after 24 hours</b>	<b>50 ± 3</b>
<b>Tensile strenght</b>	<b>4,0 N/mm2</b>
<b>Elongation at break</b>	<b>320 %</b>
<b>Tear resistance (die C)</b>	<b>12 N/mm</b>
<b>Reproduction of details</b>	<b>2 micron</b>
<b>Dimensional variation after 24 hours</b>	<b>-0.05 %</b>

## **AVAILABLE ACCESSORIES FOR THE ADDITION SILICONES (1:1)**

- ✓ Delayer ( enlarge the WT of a product);

COMMERCIAL CODE DT40040

- ✓ Separator ( used between silicone/ silicone or silicone and other surface);

COMMERCIAL CODE DT40000

- ✓ Thixo agent both for addition and condensation ( used to increase the viscosity and use it in vertical surface).

COMMERCIAL CODE DT00673

## ZAX 60 - MIXING RATIO 10:1

Mould making for special applications (suggested for Polyurethane resins, Epoxy resins and Polyester resins). Suggestion: put a lay of silicone oil on the hardened silicone before to cast the resin, this procedure enlarge the life of the mould.

Part A (part 10) [catalyst]	White
Part B (part 1) [base]	Blue
Viscosity Part A (part 10)	160.000 cPs
Density Part A (part 10)	1,28 g/cc
Viscosity Part B (part 1)	1.500 cPs
Density Part B (Part 1)	0,97 g/cc
Viscosity of pre-catalyzation mixture	100.000 cPs
Mixing ratio (part A/part B)	10 : 1
Density	1,24 g/cc
Working time (@ 23 C)	≈ 60 min
Setting time (@ 23 C)	≈ 24 ore
Hardness after 24h	60 ± 3 sh”A”
Tear strenght	> 10 N/mm (>10 ppi)
Tensile strenght	5,0 ± 0,5 N/mm2 (1090 psi)
Elongation at break	200 ± 20%

- High viscosity
- No oil inside
- Vacuum needed
- Could resist to aggressive formulation of resins



### AVAILABLE PACKAGING

- DT24303 25KG + DT24301 2,5kg
- DT24302 5KG + DT24300 500g

## ZA 22 THIXO – thixo silicone

Used in Body Casting and Special Effects.



### AVAILABLE PACKAGING

- DT23334 1+1kg
- DT23335 3+3KG
- DT23336 25+25KG



### TYPICAL PROPERTIES

<b>Vulcanized color</b>	<b>Skin tone</b>
<b>Mixing ratio</b>	<b>1: 1</b>
<b>Viscosity of pre-catalyzation mixture</b>	<b>&gt; 50'000cP</b>
<b>Working time at 23 °C (73 °F)</b>	<b>6<sup>min</sup> 00<sup>sec</sup></b>
<b>Setting time at 23 °C (73 °F)</b>	<b>15<sup>min</sup> 00<sup>sec</sup> ÷ 20<sup>min</sup> 00<sup>sec</sup></b>
<b>Shore A hardness after 24 hours</b>	<b>22 ± 2 shA</b>
<b>Tensile Strenght</b>	<b>3.0 ± 0.3 N/mm<sup>2</sup></b>
<b>Elongation at break</b>	<b>400 ± 20 %</b>
<b>Tear strength</b>	<b>&gt;14 ± 1 N/mm</b>
<b>Reproduction of details</b>	<b>2 micron</b>
<b>Dimensional variation after 24 hours</b>	<b>-0.05 %</b>

- High viscosity
- Used in vertical surface
- Cosmetic pigments
- fast silicone
- Reusable moulds

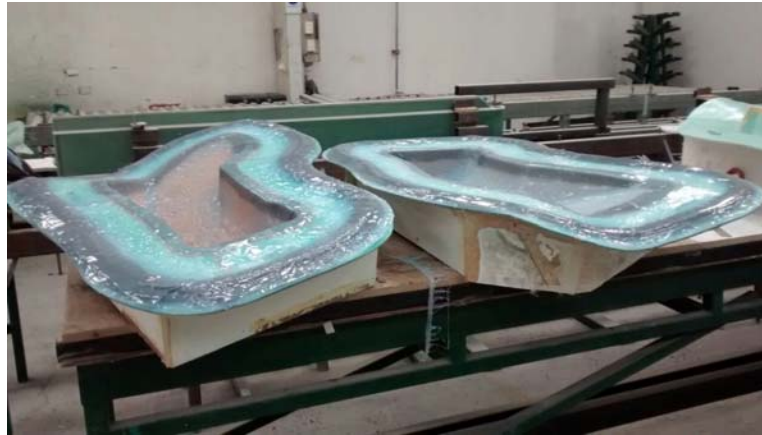


**ZA 22 WT 2 SPRAY**

**(very fluid – for silicone bags)**

Used for vacuum bagging.

