

XIAMETER(R) RTV-4131-P1 KIT (CURING AGENT information is below)

1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

1.1	Product Name:	XIAMETER(R) RTV-4131-P1 KIT (CURING AGENT information is below)		
1.2	Manufacturer's Product Code:	04107130		
1.3	Chemical Classification:	Silicone elastomer		
1.4	Use:	Silicone rubber curing agent		
1.5	Company Details:			
	Manufacturer/Supplier:	Dow Corning (Thailand) Limited		
	Address:	177/1 Bangkok Union Insurance Building, 17th Floor, Soi Anumarnrajthorn 1, Surawong Road, Suriyawong, Bangrak, Bangkok 10500		
	Telephone Number:	(+66) 2634 6700	Fax Number:	(+66) 2634 6799
	Emergency Telephone Number:	(65) 6542 9595 (24 hours)		
	Contact Person:	EHS, QA, Production or Distribution Center Department Head		

2. COMPOSITION / INFORMATION ON INGREDIENTS

- 2.1 Chemical characterization:** Mixture
2.2 Hazardous Ingredients:

<u>Chemical Name</u>	<u>CAS No.</u>	<u>% (w/w)</u>	<u>Risk Phrases</u>
Octamethylcyclotetrasiloxane	556-67-2	<10	Possible risk of impaired fertility. May cause long-term adverse effects in the aquatic environment.
Decamethylcyclopentasiloxane	541-02-6	<10	Not hazardous.
Methylvinyl cyclosiloxanes	68082-23-5	<10	May cause long-term adverse effects in the aquatic environment.

Classified as hazardous according to the Harmful Chemical Lists as defined in Clause 2 of Notification of Ministry of Interior, Re: Working Safety relating to harmful chemicals* (*Government Gazette Vol.108, Part 167, dated 24 September B.E. 2534) and European Commission Directive 1999/45/EC (Article 3[3]).

3. HAZARDS IDENTIFICATION

- 3.1 Overall Hazard Classification:** Not hazardous.
- 3.2 Hazard Information:** Not hazardous.
- 3.3 Precautionary Information:**
- Keep container in a well-ventilated place.
 - Do not keep the container sealed.
 - Keep away from sources of ignition - no smoking.
 - Avoid contact with skin and eyes.
 - Use only in well-ventilated areas.

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3.4 Signs and Symptoms of Overexposure: No significant adverse effects from a single exposure expected from normal use.

4. FIRST AID MEASURES

4.1 Eyes: Immediately flush with water.
4.2 Skin: No first aid should be needed.
4.3 Inhalation: Remove to fresh air. Get medical attention if ill effects persist.
4.4 Ingestion: Get medical attention.
4.5 Comments: Treat according to person's condition and specifics of exposure.
4.6 Note to physicians: Treat symptomatically. For further information, the medical practitioner should refer to the phone numbers in Section 1.

5. FIRE-FIGHTING MEASURES

5.1 Hazardous Properties: Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge.
5.2 Extinguishing Media: On large fires use AFFF alcohol compatible foam or water spray (fog). On small fires use AFFF alcohol compatible foam, CO2 or water spray (fog). Water can be used to cool fire exposed containers. Most fire extinguishing media will cause hydrogen evolution. When the fire is put out, hydrogen may accumulate in poorly ventilated or confined areas and result in flash fire or explosion if ignited. Foam blankets may also trap hydrogen or flammable vapors, with the possibility of subsurface explosion.
5.3 Special Fire Fighting Procedures and Equipment: Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool. Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals.
5.4 Hazardous Combustion Products: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Hydrogen. Formaldehyde.
5.5 Unsuitable Extinguishing Media: Dry powder. Do not allow extinguishing medium to contact container contents.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions: Avoid eye contact. Avoid breathing vapor. Keep container closed. Do not take internally.
6.2 Environmental Precautions: Prevent from spreading or entering into drains, ditches or rivers by using sand, earth or other appropriate barriers.
6.3 Methods for Cleaning up: Remove possible ignition sources. Determine whether to evacuate or isolate the area according to your local emergency plan. Observe all personal protective equipment recommendations described in this MSDS. If diked material can be pumped, store recovered material in appropriate container. Materials in contact with water, moisture, acids or bases have the potential to generate hydrogen gas. Recovered material should be stored in a vented container. Clean up remaining materials from spill with suitable absorbant. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which laws and regulations are applicable.

