

Silicone Products for Clean Room



FOR CLEAN ROOM

Solutions to Ever-Accelerating High Tech Industry

Products to Deal with Molecular Pollutants, or Chemical Pollution

By Dow Corning Toray



Reliability will increase by using clean room sealant that has been shown to have good results in the electronics field.

As the electronics industry strives for ever-advancing high tech electronics, precision instruments and optical products, the needs for a higher degree clean room environment increase. A clean room environment is essential for development of high quality products and research in many fields. Especially the clean room for manufacturing LSI (large-scale integrated circuit) and hard disc must have a pollution-free environment, from not only air-borne particles but also molecular pollutants. Dow Corning Toray products containing fewer ionic contaminants have long been trusted as materials for various semiconductor-related products. To deal with molecular pollutants, we now offer a series of high level products to be used as the sealant for the clean room. Low molecular weight siloxane contents of these high level products are reduced to the limit.

Silicone Products for Clean Room

	Sealant	Gel
For electronics clean room use*	SE5088 (non-sag type)	CY52-272A/B (white)
	SE9187L (sag type)	CY52-276A/B (clear)
For general use	SH780 (general purpose type)	
	SE960 (high-strength adhesion type)	
For Bio-clean room use	SE5010 (mildew resistant type)	

* Products in which low molecular weight siloxane is reduced to the limit.

CHARACTERISTICS

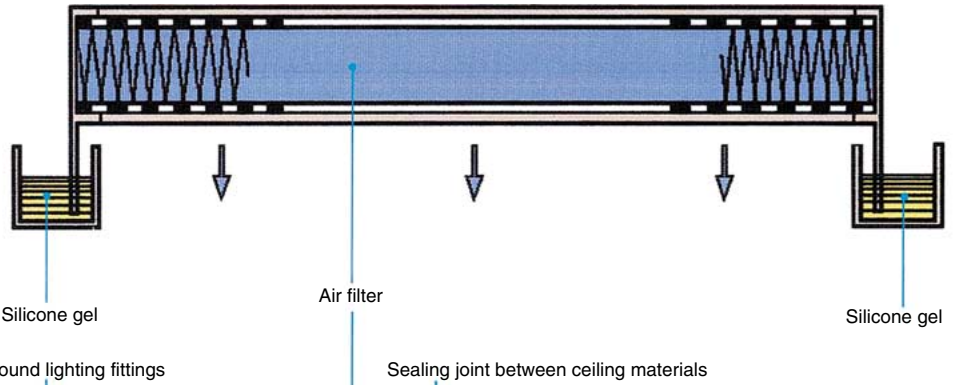
- 1 Fewer volatile components (electronics clean room use*)**
 Low molecular weight siloxane (one of the volatile components) that causes trouble at contact points and in adhesion of electric and electronic instruments is reduced to the limit.
- 2 Low contents of ionic components**
 Contents of ionic components such as halogen ion are extremely low in the new series of products, markedly decreasing the possibility of environmental pollution, compared with other organic materials.
- 3 Chemical resistance**
 The new series of products maintain excellent chemical resistance that silicone resin is known to have.
- 4 Weatherability**
 The new series of products is extremely stable in ultraviolet rays and ozone, has superior heat- and cold-resistance, and is able to demonstrate excellent performance in a wide range of temperature.
- 5 Durability**
 The silicone sealant for the clean room has excellent fatigue resistance and elastic recovery.

