

HYDRO SEALING TECHNOLOGY SDN BHD (426172-P)

(Sales Tax ID No : J31-1808-21018370)

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HYDRO
House of Seals

Material Safety Data Sheet

VMQ - FDA

1. SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Commercial product name: ELASTOSIL® R 401/80
S

1.2 Relevant identified uses of the substance or mixture and uses advised against

Industrial.

Raw material for: elastomer products .

2. SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (67/548/EEC, 1999/45/EC):

R-Phrase	Description
R-	-

This product is not a dangerous preparation within the meaning of Directive 1999/45/EC.

2.2 Label elements

Labelling (67/548/EEC, 1999/45/EC):

R-Phrase	Description
R-	-

S-Phrase	Description
S-	-

2.3 Other hazards

No data are available.

3. SECTION 3: Composition/information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

3.2.1 Chemical characterization (preparation)

Polydimethylsiloxane with vinyl groups and auxiliary

4. SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

In case of accident or if you feel unwell seek medical advice (show label or SDS where possible).

After inhalation:

Material cannot be inhaled under normal conditions.

After contact with the skin:

Wipe off excess material with cloth or paper. Wash with plenty of water or water and soap. In the event of a visible skin change or other complaints, seek medical advice (show label or SDS where possible).

After contact with the eyes:

Rinse immediately with plenty of water. Seek medical advice in case of continuous irritation.

After swallowing:

Give several small portions of water to drink. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Any relevant information can be found in other parts of this section.

4.3 Indication of any immediate medical attention and special treatment needed

No data are available.

5. SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media:**

water spray , extinguishing powder , alcohol-resistant foam , carbon dioxide , sand .

Extinguishing media which must not be used for safety reasons:

water jet .

5.2 Special hazards arising from the substance or mixture

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5.3 Advice for firefighters**Special protective equipment for fire fighting:**

Use respiratory protection independent of recirculated air.

6. SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

No special measures required.

6.2 Environmental precautions

Prevent material from entering sewers or surface waters.

6.3 Methods and material for containment and cleaning up

Scoop up large quantities after dusting surfaces with sand or Fuller's earth to prevent sticking. Sweep or scrape up the spilled material and place in an appropriate chemical waste container. Clean any slippery coating that remains using a detergent / soap solution or another biodegradable cleaner. Apply sand or other inert granular material to improve traction.

6.4 Reference to other sections

Relevant information in other sections have to be considered. This applies in particular for information given on personal protective equipment (section 8) and on disposal (section 13).

7. SECTION 7: Handling and storage**7.1 Precautions for safe handling****Precautions for safe handling:**

No special protective measures required.

Precautions against fire and explosion:

No special precautions against fire and explosion required.

7.2 Conditions for safe storage, including any incompatibilities**Conditions for storage rooms and vessels:**

none known

Advice for storage of incompatible materials:

not applicable

Further information for storage:

Keep container tightly closed. Store in a dry and cool place.

7.3 Specific end use(s)

No data are available.

8. SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Maximum airborne concentrations at the workplace:

not applicable

8.2 Exposure controls

8.2.1 Exposure in the work place limited and controlled

General protection and hygiene measures:

Observe standard industrial hygiene practices for the handling of chemical substances. Do not eat or drink when handling.

Personal protection equipment:

Respiratory protection

not required .

Hand protection

Recommendation: Protective gloves made of butyl rubber . Gloves suitable for up to 60 minutes' use.

Eye protection

Recommendation: protective goggles .

Skin protection

not required .

8.2.2 Exposure to the environment limited and controlled

Prevent material from entering surface waters and soil.

9. SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General information:

Physical state / form..... : paste
Colour : transparent
Odour : slight

Important information about the protection of health, safety and the environment:

Property:	Value:	Method:
Melting point / melting range	not applicable	
Boiling point / boiling range	not applicable	
Flash point.....	: > 200 °C	(DIN 51376)
Ignition temperature	: > 400 °C	(DIN 51794)
Lower explosion limit (LEL)	: not applicable	
Upper explosion limit (UEL).....	: not applicable	
Vapour pressure.....	: not applicable	
Density	: approx. 1,20 g/cm ³ at 20 °C	(ISO 1183-1 A)
Water solubility / miscibility.....	: virtually insoluble	
pH-Value	: not applicable	
Viscosity (dynamic)	: not applicable	

9.2 Other information

Thermal decomposition : > 250 °C

10. SECTION 10: Stability and reactivity

10.1 – 10.3 Reactivity; Chemical stability; Possibility of hazardous reactions

If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

Relevant information can possibly be found in other parts of this section.

10.4 Conditions to avoid

none known

10.5 Incompatible materials

none known

10.6 Hazardous decomposition products

If stored and handled properly: none known . Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.

