

Liquid Silicone Rubber

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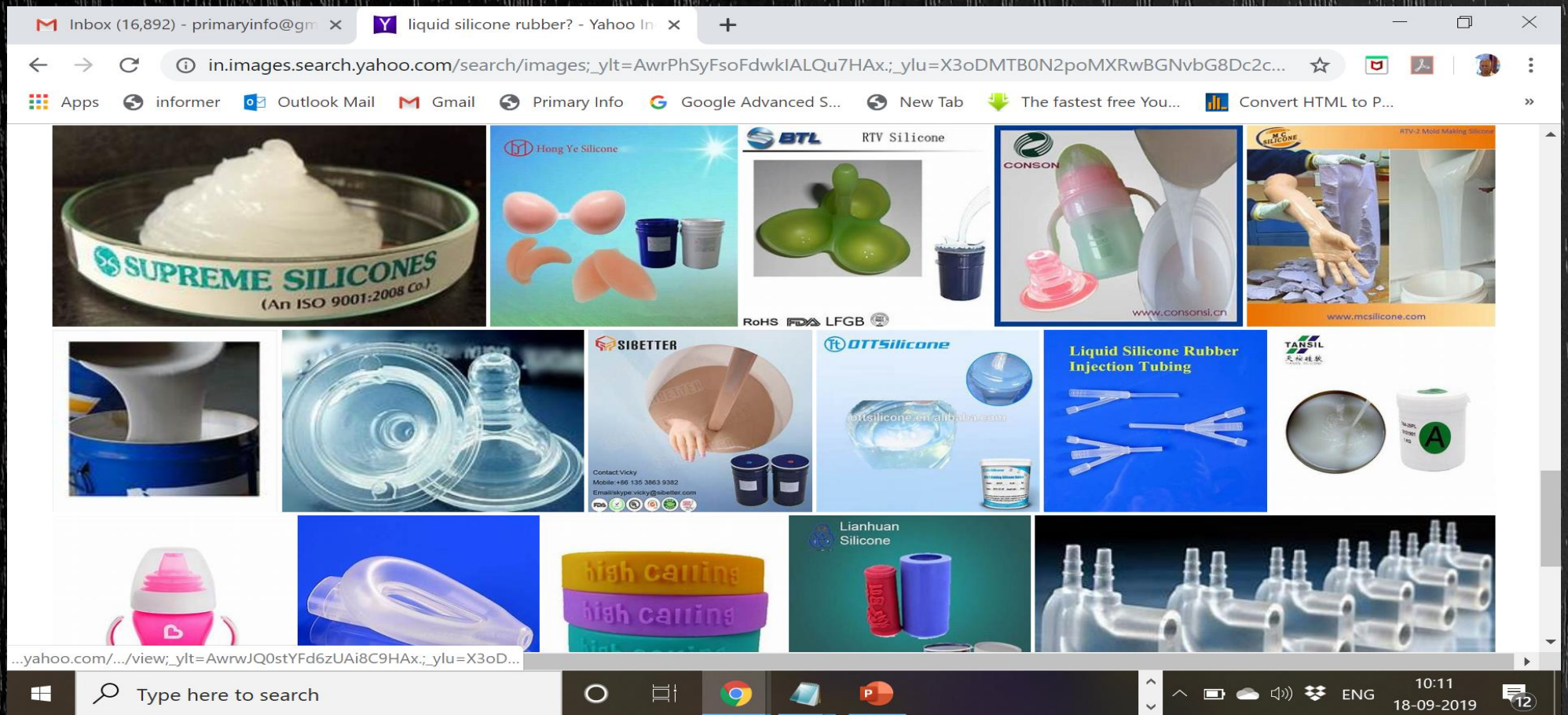
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A Liquid Silicone Rubber material is a two-part platinum-cured **elastomer** that can be injected into a mold cavity to manufacture a part. LSR is very versatile in the elastomer industry and is seen across a whole spectrum of parts from consumer products to medical devices

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What ?