In vacuum bagging the suggest mold's thickness is minimum 6 mm).



**ZA 22 WT 2 SPRAY**

Aspect	fluid
Colour BASE	Light blue
Colour CATALYST	Translucent
Mixing ratio	1 : 1
Viscosity Base	3500 – 4500 cP
Viscosity Catalyst	3500 – 4500 cP
Density	1,08 g/cc
Total working time a 23°C	120"
Setting time a 23°C	15'
Hardness after 1 h	21 ± 3 sh "A"
Tear strenght (DIE B)	> 13 N/mm
Tensile Strenght	> 3 N/mm <sup>2</sup>
Elongation	300 ± 50%

**AVAILABLE PACKAGING**

- DT23865 1+1kg
- DT23866 3+3KG
- DT23867 25+25KG

- For reusable moulds



## ZA 22-20 SPRAY THIXO

### for restoration and silicone bags

Used both for vacuum bagging and restoration vertical surfaces.

In vacuum bagging the suggest mold's thickness is minimum 6 mm).



## ZA 22 WT 20 SPRAY thixo

Mixing ratio / Rapporto di miscelazione	<b>1 : 1</b>	B : C
Color / Colore	<b>azzurro</b>	
Density / Densità	<b>1,08</b>	g/cc
Viscosity of pre-catalyzation mixture / Viscosità miscelato	<b>35000</b>	cPs
Working time at 23° C (73° F) / Tempo di lavoro a 23° C (73° F)	<b>20</b>	minutes
Setting time at 23° C (73° F) / Tempo di indurimento a 23° C (73° F)	<b>3</b>	hours
Shore A hardness after 24 hours / Durezza dopo 24 ore	<b>20</b>	sh A
Tensil Strenght / Resistenza alla trazione	<b>3,5</b>	N/mm <sup>2</sup>
Elongation at break / Allungamento a rottura	<b>400</b>	%
Tear strength (Die B) / Resistenza alla lacerazione (Die B)	<b>10</b>	N/mm

- The Thixo formulation is used for restauration
- (vertical surfaces is also brushable)
- Reusable moulds



## ZA 35-15 GLASS

### Used in Special Effects.

Pay attention to fulfill and cover immediately the object inside the container. This is of help to not in globe air and detach the object from the silicone.



- Very liquid
- Water effect
- Very fragile
- keep transparence for 2 years
- Used to in globe objects
- Used to reproduce the broken ice or glass.

### AVAILABLE PACKAGING

- DT20040 1+1kg
- DT20041 3+3KG
- DT20042 25+25KG



<b>Mixing ratio</b>	<b>1 : 1</b>
<b>Viscosity of pre-catalyztion mixture</b>	<b>160 - 240 cP</b>
<b>Mixing time at 23 °C (73 °F)</b>	<b>1'</b>
<b>Working time at 23 °C (73 °F)</b>	<b>WT= 40' - 50'</b>
<b>Setting time at 23 °C (73 °F)</b>	<b>ST=6 h</b>
<b>Shore A hardness after 24 hours</b>	<b>20 ± 3 shA</b>

**AVAILABLE PACKAGING**

- DT21144 25 kg base (A)
- DT21143 2,5 kg dry (B)
- DT21147 2,5 kg oil bleeding (B)

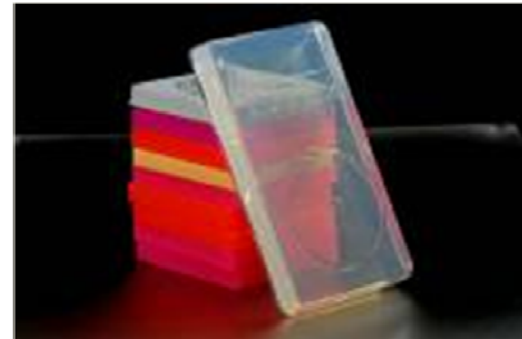
**XTX 45 (part A)**

**DRY version (part B)**

**OIL BLEEDING version (part B)**

**(for contact with aggressive resins)**

Used in rapid prototyping.