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7. HANDLING AND STORAGE

7.1	Handling Precautions:	Use with adequate ventilation. Avoid eye contact. Avoid breathing vapor. Keep container closed. Do not take internally. Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking.
7.2	Storage Conditions:	Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge. Keep container closed and away from heat, sparks, and flame. Product evolves minute quantities of flammable hydrogen gas which can accumulate. Adequately ventilate to maintain vapors well below flammability limits and exposure guidelines. Do not repackage. Do not store in glass containers which may shatter due to pressure build up. Clogged container vents may increase pressure build up. Keep container closed and store away from water or moisture.
7.3	Unsuitable Packaging Materials:	Do not store in or use glass containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1	Industrial Hygiene Standards:													
	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Ingredients</u></th> <th style="text-align: left;"><u>CAS No.</u></th> <th style="text-align: left;"><u>Exposure Limits</u></th> </tr> </thead> <tbody> <tr> <td>Octamethylcyclotetrasiloxane</td> <td>556-67-2</td> <td>Dow Corning guide: TWA 10 ppm.</td> </tr> <tr> <td>Decamethylcyclopentasiloxane</td> <td>541-02-6</td> <td>Dow Corning guide: TWA 10 ppm.</td> </tr> <tr> <td>Methylvinyl cyclosiloxanes</td> <td>68082-23-5</td> <td>None established.</td> </tr> </tbody> </table>	<u>Ingredients</u>	<u>CAS No.</u>	<u>Exposure Limits</u>	Octamethylcyclotetrasiloxane	556-67-2	Dow Corning guide: TWA 10 ppm.	Decamethylcyclopentasiloxane	541-02-6	Dow Corning guide: TWA 10 ppm.	Methylvinyl cyclosiloxanes	68082-23-5	None established.	
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Eye protection:	Use proper protection - safety glasses as a minimum.													
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Hygiene Measures:	Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking.													
8.4	Personal Protective Equipment for Spills													

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Respiratory protection:	Use self-contained breathing apparatus (SCBA) or other supplied-air respirator.
Eye protection:	Use full face respirator.
Skin protection:	Washing at mealtime and end of shift is adequate.
Precautionary Measures:	Avoid eye contact. Avoid breathing vapor. Keep container closed. Do not take internally. Use reasonable care.
Comments:	If this product is heated to > 150 degrees C, trace quantities of formaldehyde may be released, and adequate ventilation is required.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions. For further information regarding aerosol inhalation toxicity, please refer to the guidance document regarding the use of silicone-based materials in aerosol applications that has been developed by the silicone industry (www.SEHSC.com) or contact the Dow Corning customer service group.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Physical Form:	Liquid
9.2 Color:	Colorless
9.3 Odor:	Odorless
9.4 pH:	Not determined.
9.5 Solubility in Water:	Not determined.
9.6 Boiling Point:	> 100 °C
9.7 Melting Point:	Not determined.
9.8 Flash Point:	60 °C (Closed Cup)
9.9 Autoignition temperature:	Not determined.
9.10 Explosive properties:	No
9.11 Oxidizing properties:	No
9.12 Vapor Pressure @ 25°C:	Not determined.
9.13 Specific Gravity:	0.96
9.14 Octanol/water partition coefficient:	Not determined.
9.15 Vapour Density (air=1):	Not determined.
9.16 Viscosity:	150 cSt
9.17 Upper Flammability Limit:	Not determined.
9.18 Lower Flammability Limit:	Not determined.

The above information is not intended for use in preparing product specifications.

10. STABILITY AND REACTIVITY

10.1	Stability:	Stable under normal usage conditions. Material may decompose (generating heat and gas) if exposed to temperatures in excess of 250 degree C.
10.2	Reactivity	
	Conditions to Avoid:	None.
	Materials to Avoid:	Can react with strong oxidising agents. Water, alcohols, acidic or basic materials, and many metals or metallic compounds, when in contact with product, liberate flammable hydrogen gas, which can form explosive mixtures in air.
	Hazardous Decomposition Products:	Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Hydrogen. Formaldehyde.