GUIDE TO USE OF THE PRODUCTS

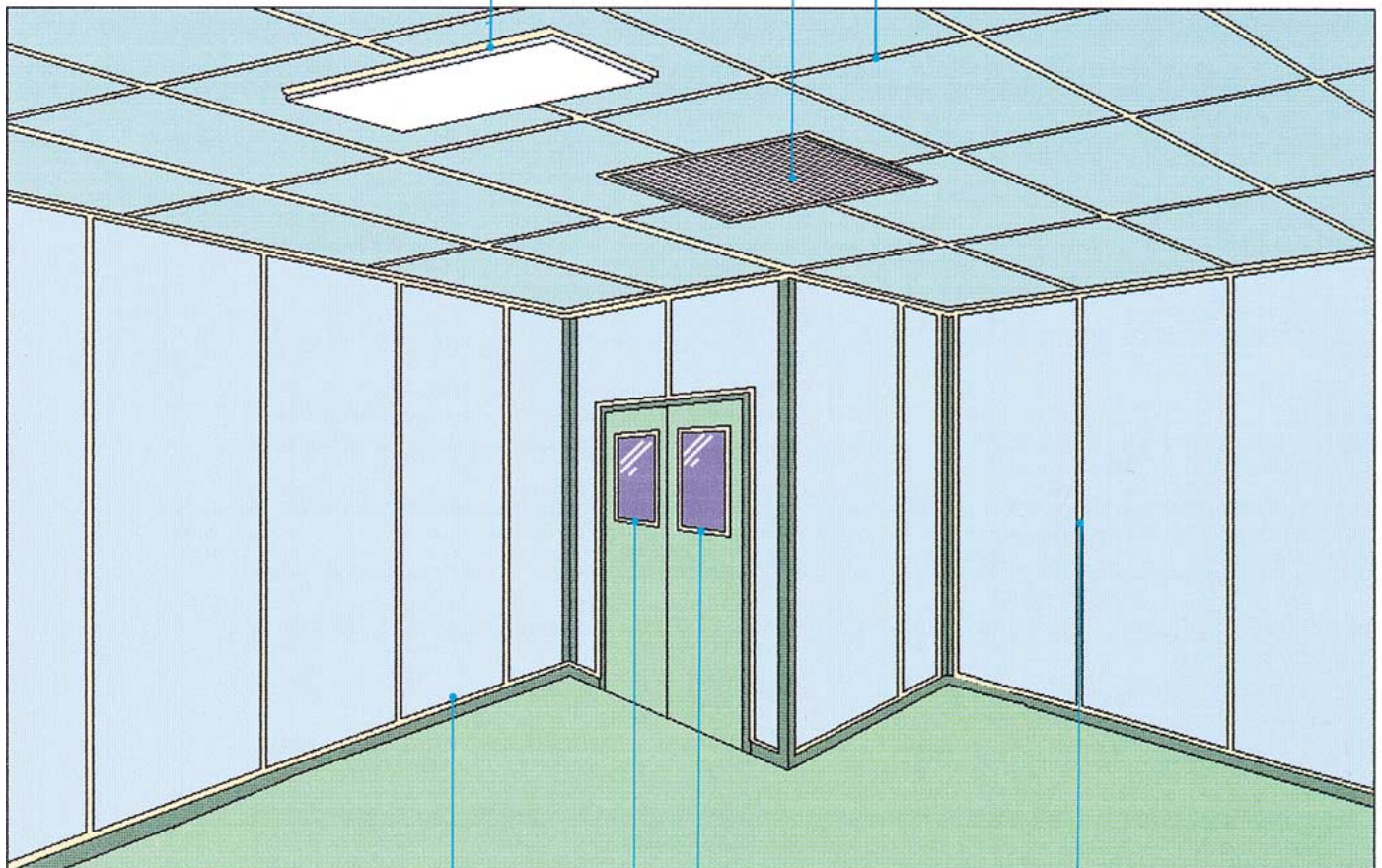
The sealant is used for sealing on floors, walls, ceilings and window frames of the clean room, and around lighting fittings and installation units.

The gel is suitable for sealing material for exchangeable instruments, such as air filters, and instruments that may be subjected to design changes.

● Air filter for clean room



● Clean Room



Sealing joint between flooring materials and wall material

Sealing around window frames

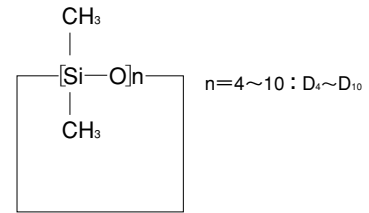
Sealing joint between wall panels

● Low molecular weight siloxane content

Unit : wt%

	D4-D10
SE5088 (non-sag type)	0.006
SE9187L (sag type)	0.009
CY52-272A/B (White)	0.008
CY52-276A/B (Clear)	0.005
SE5010 (mildew resistant type)	0.502
SH780 (general purpose type) SE960 (high strength adhesion type)	0.502

★ Low molecular weight siloxane component



Precautions for Use

Sealant

- Materials to be sealed must be clean and dry.
- When air gun is used, the pressure should not be higher than 3.0 kgf/cm². Higher pressure may cause the sealant to protrude or the cartridge to explode.
- Contacts with backup materials or waterproof sheets containing EPT or some types of chloroprene rubber may cause the sealant to degenerate (color change and loose adhesion).
- When the cartridge is not completely used, close the cartridge tightly by inserting a tip that was cut off into the nozzle, and use the remaining sealant as soon as possible.
- Store the sealant a cool (not higher than 25(C) and dry indoor place avoiding the direct sun light.
- The primer is particularly sensitive to moisture. Subdivide the necessary amount, close it tightly and store avoiding a risk of fire.