<b>Part A (part 10) [catalyst]</b>	<b>Transparent</b>
<b>Part B (part 1) [base]</b>	<b>Translucent</b>
<b>Viscosity Part A (part 10)</b>	<b>70000 cPs</b>
<b>Viscosity Part B (part 1)</b>	<b>3000 cPs</b>
<b>Viscosity of pre-catalyzation mixture</b>	<b>≈ 50000 cPs</b>
<b>Mixing ratio (part A/part B)</b>	<b>10 : 1</b>
<b>Density</b>	<b>1,12 g/cc</b>
<b>Working time (@ 23 C)</b>	<b>70 - 90 min</b>
<b>Setting time (@ 23 C)</b>	<b>≈ 9 ore</b>
<b>Hardness after 24h</b>	<b>40 ± 3 sh”A”</b>
<b>Tear strenght</b>	<b>&gt; 20 N/mm</b>
<b>Tensile strenght</b>	<b>6,0 ± 0,5 N/mm2</b>
<b>Elongation at break</b>	<b>350 ± 20%</b>
<b>Resistance of temperature</b>	<b>250°C – 300 °C</b>

- High viscosity
- Transparent
- Vacuum needed
- Long Pot life
- Resistant to resins

- Putties
- Very fast
- Mixing ratio 1:1

**ZA 25 Putty fast 1:1 ( green 25 shA)**

**ZA 45 Putty Fast 1:1 ( light blue 45 shA)**

Used in mould making to reproduce small and detailed objects .

<b>Form</b>	<b>Putty form</b>
<b>color</b>	<b>light blue</b>
<b>Mixing ratio</b>	<b>1 : 1</b>
<b>Specific weight (g/cm<sup>3</sup>)</b>	<b>1,24</b>
<b>Working time at 23 °C (73 °F)</b>	<b>1' 10"</b>
<b>Setting time at 23 °C (73 °F)</b>	<b>3' 30"</b>
<b>Shore A hardness after 24 hours</b>	<b>47 ± 3 sh "A"</b>
<b>Tensile strenght</b>	<b>2,49 ± 0,2 N/mm2</b>
<b>Elongation at break</b>	<b>170 ± 10%</b>
<b>Tear strength (Die B)</b>	<b>6,6 ± 0,4 N/mm</b>
<b>Tear strength (Die C)</b>	<b>8,7 ± 0,2 N/mm</b>



## MARKPLUS– putty 1:1

### Main Fields of Application

Restoration and arts,  
Jewellery field and  
Mould making

- No oily Putty
- Longer WT, ST
- Mixing ratio 1:1
- Resistant to polyurethane resins
- Resistant to high temperature 400°C

### AVAILABLE PACKAGING

- DT23530 1+1kg
- DT23531 4+4KG
- DT23532 25+25KG

<b>Form</b>	<b>Putty form</b>
<b>color</b>	<b>light green</b>
<b>Mixing ratio</b>	<b>1 : 1</b>
<b>Specific weight (g/cm<sup>3</sup>)</b>	<b>1,43</b>
<b>Working time at 23 °C (73 °F)</b>	<b>10 ± 15'</b>
<b>Setting time at 23 °C (73 °F)</b>	<b>120' – 180'</b>
<b>Shore A hardness after 24 hours</b>	<b>37 ± 3 sh "A"</b>
<b>Tensile strenght</b>	<b>1,8 ± 0,2 N/mm2</b>
<b>Elongation at break</b>	<b>176 ± 10%</b>
<b>Tear strength (Die B)</b>	<b>5,6 ± 0,4 N/mm</b>
<b>Tear strength (Die C)</b>	<b>5,4 ± 0,2 N/mm</b>



## ALGINATES

**AL MT : MEDIUM setting time (9 minutes)**

**at 23°C**

Used in mould making and body casting .