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Hazardous Polymerization : Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

11.1 Possible Health Effects:

Acute

Eyes: Direct contact may cause temporary redness and discomfort.
Skin: No significant irritation expected from a single short-term exposure.
Ingestion: Low ingestion hazard in normal use.
Inhalation: No significant effects expected from a single short-term exposure.

Chronic

Skin: No known applicable information.
Ingestion: Repeated ingestion or swallowing large amounts may injure internally.
Inhalation: Overexposure by inhalation may injure the following organ(s): Reproductive System.

11.2 Sensitizing Effects:

None known.

11.3 Mutagenic Effects:

None known.

11.4 Reproductive Effects:

None known.

11.5 Carcinogenic Effects:

None known.

11.6 Other Health Hazard

Information:

Octamethylcyclotetrasiloxane administered to rats by inhalation at concentrations of 500 and 700 ppm resulted in statistically significant decreases in the number of pups born and the live litter size in both the first and second generations. Prolonged estrous cycles, and decreased mating and fertility indices were observed following 700 ppm exposure in the second generation only. There were also increases in the incidence of deliveries of offspring extending over an unusually long time period (dystocia). Results from a 2 year repeated vapor inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Based on the available information on its potential to cause harm to human health, Health Canada, in a 2008 screening assessment, has concluded that octamethylcyclotetrasiloxane is not entering the environment in a quantity or concentration or under conditions that constitute or may constitute a danger in Canada to human life or health (http://www.ec.gc.ca/substances/ese/eng/challenge/batch2/batch2_556-67-2.cfm). Repeated exposure in rats to D4 resulted in what appears to be protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

The above listed potential effects of overexposure are based on actual data, the results of studies performed upon similar compositions, component data, and/or expert review of the products.

12. ECOLOGICAL INFORMATION

12.1 Environmental Fate and Distribution:

Siloxanes are removed from water by sedimentation or binding to sewage sludge. In soil, siloxanes are degraded.

12.2 Environmental Effects:

No adverse effects on aquatic organisms.

Bioaccumulation: No bioaccumulation potential.

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12.3 Fate and Effects in Waste Water Treatment Plants:

Removed > 90% by binding onto sewage sludge. No adverse effects on bacteria. The siloxanes in this product do not contribute to the BOD.

12.4 Additional Environmental Information:

Degradation: Additional environmental information on the silicone component is available on request.

13. DISPOSAL CONSIDERATIONS

13.1 Product Disposal: Dispose of in accordance with local regulations.

13.2 Packaging Disposal: Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

14.1 Road and Rail Transport:

Haz Identification Code: 33
 UN No.: 1993
 Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.
 Technical Name: Octamethylcyclotetrasiloxane
 Class: 3
 Packing Group: III

14.2 Sea Transport (IMDG):

UN No.: 1993
 Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.
 Technical Name: Octamethylcyclotetrasiloxane
 Class: 3
 Packing Group: III
 Hazard Label(s): flammable liquid

14.3 Air Transport (IATA):

UN No.: 1993
 Proper Shipping Name: Flammable liquid, n.o.s.
 Technical Name: Octamethylcyclotetrasiloxane
 Class: 3
 Packing Group: III
 Hazard Label(s): Flammable Liquid
 Remarks: VENTED PACKAGES ARE FORBIDDEN FOR AIR TRANSPORT.

15. REGULATORY INFORMATION

15.1 Hazardous Substance Act, B.E. 2535:

<u>Chemical Name</u>	<u>CAS No.</u>
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Not available.

15.2 Chemical Inventories:

EINECS:	All ingredients listed or exempt.
TSCA:	All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
AICS:	All ingredients listed or exempt.
IECSC:	All ingredients listed or exempt.
DSL:	All chemical substances in this material are included on or exempted from the DSL.
KECL:	Not determined.
ENCS/ISHL:	Not determined.
PICCS:	Not determined.

16. OTHER INFORMATION

Contact Point: EHS, QA, Production or Distribution Center Department Head
Prepared by: Dow Corning (Thailand) Limited

This information is offered in good faith as typical values and not as a product specification. No warranty, expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

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<http://www.xiameter.com>