

# Material Safety Data Sheet



<b>1</b>	FIRE HAZARD	<b>HAZARD KEY</b> 4 - SEVERE 3 - SERIOUS 2 - MODERATE 1 - SLIGHT 0 - MINIMAL
<b>1</b>	HEALTH HAZARD	
<b>2</b>	REACTIVITY	

## Rapido™ Silicone Jewelry Molding Rubber

*Manufacturer:* F. E. Knight Inc.  
*Address:* 120 Constitution Blvd., Franklin, MA 02038  
*Telephone:* 508-520-1666  
*Fax:* 508-298-0160  
*Date Prepared:* May 20, 2009  
*Emergency:* Chem-Tel: 1-800-255-3924  
*Telephone No:* or 617-969-5399  
*Prepared by:* Michael Knight

### SECTION 2 - Composition / information on ingredients

*Type:* NEBE  
*CAS No.:* 1333-74-0  
*Substance:* Hydrogen gas  
*Content [wt. %]:* Lower: Varies  
Upper: Varies  
*Note:* None.  
*Type:* HYD -by-product upon hydrolysis, INHA -ingredient, NEBE -by-product, MONO-residual monomer, VERU -impurity, VUL -by-product upon vulcanization. \*\*\* Note: C1 -IARC carcinogen, C2 -NTP carcinogen, C3 -OSHA carcinogen, NH -non-hazardous, R- reproductive toxin. Substances listed in the Subsections HAPS and California Proposition 65 Carcinogens / Reproductive Toxins that are not listed in Section 2 are only present at quantities below 0.1% or they are inextricably bound in the product.

### SECTION 3- Hazards Identification

#### HAZARDS CLASSIFICATIONS

#### HMIS RATING

(product as packaged)

*Health:* 1  
*Fire:* 1  
*Reactivity:* 2

<i>PPE:</i>	B (HMIS codes are based on contact with the product as packaged and any hydrolysis by-products, if present.) Hazardous Materials Identification System and HMIS are registered trademarks of the National Paint and Coatings Association.
<i>Canadian WHMIS Classification:</i>	None.
<i>Emergency overview and potential hazards</i>	This material is not hazardous under OSHA criteria. This material is not hazardous under WHMIS criteria.
<i>Physical Hazards:</i>	Under certain conditions this material may generate flammable hydrogen gas.
<i>Acute health effects route of entry or possible contact:</i>	Eyes, skin, ingestion.
<i>Eye contact:</i>	May cause slight eye irritation.
<i>Skin contact:</i>	No acute toxic effects are expected.
<i>Inhalation:</i>	Inhalation is not expected due to low vapor pressure.
<i>Ingestion:</i>	Not expected in industrial use.
<i>Additional information on acute health effects:</i>	The health hazard evaluation is based on test results and/or on known properties of ingredients..

*FURTHER INFORMATION*

<i>Medical conditions which may be aggravated by exposure:</i>	Unknown
<i>Carcinogens/ Reproductive toxins:</i>	This material does not contain any reportable carcinogenic ingredients. This material does not contain any reproductive toxins at or above OSHA or WHMIS reportable levels. See Section 11 for Toxicological Information, if any.

## SECTION 4 – First Aid Measures

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<i>General information:</i>	In cases of sickness seek medical advice (show label if possible).
<i>After inhalation:</i>	No special measures required.
<i>After contact with the skin.</i>	Remove material with a waterless skin cleaner from skin and clothing. Wash then with plenty of water or water and soap.
<i>After contact with the eyes:</i>	If contact with eyes, immediately hold eyelids apart and flush with plenty of water. Get medical attention if irritation occurs.
<i>After swallowing:</i>	No special measures required. Get medical attention if symptoms occur. Show label if possible.