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LSR Products

Liquid silicone rubber is a high purity platinum cured silicone with low compression set, great stability and ability to resist extreme temperatures of heat and cold ideally suitable for production of parts, where high quality is a must

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**What is liquid silicone
rubber used for?**

The variation of properties in silicone is less at high temperatures. Silicone is more durable than other elastomers. ... From all the rubbers, silicone is much better for thermal insulation due to its heat resistance. Silicone rubber offers special properties, which organic rubbers do not possess

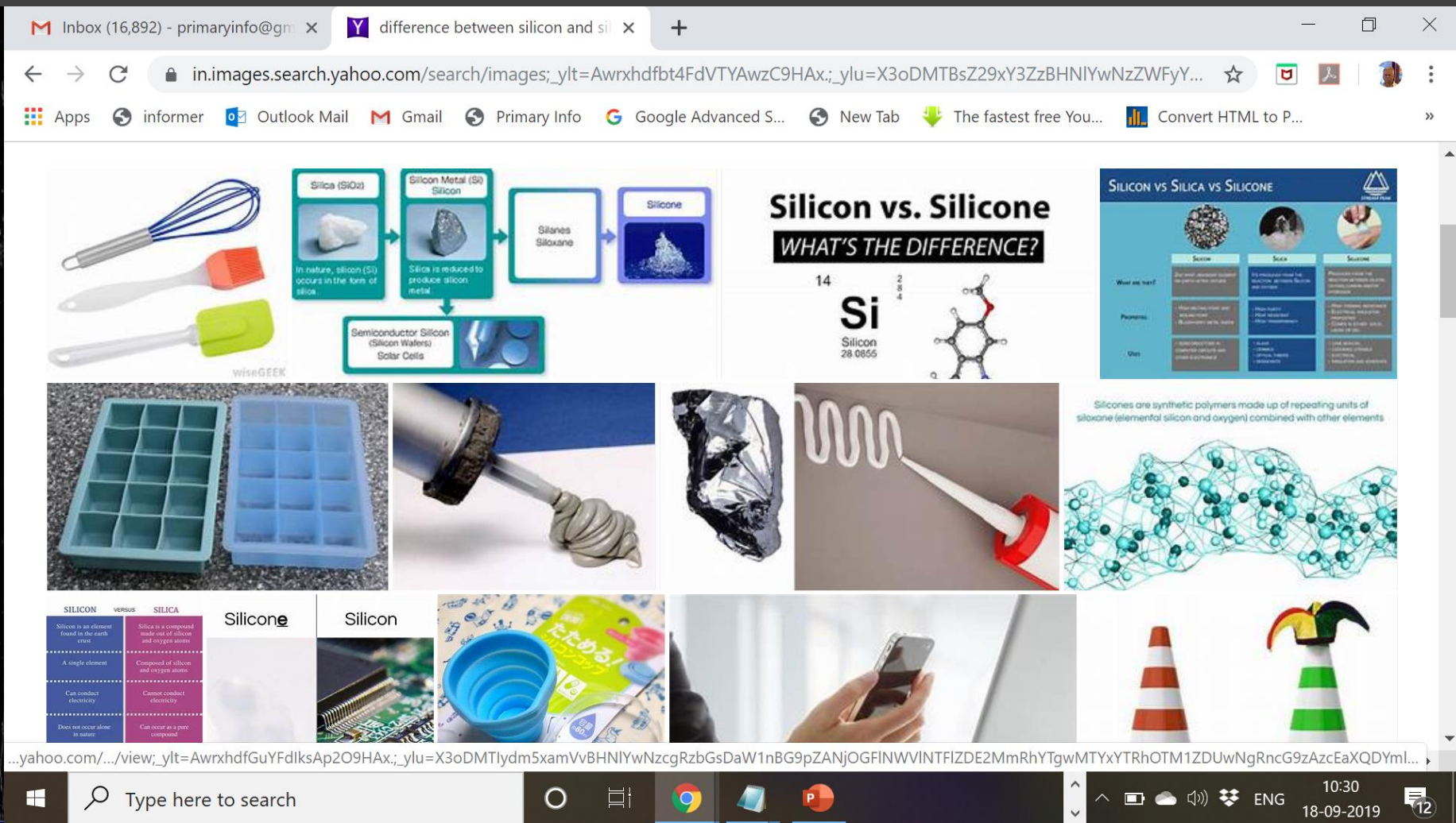
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Which is better
silicone or rubber?

Silicon is the chemical element Si, while silicone is a synthetic polymer. Although it appears like the words are synonyms and can be used interchangeably, they're not and they designate completely different things

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**What is the difference
between silicon and silicone?**



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Difference ?