11. SECTION 11: Toxicological information

11.1 Information on toxicological effects

11.1.1 General information

Data derived for the product as a whole are of higher priority than data for single ingredients.

11.1.2 Acute toxicity

Assessment:

Based on the available data acute toxic effects are not expected after single oral exposure.

Product details:

Route of exposure	Result/Effect	Species/Test system	Source
oral	LD ₅₀ : > 2000 mg/kg	rat	Conclusion by analogy
dermal	LD ₅₀ : > 2000 mg/kg	rat	Conclusion by analogy

11.1.3 Skin corrosion/irritation

Assessment:

Based on the available data a clinically relevant skin irritation hazard is not expected.

Product details:

Result/Effect	Species/Test system	Source
not irritating	rabbit	Conclusion by analogy

11.1.4 Serious eye damage / eye irritation

Assessment:

For this endpoint no toxicological test data is available for the whole product.

Product details:

Result/Effect	Species/Test system	Source
not irritating	rabbit	Conclusion by analogy

11.1.5 Respiratory or skin sensitization

Assessment:

Based on the available data a sensitization reaction is not expected from this product.

Product details:

Route of exposure	Result/Effect	Species/Test system	Source
dermal	not sensitizing	guinea-pig; Bühler	Conclusion by analogy

11.1.6 Germ cell mutagenicity

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.1.7 Carcinogenicity

Assessment:

For this endpoint no toxicological test data is available for the whole product.

Data related to ingredients:

Decamethylcyclopentasiloxane (Impurity):

Chronic inhalation exposure to D5 (24 months, 160 ppm) led to an increase in endometrial adeno carcinomas in the uterus of rats. The statistically relevant NOAEL for the adeno carcinomas was 0.6 mg/L (40 ppm). Based on available data a mutagenic/genotoxic mode of action as well as a direct agonistic/antagonistic action at both the estrogen and progesterone receptor are unlikely. In the male animals no indications of carcinogenic effects were observed. Based on the incidence for hyperplasia and tumors throughout all dose groups, including the control group it can not be excluded that the tumor formation occurred spontaneously. Mechanistic studies are ongoing under the review of an international expert panel.

11.1.8 Reproductive toxicity

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.1.9 Specific target organ toxicity (single exposure)

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.1.10 Specific target organ toxicity (repeated exposure)

Assessment:

For this endpoint no toxicological test data is available for the whole product.

11.1.11 Aspiration hazard

Assessment:

Based on the physical-chemical properties of the product no aspiration hazard must be expected.

12. SECTION 12: Ecological information

12.1 Toxicity

Assessment:

Evaluation on basis of physical-chemical properties: No expected damaging effects to aquatic organisms. According to current knowledge adverse effects on water purification plants are not expected.

12.2 Persistence and degradability

Assessment:

Biologically not degradable. Separation by sedimentation.

12.3 Bioaccumulative potential

Assessment:

Polymer component: No adverse effects expected.

Data related to ingredients

Decamethylcyclopentasiloxane (Impurity):

Under controlled laboratory conditions D5 dissolved in water bioconcentrates in fish. However, available monitoring data indicate that the substance does not biomagnify in aquatic and terrestrial food webs in the environment.

12.4 Mobility in soil

Assessment:

Insoluble in water. No adverse effects expected.

Data related to ingredients:

Decamethylcyclopentasiloxane (Impurity):

D5 has a very low water solubility, easily evaporates to air, and partitions to organic matter. It is degraded in air by reaction with hydroxyl radicals. In soil D5 is removed by several simultaneously occurring processes including volatilisation, hydrolysis, and clay-catalysed degradation.

12.5 Results of PBT and vPvB assessment

No data are available.

Data related to ingredients:

Decamethylcyclopentasiloxane (Impurity):

D5 meets the screening criteria for vPvB. However, D5 does not behave similarly to known vPvB substances. The weight of scientific evidence from field studies shows that D5 is not biomagnifying in aquatic and terrestrial food webs. D5 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D5 in air that does not degrade by this reaction is not expected to deposit from the air to water, to land, or to living organisms.

12.6 Other adverse effects

none known

12.7 Additional information

Easily separable from water by filtration.

13. SECTION 13: Disposal considerations

13.1 Waste treatment methods

13.1.1 Material

Recommendation:

Material that cannot be used or chemically reprocessed should be disposed of at an approved facility in accordance with any applicable governmental regulations.

13.1.2 Uncleaned packaging

Recommendation:

Containers should be completely emptied before recycling as specified in government regulations. Empty containers should be sent to an approved recycling facility.