## SECTION 4 – Fire Fighting Measures

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*FLAMMABLE PROPERTIES*

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*Fire and explosion hazards:* Caution! This product is not flammable but it may evolve flammable hydrogen gas under certain conditions, which may accumulate in the container headspace. Do not use a welding or cutting torch on or near any container of this material, even if empty, because an explosion could occur. Spontaneous ignition is possible due to electrostatic discharge. The generation of hydrogen gas is increased under circumstances mentioned in Sect. 10 "Stability and reactivity". Contact with contaminated piping or vessels or with corroded and rusty containers can increase the rate of hydrogen formation. Explosion limits for hydrolysis product: 4-75.6% v/v (hydrogen).

*Recommended extinguishing media:* Carbon dioxide, alcohol-resistant foam, dry sand.

*Unsuitable extinguishing media:* Water, dry chemical, halones.

*Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:* Hazardous decomposition products: carbon dioxide, carbon monoxide, formaldehyde, silicon dioxide and incompletely burnt hydrocarbons.

*Fire fighting procedures:* Fire fighters should wear full protective clothing including a self-contained breathing apparatus.

## SECTION 6 - Accidental Release Measures

*Precautions:* No special measures required.  
HAZWOPER PPE Level: D

*Containment:* Prevent material from entering surface waters, drains or sewers and open soil. Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll free phone number (800) 424-8802.

*Methods for cleaning up:* Take up mechanically and dispose of according to local/state/federal regulations. Clean any slippery coating that remains using a detergent / soap solution or another biodegradable cleaner.

*Further information:* Eliminate all sources of ignition. Do not seal collecting vessel gas-tight. Observe notes under section 7.

## SECTION 7 - Handling and Storage

### HANDLING

*Precautions for safe handling:* Open and handle container with care. Ensure adequate ventilation. Keep away from incompatible substances in accordance with section 10.2 .

*Precautions against fire and explosion:* Product can release hydrogen. In partly emptied containers formation of explosive mixtures is possible. Keep away from sources of ignition and do not smoke. Keep away from open flames, heat and sparks. Take precautionary measures against electrostatic charging.

### STORAGE

*Conditions for storage rooms and vessels:* None known.

*Advice for storage of incompatible materials:* Keep away from alkalis.

*Further information for storage:* Protect against moisture. Store in original container only. Keep container tightly closed and store in a well-ventilated place.

## SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

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### ENGINEERING CONTROLS

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<i>Ventilation:</i>	Use only with adequate ventilation.
<i>Local exhaust:</i>	Yes.
<i>Associate substances with specific control parameters such as limit values:</i>	None known.
<i>Personal protection equipment (PPE)</i>	
<i>Respiratory protection:</i>	Not necessary.
<i>Hand protection:</i>	Recommendation: butyl rubber protective gloves, nitrile rubber protective gloves.
<i>Eye protection:</i>	Chemical safety goggles.
<i>Other protective clothing or equipment:</i>	Recommendation: antistatic clothing and shoes.
<i>General hygiene and protection measures:</i>	Do not eat, drink or smoke when handling. Wash thoroughly after handling.

## SECTION 9 - Physical and Chemical Properties

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### APPEARANCE

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<i>Physical state/form:</i>	Solid.
<i>Color:</i>	Clear.
<i>Odor:</i>	Characteristic.

### SAFETY PARAMETERS

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<i>Density:</i>	1.14 g/cm <sup>3</sup>
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### FURTHER INFORMATION

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<i>Explosion limits for released hydrogen:</i>	4 -75.6%(V).
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## SECTION 10 - Stability and Reactivity

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<i>General information:</i>	If stored and handled in accordance with standard industrial practices no hazardous reactions are known.
<i>Conditions to avoid:</i>	None known.
<i>Materials to avoid:</i>	Reacts with: alkalis, amines, strong acids, oxidizing agents. Reaction causes the formation of: hydrogen.
<i>Hazardous decomposition products:</i>	Hydrogen. Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.
<i>Further information:</i>	Hazardous polymerization cannot occur.

## SECTION 11 - Toxicological Information

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<i>General information:</i>	Toxicological testing has not been conducted with this material.
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## SECTION 12 - Ecological Information

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*INFORMATION ON  
ELIMINATION (persistence  
and dependability)*

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*Biodegradation /  
further information:* Biologically not degradable.