Siloxanes (silicones) are well tolerated by the human organism, and therefore they are an integral part of innovative methods of treatment, health care and nursing. They are commonly regarded as non-toxic to humans and the environment, or toxic to a very small extend

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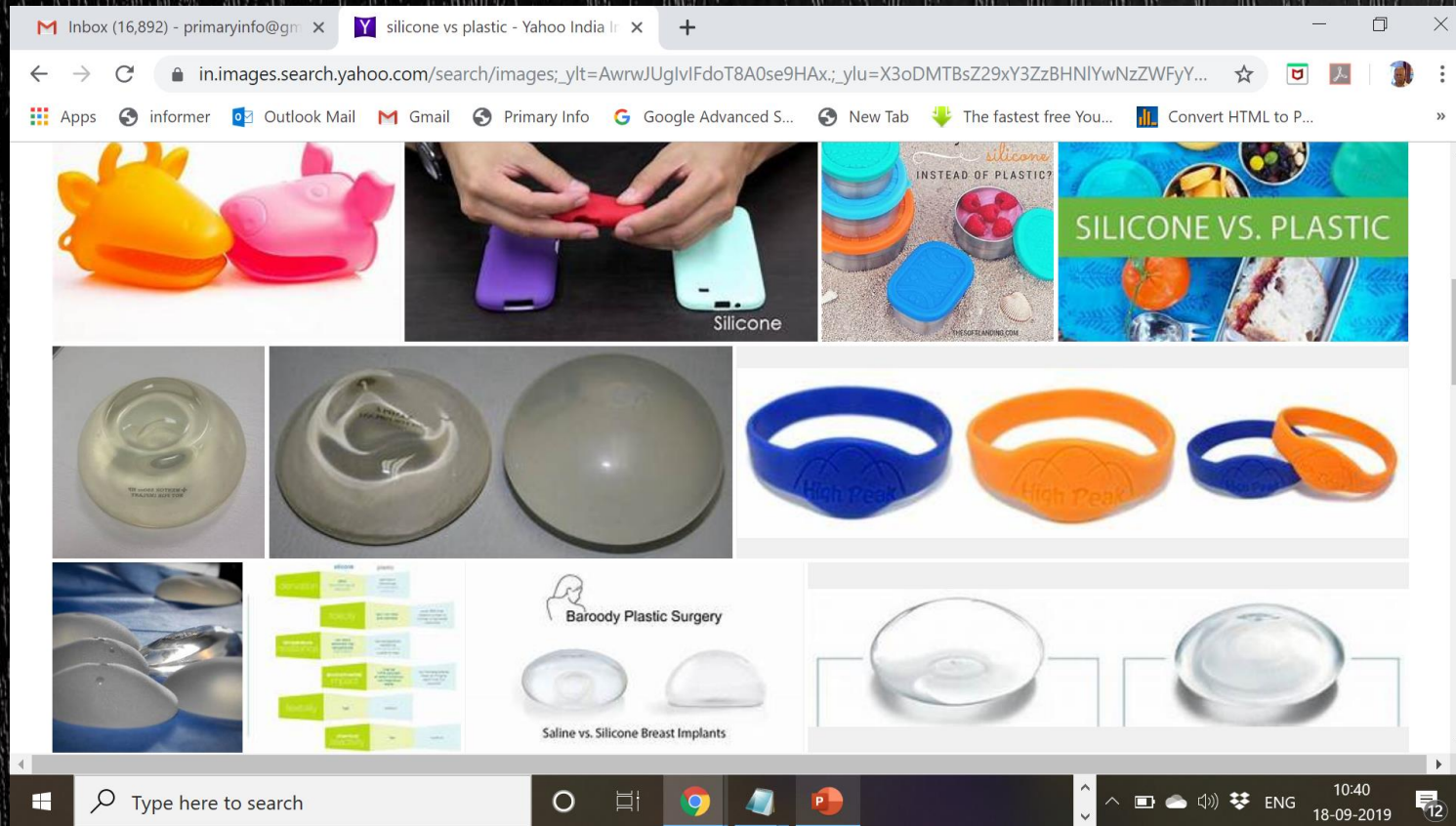
Is silicone toxic to humans?

**Silicone is durable, and more ocean-friendly than plastic.
It lasts longer, and stands up better against heat and cold
than plastics.**

**It's safer for the family, too, with no estrogen-mimicking
toxins like BPA to worry about**

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**Is silicone better than
plastic?**



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Silicone vs Plastic

Silicones, also known as polysiloxanes, are polymers that include any synthetic compound made up of repeating units of siloxane, which is a chain of alternating silicon atoms and oxygen atoms, combined with carbon, hydrogen, and sometimes other elements.