13.1.3 Waste Disposal Legislation Ref.No.(EC)

It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

14. SECTION 14: Transport information

14.1–14.4 UN number; UN proper shipping name; Transport hazard class(es); Packing group

Road ADR:

.....Valuation : Not regulated for transport

Railway RID:

Valuation : Not regulated for transport

Transport by sea IMDG-Code:

Valuation : Not regulated for transport

Air transport ICAO-TI/IATA-DGR:

Valuation : Not regulated for transport

14.5 Environmental hazards

Hazardous to the environment: no

14.6 Special precautions for user

Relevant information in other sections have to be considered.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Bulk transport in tankers is not intended.

15. SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National and local regulations must be observed.

For information on labelling please refer to section 2 of this document.

SI 2002/1689: CHIP Regulations 2002
SI 2002/2677: COSHH Regulations 2002
SI 1999/3242: Management of Health & Safety at Work Regulations 1999
Health & Safety at Work Act 1974
SI 1993/1643: Environmental Protection Act 1993 & Subsidiary Regulations.
Other national and local measures relating to the workplace, pollution control, environmental protection and waste control.

15.2 Chemical safety assessment

A chemical safety assessment according to (EC) regulation 1907/2006 (REACH) has not been carried out for this product.

15.3 Other international regulations

Details of international registration status:

Listed on or in accordance with the following inventories:

EINECS - Europe

ECL - Korea

ENCS - Japan

AICS - Australia

IECSC - China

DSL - Canada

PICCS - Philippines

TSCA - USA

16. SECTION 16: Other information

16.1 Material

The above information describes exclusively the safety requirements of the product(s) and is based on our present-day knowledge. It does not represent a guarantee for the properties of the product(s) described in terms of the legal warranty regulations. Properties of the product are to be found in the respective product leaflet.

16.2 Further information:

Commas appearing in numerical data denote a decimal point. Vertical lines in the left-hand margin indicate changes compared with the previous version. This version supersedes all previous versions.

- End of Safety Data Sheet -

Statement on suitability for Use under Food Contact Regulations for

ELASTOSIL[®] R 401/10 – 90 S or OH

1. Europe:

Due to lack of specific European legislation on Silicones these materials are subject to the Framework Regulation (EC) No. 1935/2004 and national provisions (Article 6). Provided appropriate processing, **ELASTOSIL[®] R 401/10 – 90 S or OH series** and their curing agents **ELASTOSIL[®] Crosslinker B, C1, C6, E and E 2** are suitable for the manufacture of food contact materials and articles under article 3 of the before mentioned Regulation. Compliance with the requirements of Regulation (EC) No. 1935/2004 for the food contact material or article on limitations for migration or extraction and volatiles and the effect on taste and smell of the food has to be ensured by the producer of the food contact material or article.

2. Germany:

The ingredients of **ELASTOSIL[®] R 401/10 – 90 S or OH series** and their curing agents **ELASTOSIL[®] Crosslinker B, C1, C6, E and E 2** are contained in the positive list of Recommendation XV. Silicones of the BfR.
Limitations: Extractables and volatiles may not exceed 0.5%. The cured elastomer may not change the food concerning taste and odour.
If Bis(2,4- dichlorobenzoyl)peroxide (Crosslinker E) is used as curing catalyst, an SML (specific migration limit) of 5 mg/kg food or food simulant relating to the decomposition product 2,4-dichlorobenzoic acid, has to be met.

3. France:

The ingredients of **ELASTOSIL[®] R 401/10 – 90 S or OH series** and their curing agents **ELASTOSIL[®] Crosslinker B, C1, C6 and E** are in compliance with the positive list of the Arrêté du 25 novembre 1992.
Limitations: Total migration may not exceed 60 mg/kg food or food simulant, respectively, and volatiles are limited to 0.5%.

4. USA:

The ingredients of **ELASTOSIL[®] R 401/10 – 90 S or OH series** and their curing agents **ELASTOSIL[®] Crosslinker B, C1, C6, E and E 2** are in compliance with 21 CFR §177.2600 Rubber articles intended for repeated use.

Limitations:

Rubber articles intended for use with dry food are so formulated and cured under conditions of good manufacturing practice as to be suitable for repeated use.

Rubber articles intended for repeated use in contact with aqueous food shall meet the following specifications: The food-contact surface of the rubber article in the finished form in which it is to contact food, when extracted with distilled water at reflux temperature, shall yield total extractives not to exceed 20 milligrams per square inch during the first 7 hours of extraction, nor to exceed 1 milligram per square inch during the succeeding 2 hours of extraction.

Rubber articles intended for repeated use in contact with fatty foods shall meet the following specifications: The food-contact surface of the rubber article in the finished form in which it is to contact food, when extracted with n-hexane at reflux temperature, shall yield total extractives not to exceed 175 milligrams per square inch during the first 7 hours of extraction, nor to exceed 4 milligrams per square inch during the succeeding 2 hours of extraction.

In accordance with good manufacturing practice finished rubber articles intended for repeated use in contact with food shall be thoroughly cleansed prior to their first use in contact with food.