Materials

General

- important information
  - pot life: how long do we have between mixing two components together and pouring
  - cure time: how long it takes to harden
  - post cure (but not so important)
  - mix ratio
  - what if someone gets it on their skin/in their eye/mouth
  - what protective equipment is needed?
    - protective mask?
    - fume hood?
    - goggles?
    - long sleeves?

Specification

Material	Pot Life	Cure time	Mix Ratio	Useful Temp (max)	Useful Temp (min)	Heat Deflection Temp	Shore Hardness
Mold Star 15 SLOW	50 min	4 h	1:1	232 °C	-53 °C	-	15A
Mold Star 30	45 min	6 h	1:1	232 °C	-53 °C	-	30A
Sorta-Clear 37	25 min	4 h	1:1	-	-	-	37 A
Smooth Cast 305	7 min	30 min	1:1	-	-	50 °C	70 D
Smooth Cast 326	7-9 min	60 min	1:1	-	-	50 °C	72 D

General Info about (Shore Hardness Scale)

- The **Shore 00** Hardness Scale measures rubbers and gels that are *very soft*
- The **Shore A** Hardness Scale measures the hardness of flexible mold rubbers that range in hardness from very soft and flexible, to medium and somewhat flexible, to hard with almost no flexibility at all. *Semi-rigid* plastics can also be measured on the high end of the Shore A Scale
- The **Shore D** Hardness Scale measures the hardness of *hard* rubbers, semi-rigid plastics and hard plastics.

Shorehardness.png

Safety Information

Mold Materials

- **Mold star 15 slow cure**
  - safety
  - use in properly ventilated area
  - Safty glasses, long sleeves and rubber (vinyl only! Latex will inhibit the cure of the rubber) gloves
  - store in room temprature (23°C) (warmer reduces shelf life)
  - mixing container should have straight edges and flat bottom
  - mixing sticks should be flat and stiff
  - product has a limited shelf time!

  IMPORTANT:
  - avoid contact with eyes, slight transient irritation possible
  - flush with water 15 min and seek medical attention
  - remove from skin with waterless hand cleaner, then soap and water

- **Mold Star 30**
  - safety
  - same as mold star 15

- **SORTA-Clear 37**
  - safety
  - same as mold star 15

  IMPORTANT:
  - use only with adequate ventilation

Cast Materials

- **Smooth-Cast 326**
  - safety
  - store in warm environment (23 °C)
  - liquids are moisture sensitive and will asorb atmospheric moisture
  - mixing container should be clean and made out of metall, glass or plastic
  - mixing in a well ventilated area
  - safety glass, long sleeves and rubber gloves to minimize containment risk
  - test application is recommended!

  IMPORTANT:

  > ⚠WARNING: Known to the state of CA to cause cancer, birth defects or reproductive harm

  - PART A (YELLOW):
  - contains diphenyldiisocyante
  - SUSPECTED OF CAUSING CANCER
  - vapors can be significant if heated or sprayed may cause lung damage and sensitization
  - only use with adequate ventilation!
  - contact with eye and skin may cause severe irritation!
  - flush eyes with water for 15min and get immediate medical attention
  - remove from skin with soap and water
  - PART B (BLUE):
  - is irritating to the eye and skin
  - avoid prolonged or repeated skin contact
  - flush eyes with water for 15min and get immediate medical attention
  - remove from skin with soap and water

- **Smooth-Cast 305**
  - safety
  - wear safety glasses, long sleeves and rubber gloves to minimize contamination risk
  - only in well-ventilated area

  IMPORTANT:

  > ⚠WARNING: Known to the state of CA to cause cancer, birth defects or reproductive harm

  - PART A:
  - IRRITATING TO EYES, SKIN & MUCOUS MEMBRANES
  - contains Methylene Diphenyl Isocyanate
  - SUSPECTED OF CAUSING CANCER

    - do not get in eyes and mucous membranes
    - do not take internally
    - do not breathe fumes
    - use only with adequate ventilation
    - WEAR CHEMICAL RESISTANT GLOVES AND EYE PROTECTION !!
    - PART B:
    - not that contaiges
    - CAUTION: HOT!!
    - GETS HOT WHEN MIXED (100 °C), cool before handling

off the shelf materials:

- **chocolate**
- **candle wax**
- **soap**
- **nougat**

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