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Is siloxane a silicone?

A Liquid Silicone Rubber material is a two-part platinum-cured elastomer that can be injected into a mold cavity to manufacture a part

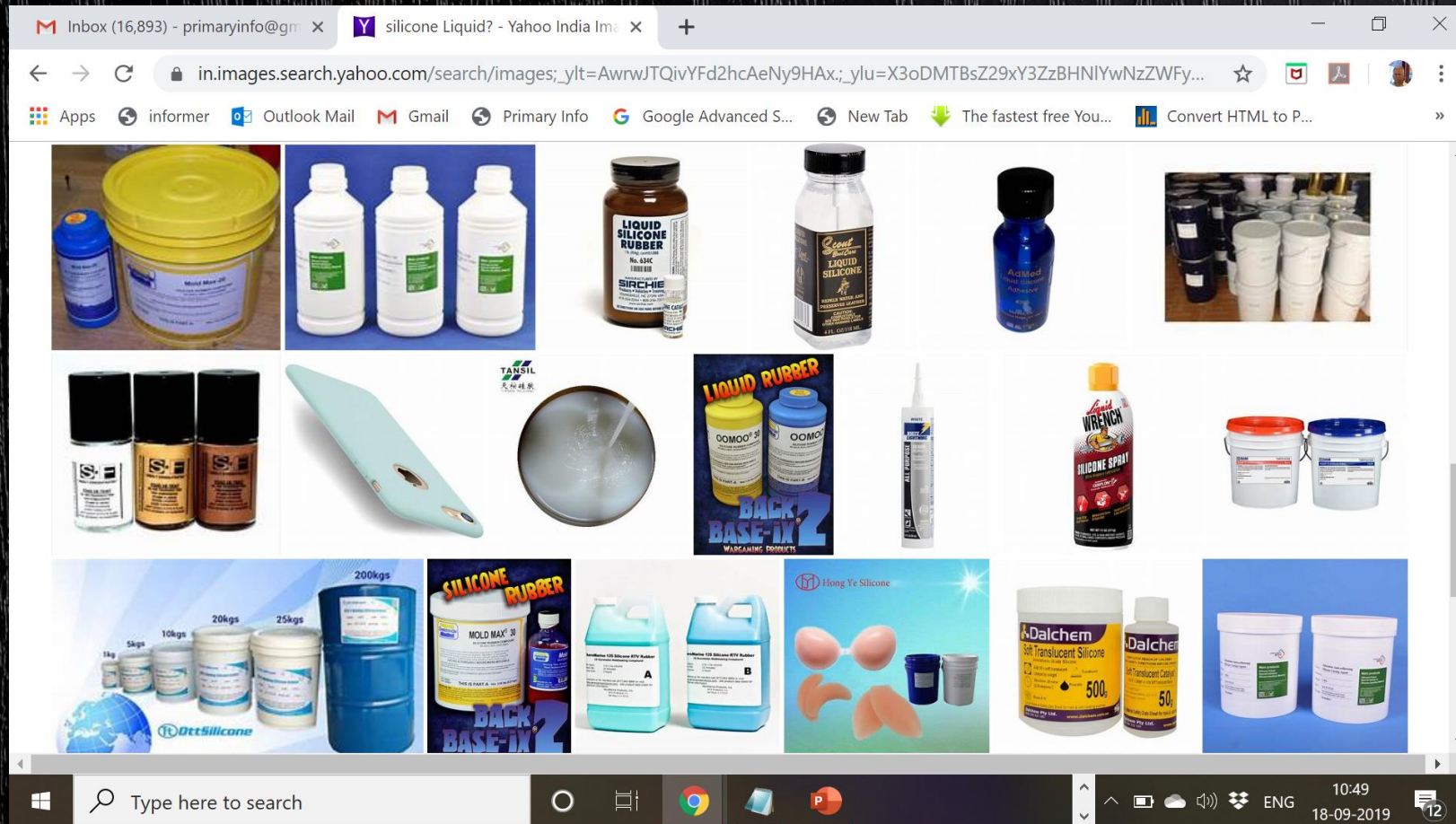
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What is silicone liquid?