Gel

- As for two-component type gels, once A and B are mixed, the hardening progresses gradually even at room temperature. Please use up the mixed gel as soon as possible.
- Contacts with the following substances may prevent the two-component type gel from curing. Test and confirm the appropriateness before use.
<Substances that may cause failure to cure.>
Unsaturated polyester, organic rubber (especially sulfur-vulcanization type), epoxy resin (especially amine-curing type), soft PVC, soldering flux, some types of room-temperature cure silicone rubber.

Safety and hygienic precautions

Sealant

- Handling the sealant in a poorly ventilated area may irritate the eyes and nose and may cause inhalation injuries. Use the sealant in well-ventilated areas.
- When uncured sealant sticks to the skin, wipe off the product immediately and wash the skin well with soap and water.
- When the sealant gets into the eye, rinse the eye immediately with clean water (for 15 min or longer) and consult a medical doctor.
- With the oxime type sealant, such as SH780 and SE5010, observe the following. (Safety and hygienic precaution for use of the oxime type sealant)
 1. The product generates methyl ethyl keto-oxime (MEKO) during its cure.
 2. Animal experiments of long-term and massive inhalation of MEKO showed injuries in some subjects.
 3. Long-term and massive inhalation may result in a health hazard. Use the product in a well-ventilated area.
- For more details, please refer to the material safety data sheet (MSDS).

Gel

- When the gel adheres to the skin, wipe it off immediately.
- When the gel gets in the eye, rinse the eye immediately with clean water and consult medical doctor without delay.
- Handle the product in a well-ventilated area.
- Do not let the product come in contact with the mouth. In case of an accidental swallowing, induce vomiting immediately. If necessary, consult a medical doctor.
- For more details, please refer to the material safety data sheet (MSDS).

Packaging unit

For electronics clean room

Sealant

SE5088	(white, ivory and light gray-2)	330 ml cartridge
SE9187L	(clear, white and black)	330 ml cartridge

Gel

CY52-272A/B	(white)	18 Kg pail
CY52-276A/B	(clear)	1 Kg can and 18 Kg pail

For general clean room

Sealant

SH780 (clear, white, ivory, new ivory, aluminum, gray, umber, black, light gray- 2 and dark brown [special order color]) 330ml and 320ml film pack

SE960 (white, ivory, new ivory, gray, umber, black and light gray-2) 330ml

The followings are our products for bioclean room. For more details, please contact our customer service department of our company.

For bio-clean room

SE5010 (mildew resistant type)

Fungicidal performance JIS Z2911 Labeling 0

Packing unit

SE5010 (clear, white, ivory, gray and dark brown [special order color], green 250 [special order color]) 330 ml

Precautions for handling

The product is developed and manufactured for general industrial purposes.

For medical purpose or other purposes where safety consideration is required, please conduct own safety studies beforehand to confirm safety and judge the appropriateness of the use for said purpose.

Under no circumstances use the products for implantation, injection or when there is a possibility that part of the products may remain in the body.

● IMPORTANT NOTICE ●

DOW CORNING TORAY NEITHER REPRESENTS NOR TESTS THIS MATERIAL FOR MEDICAL DEVICE APPLICATIONS OR FOR PHARMACEUTICAL END-USE.

● NOT FOR HUMAN INJECTION! ●

THIS PRODUCT IS MADE TO INDUSTRIAL GRADE STANDARDS. IT IS NOT INTENDED FOR NOR SHOULD IT BE USED IN MEDICAL DEVICE APPLICATIONS AND PHARMACEUTICAL END-USE.

Dow Corning Toray Co., Ltd.

AIG Building, 1-1-3, Marunouchi, Chiyodaku,
Tokyo, Japan, 100-0005

Technical Information Center ☎(0120)77-6278

The figures of the data are not the sales specs.

The information and data contained herein are based on information we believe reliable.

You should thoroughly test any application.

and independently conclude satisfactory performance before commercialization.

Suggestions of uses should not be taken as inducements to infringe any particular patent.