<b>Mixing ratio</b>	<b>2 parts water 1 part alginate</b>
<b>Viscosity</b>	<b>150-250 [Pa.s.]</b>
<b>Setting Time a 23 °C (73 °F)</b>	<b>9' – 11'</b>



### AVAILABLE PACKAGING AL MT

- DT30015 20 X 500G BAGS
- DT30012 25 KG BAGS

- Creamy
- Only one use
- It's suggested the use of plaster bandages (to create a solid structure)
- One usage
- Use the plaster bandage to obtain a stronger mould.
- The main products casted on the alginate without problems are plasters, ceramic resins and silicone. In fact the resins could be very aggressive and have hardening problems ( due to the presence of water).

## ALGINATES

**AL PR : FAST setting time ( 3 minutes) at 23°C**

Used in mould making and body casting .

<b>Mixing ratio</b>	<b>2 parts water 1 part alginate</b>
<b>Viscosity</b>	<b>150-250 [Pa-s.]</b>
<b>Setting Time a 23 °C (73 °F)</b>	<b>2'30"- 3'30"</b>



### AVAILABLE PACKAGING AL PR

- DT30020 20 X 500G BAGS
- DT30021 25 KG BAGS

- Creamy
- Only one use
- It's suggested the use of plaster bandages (to create a solid structure)
- One usage
- Use the plaster bandage to obtain a stronger mould.
- The main products casted on the alginate without problems are plasters, ceramic resins and silicone. In fact the resins could be very aggressive and have hardening problems ( due to the presence of water).



## CONDENSATION

### ZC 30-120 (30 ShA)

#### ZC 120 curing agent

- Dimensional variation 0,6 -1%
- Demoulding 10 hours ( complete hardening in 18/20 hours)
- Auto degasing
- No sensitive to inhibition

Properties	
Material	liquid
Base Viscosity	27000 cP
Mixing ratio B + C	100 + 5
Density	1.20 g/cc
<b>With ZC 120 curing agent</b>	
Working time (@ 23 C)	> 90 (*)
Setting Time (@ 23 C)	< 24 hours(*)
<b>With ZC 45 curing agent</b>	
Working time (@ 23 C)	≈ 45 (*)
Setting Time (@ 23 C)	≈ 8 hours(*)
Hardness after 72h	30± 2 shA
Tear Resistance	17/Nmm
Strength Resistance	3/Nmm <sup>2</sup>
Elongation at break	320%
Dimensional variation	0,5%

#### AVAILABLE PACKAGING

##### ZC 30-120 BASE

- DT00665 1KG
- DT00666 5KG
- DT00667 20KG
- DT00668 200KG

#### AVAILABLE PACKAGING CURING AGENT

##### STANDARD

- DT00683 50G
- DT00680 250G
- DT00681 1KG
- DT00682 10KG

## Liquid CONDENSATION

### ZC 20-120 (20 shA)

ZC 120 curing agent

ZC 120 Non flammable curing agent

- Dimensional variation 0,6-1%
- Demoulding 10 hours ( complete hardening in 18/20 hours)
- Auto degasing
- No sensitive to inhibition

Properties	
Material	liquid
Base Viscosity	25000 cP
Base Density	1.19 g/cc
Mixing ratio B + C	100 + 5
<b>With ZC 45 curing agent</b>	
Working time (@ 23°C)	75 min. (*)
Setting Time (@ 23 °C)	18 hours(*)
Hardness after 72h	21 ShA
Tear Resistance	17 N/mm
Strength Resistance	3 MPa
Elongation at break	400%
Dimensional variation	0,5%

#### AVAILABLE PACKAGING BASE

- DT00661 1KG
- DT00662 5KG
- DT00663 20KG
- DT00664 200KG

#### AVAILABLE PACKAGING CURING AGENT

##### STANDARD

- DT00683 50G
- DT00680 250G
- DT00681 1KG
- DT00682 10KG
- DT00676 1KG NON FLAMMABLE
- DT00677 250g NON FLAMMABLE



## AVAILABLE ACCESSORIES FOR CONDENSATION SILICONE

- ✓ Thixo agent ( used to increase the viscosity and casting in vertical surfaces).

Commercial code DT00673

- ✓ Accelerator ( used to speed up the pot Life).

Commercial code xxxxxx

**THANK YOU!**