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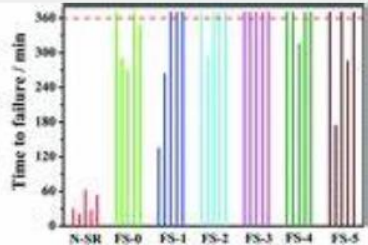
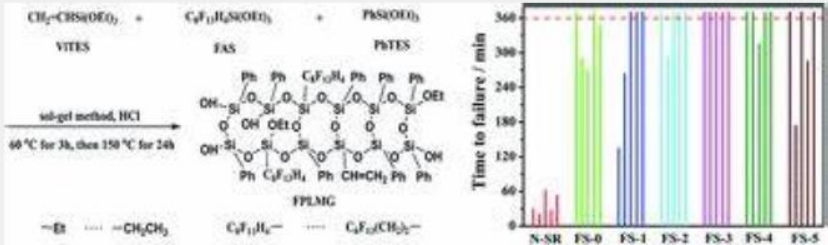
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Silicone Liquid

The preparation of silicones is generally carried out by the hydrolysis of dialkyldichlorosilanes (R_2SiCl_2) or diaryldichlorosilanes Ar_2SiCl_2 , which are prepared by passing vapors of RCl or $ArCl$ over silicon at 570 K with copper as a catalyst.

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How are silicones
prepared?

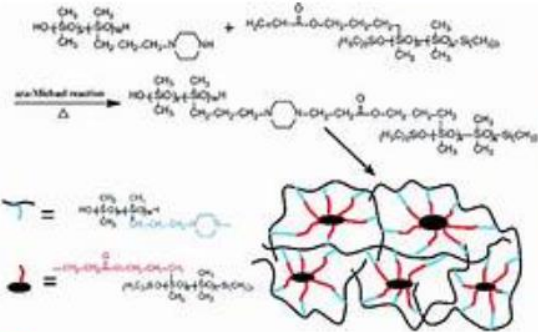


Silicone Rubber Commercial Preparation

Most silicone products including fluids, RTVs, and rubber are derived from the same chemical starting materials and are later differentiated by viscosity or degree of polymerization.

- The process begins with the reduction of silica (sand) to elemental silicon metal which is then mechanically ground and reacted with methyl chloride at 300°C in the presence of a copper catalyst.
 - This results in the formation of reactive methylchlorosilanes which are fractionally distilled and separated into their mono-, di-, and tri- counterparts.
 - Note that the dichloro species is most important for forming long linear polymer chains since its bifunctionality allows it to "grow" chemically in two dimensions.
- After distillation, the dimethylchlorosilanes are hydrolyzed to form silanols which rapidly condense to cyclic siloxanes and low molecular weight linear siloxanes. The latter are reacted with caustic to produce cyclic siloxanes, specifically dimethyltetramer or D4 which is the primary input for all dimethyl silicone rubber polymer and which is a clear, low viscosity liquid. Ring opening polymerization of the cyclic D4 is then accomplished via a strong base resulting in linear polymer whose molecular weight (viscosity) is controlled by the addition of monofunctional siloxanes which function as chain stoppers.

Ref: <http://www.pdcocones.com/silicones-american/>



Silicone is a synthetic polymer made up of silicon, oxygen and other elements, most typically carbon and hydrogen. Silicone is generally a liquid or a flexible, rubberlike plastic, and has a number of useful properties, such as low toxicity and high heat resistance

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Is silicone a liquid?

Self-Lubricating , Non-Post-Cure Self-Adhesive, High-Transparency LSR Coatings

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LSR Grades



颜色可定制 食品级认证

深圳市龙岗区... 硅胶厂

食品级手工皂硅胶

LSR

Food grade liquid silicone rubber for cake molds cooking ware

Midgold Fine Performance Materials (Shenzhen) Co., Ltd.

Medical grade liquid silicone rubber for silicone medical tube

silicone tube

Midgold

ROHS FDA UL CE MSDS

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Addition Cure Silicone Rubber

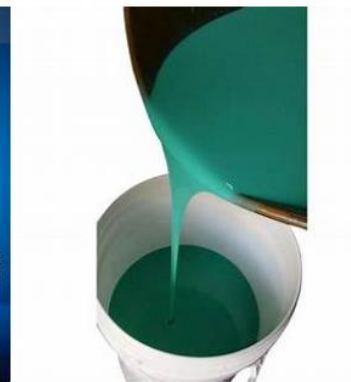
1. Easy-operation
2. Light viscosity
3. Good flowability
4. Low shrinkage
5. Favorable tension