*Further information:* Separation by sedimentation.

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*BEHAVIOR IN  
ENVIRONMENTAL  
COMPARTMENTS*

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*Mobility:* Insoluble in water.

*Further information:* Bioaccumulation is not expected to occur.

*Ecotoxicological effects:* No expected damaging effects to water organisms.

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*Effects in sewage  
treatment plants (bacteria  
toxicity: respiration-/  
reproduction inhibition):* According to current knowledge adverse effects on water purification plants are not expected.

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*FURTHER ECOLOGICAL  
INFORMATION*

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*Other harmful effects:* None known.

*General information:* No environmental problems expected if handled and treated in accordance with standard industrial practices and local regulations where applicable.

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## SECTION 13 - Disposal Considerations

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*PRODUCT DISPOSAL*

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*Recommendation:* Danger of oxyhydrogen gas formation with water, alcohols, acids, metallic salts, amines and alkalis. Material designated for disposal must, be segregated from incompatible substances or materials specified in Sect. 10.2. Dispose of according to regulations by incineration in a special waste incinerator. Observe local/state/federal regulations..

*PACKAGING DISPOSAL*

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*Recommendation::* Containers may contain hazardous quantities of hydrogen gas. Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations.

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## SECTION 14 - Transport Information

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*US DOT & CANADA  
TDG SURFACE*

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*Valuation:* Not regulated for transport.

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*TRANSPORT BY  
SEA IMDG-Code*

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*Valuation:* Not regulated for transport.

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*AIR TRANSPORT  
ICAO-TI/IATA-DGR*

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*Valuation:* Not regulated for transport.

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## SECTION 15 - Regulatory Information

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### U.S. FEDERAL REGULATIONS

<u>TSCA inventory status and TSCA information:</u>	This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory.
<u>TSCA 12(b) Export Notification:</u>	This material does not contain any TSCA 12(b) regulated chemicals.
<u>SARA 311/312 Hazard Class:</u>	This product does not present any SARA 311/312 hazards.
<u>HAPS:</u>	This material has not been evaluated for the presence of chemicals on the Hazardous Air Pollutants (HAPS) list.
<u>U. S. State regulations</u>	The status of this material with regard to State Listings has not been determined.
<u>Canadian regulations:</u>	This product has been classified in accordance with the Hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
<u>WHMIS Hazard Classes:</u>	None.
<u>DSL Status:</u>	The Canadian DSL status of this material has not been determined.

## SECTION 16 - Other Information

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<u>Additional information:</u>	This Material Safety Data Sheet (MSDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200) .This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents. This MSDS provides selected regulatory information on this product, including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.
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### GLOSSARY OF TERMS

<u>ACGIH -American Conference of Governmental Industrial Hygienists:</u>	ppm -Parts per Million.
<u>DOT -Department of Transportation:</u>	SARA -Superfund Amendments and Reauthorization Act.
<u>hPa -Hectopascals:</u>	STEL- Short Term Exposure Limit.
<u>mPa*s -Milli Pascal-Seconds:</u>	TSCA- Toxic Substances Control Act.
<u>OSHA -Occupational Safety and Health Administration:</u>	TWA- Time Weighted Average.

*PEL - Permissible  
Exposure Limit:*

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WHMIS -Canadian Workplace Hazardous Materials  
Identification System.

*FLASH POINT  
DETERMINATION METHODS*

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Common Name

*ASTM D56:*

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Tagliabue (Tag) closed cup.

*ASTM D92, DIN  
51376, ISO 2592:*

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Cleveland open cup.

*ASTM D93, DIN  
51758, ISO 2719:*

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Pensky-Martens closed cup.

*ASTM D3278, DIN  
55680, ISO 3679:*

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Setaflash or Rapid closed cup.

*DIN 51755:*

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Abel-Pensky closed cup.

*CONVERSION TABLE*

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*Pressure:*

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1 hPa \* 0.75 = 1 mm Hg = 1 Torr; 1 bar = 1000 hPa

*Viscosity:*

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1 mPa\*s = 1 Centipoise (Cp)