Hong Ye Silicone

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Medical grade liquid silicone rubber

Expert advice hotline: 86-0755-89311348



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**Automotive ,Medical , Consumer & Baby Care
Electrical & Electronic
Industrial & Other**

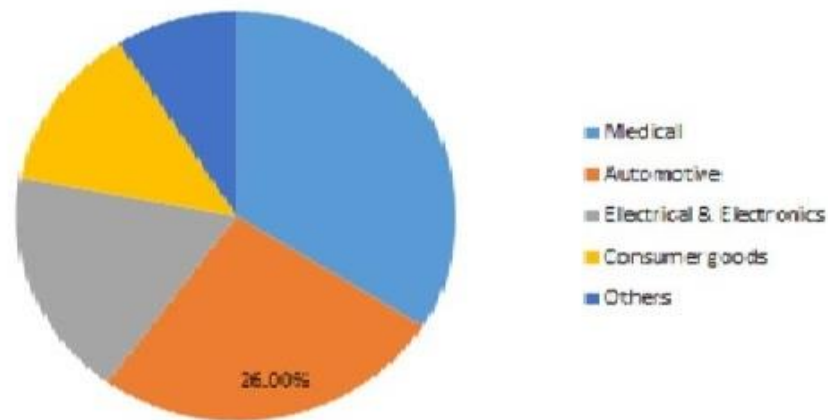
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LSR Market Segments

Global Liquid Silicone Rubber Market 2018-2025 Top Manufacturers Profiles|Wacker Chemie AG,Dow Corning Corporation,Momentive Performance Materials Inc.,KCC Corporation,Elkem Group, Stockwell Elastomerics

05-29-2018 11:01 AM CET | Advertising, Media Consulting, Marketing Research

Press release from: [Market Research Future \(MRFR\)](#)



Liquid Silicone Rubber industry research, Liquid Silicone Rubber Market Size, Liquid Silicone Rubber Market Share, Liquid Silicone

US demand for liquid silicone rubber (LSR) is projected to rise 8.3% per year to \$685 million in 2023. Growth will be supported by an expanding number of applications for LSR, as well as by an increasing number of processors adopting LSR production capabilities.

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LSR Market Scenario

liquid silicone market - Yahoo Inc

in.images.search.yahoo.com/search/images;_ylt=AwrwZeXwyoFdI1sA1RC7HAX;_ylu=X3oDMTB0N2poMXRwBGNvbG8Dc2...

Apps | informer | Outlook Mail | Gmail | Primary Info | Google Advanced S... | New Tab | The fastest free You... | Convert HTML to P...

World consumption of silicones—2016

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Region	Percentage
China	~35%
Western Europe	~25%
North America	~15%
Other Asia	~10%
Central/Eastern Europe	~5%
Central/South America	~5%
Middle East/Africa	~5%

World consumption of silicones—2016 (Estimated from bar chart)

Year	Electrical & Electronics	Industrial Machinery	Construction	Automotive & Transportation	Consumer Goods	Others
2013	~40	~30	~20	~10	~10	~10
2014	~45	~35	~25	~15	~15	~10
2015	~50	~40	~30	~20	~20	~15
2016	~55	~45	~35	~25	~25	~20
2017	~60	~50	~40	~30	~30	~25
2018	~65	~55	~45	~35	~35	~30
2019	~70	~60	~50	~40	~40	~35
2020	~75	~65	~55	~45	~45	~40
2021	~80	~70	~60	~50	~50	~45
2022	~85	~75	~65	~55	~55	~50
2023	~90	~80	~70	~60	~60	~55

Decision Databases Report - Introduction

Liquid silicone rubber (LSR) is a high purity platinum-cure silicone. LSR is well suited for injection molding owing to its excellent flowability. It's also very ideal for complex molds since it easily fits in the most complex parts of any mold. Liquid silicone rubbers (LSR) are characterized by a low viscosity compared to solid silicone rubbers (HTV). Liquid silicone rubbers are pumping able two-part compounds that are delivered ready-to-use. They are vulcanized by additional curing.

Scope of the Report:
This report focuses on the Liquid Silicone Rubber in Global market, especially in North America, Europe and Asia-Pacific, Latin America, Middle East and Africa. This report categorizes the market based on manufacturers, regions, type and application.

Medical Grade Silicone Market by Type, Application - & by Region Global Trends & Forecast to 2021

MARKETSANDMARKETS

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Questions ?

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