

Product Code A-120

Date of Issue: 10/17/2018 Revision Date: 12/08/2020

Factor II Inc. encourages the end user to read this document entirely and understand all sections of this SDS sheet prior to use. There is important information regarding this product. The end user is expected to follow all precautions outlined in this SDS.

**SECTION 1: IDENTIFICATION** 

# **PRODUCT IDENTIFIER**

Product Name: HCR Silicone Elastomer 20 Dur Biomed Grade

Product Code : A-120 Part A

Intended Use(s): For professional use only

### CONTACT INFORMATION FOR SUPPLIER OF SAFETY DATA SHEET

Factor II, Incorporated 5642 White Mountain Ave PO Box 1339 Lakeside AZ 85929 928-537-8387 www.factor2.com sales@factor2.com

# **EMERGENCY TELEPHONE NUMBERS**

928-368-7502

# **SECTION 2: HAZARD(S) IDENTIFICATION**

#### **Hazard Classification**

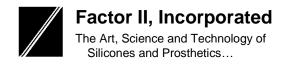
This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Reproductive toxicity – Category 2

# Label Elements Hazard pictograms



Signal word: WARNING!



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#### Hazards

Suspected of damaging fertility or the unborn child.

# **Precautionary statements**

#### Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

#### Response

If exposed or concerned: Get medical advice/ attention.

### Storage

Store locked up.

# **Disposal**

Dispose of contents/ container to an approved waste disposal plant.

#### Other hazards

No data available

### **SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

**Chemical nature :** Silicone This product is a mixture.

Component	CASRIN	Concentration
Octamethyl Cyclotetrasiloxane	556-67-2	>=0.34 - <=0.46%

# **SECTION 4: FIRST-AID MEASURES**

# Description of first aid measures General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Skin contact:** Seek first aid or medical attention as needed. If molten material comes in contact with the skin, do not apply ice but cool under ice water or running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage. Seek medical attention immediately. Suitable emergency safety shower facility should be immediately available.



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**Eye Contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**Ingestion:** If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

# Indication of any immediate medical attention and special treatment needed

**Notes to physician:** If burn is present, treat as any thermal burn, after decontamination. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

#### **SECTION 5: FIRE-FIGHTING MEASURES**

**Suitable extinguishing media:** Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture Hazardous combustion products: Silicon oxides Carbon oxides

**Unusual Fire and Explosion Hazards:** Exposure to combustion products may be a hazard tohealth. Fire burns more vigorously than would be expected.

#### Advice for firefighters

**Fire Fighting Procedures:** Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

**Special protective equipment for firefighters:** In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.



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### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures:** Remove all sources ofignition. Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

**Environmental precautions:** Discharge into the environment must be avoided. Prevent furtherleakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

**Methods and materials for containment and cleaning up:** Sweep up or vacuum up spillage and collect in suitable container for disposal. Local or national 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 regulations are applicable. Sections 13 and 15 of this SOS provide information regarding certain local or national requirements. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. See sections: 7, 8, 11, 12 and 13.

#### **SECTION 7: HANDLING AND STORAGE**

**Precautions for safe handling:** Do not swallow. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice.

Use only with adequate ventilation. See Engineering measures under EXPOSURECONTROLS/PERSONAL PROTECTION section.

**Conditions for safe storage:** Keep in properly labelled containers. Store locked up. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents. Unsuitable materials for containers: None known.



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# **SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

# **Control parameters**

If exposure limits exist, the are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation
Octamethyl	US WEEL	TWA	10ppm
Cyclotetrasiloxane			



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# **Exposure controls**

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

# Individual protection measures

**Eye/face protection:** Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

### Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use gloves to protect from mechanical injury. Selection of gloves will depend on the task. Use gloves with insulation for thermal protection, when needed. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadienerubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** When prolonged or frequently repeated contact could occur, useprotective clothing chemically resistant to this material. Selection of specific items such as faceshield, boots, apron, or full-body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. Use an approved air-purifying respirator when vapors are generated at increased temperatures or when dust or mist is present.

The following should be effective types of air-purifying respirators: When dust/mist are present use a/an Particulate filter. When combinations of vapors, acids, or dusts/mists are present use a/an Organic vapor cartridge with a particulate pre-filter.



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### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** Physical state Rubber-Crepe

Color Tan

Odor No data available **Odor Threshold** No data available рΗ Not applicable

No data available Melting point/range Freezing point No data available **Boiling point (760 mmHg)** Not applicable Flash point Not applicable

**Evaporation Rate (Butyl Acetate = 1)** Not applicable

Flammability (solid, gas) Not classified as a flammability hazard

Lower explosion limit No data available **Upper explosion limit** No data available **Vapor Pressure** Not applicable

**Relative Vapor Density (air = 1)** No data available

**Relative Density (water = 1)** 1:1

Water solubility No data available Partition coefficient: n-octanol/water No data available

**Auto-ignition temperature** No data available **Decomposition temperature** No data available **Dynamic Viscosity** Not applicable **Kinematic Viscosity** Not applicable **Explosive properties** Not explosive

**Oxidizing properties** The substance or mixture is not classified as

oxidizing.

Molecular weight No data available Particle size No data available

Note: The physical data presented above are typical values and should not be constructed as a specification.



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#### **SECTION 10: STABILITY AND REACTIVITY**

**Reactivity:** Not classified as a reactivity hazard.

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Can react with strong oxidizing agents. When heated to temperatures above 150 •c (300 °F) in the presence of air, product can form formaldehyde vapours.

Safe handling conditions may be maintained by keeping vapour concentrations within the occupational exposure limit for formal dehyde

Conditions to avoid: None known.

Incompatible materials: Oxidizing agents

Hazardous decomposition products: Formaldehyde.

# **SECTION 11: TOXICOLOGICAL INFORMATION**

Toxicological information appears in this section when such data is available.

### **Acute toxicity**

#### Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking if swallowed.

Single dose oral LOSO has not been determined.

# Acute dermal toxicity

No adverse effects anticipated by skin absorption. The dermal LOSO has not been determined.

# Acute inhalation toxicity

No adverse effects are anticipated from single exposure to dust. Vapors released during thermal processing may cause respiratory irritation.

The LCS0 has not been determined.,

# Skin corrosion/irritation

Prolonged contact is essentially nonirritating to skin.

Mechanical injury only.

Under normal processing conditions, material is heated to elevated temperatures;



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contact with the material may cause thermal burns.

# Serious eye damage/eye irritation

Solid or dust may cause irritation or corneal injury due to mechanical action. Elevated temperatures may generate vapor levels sufficient to cause eye irritation. Effects may include discomfort and redness.

#### Sensitization

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

# **Specific Target Organ Systemic Toxicity (Single Exposure)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

# Specific Target Organ Systemic Toxicity (Repeated Exposure)

No relevant data found.

# Carcinogenicity

No relevant data found.

# **Teratogenicity**

No relevant data found.

# Reproductive toxicity

Contains component(s) which have interfered with fertility in animal studies. Contains component(s) which have been shown to interfere with reproduction in animal studies.

### Mutagenicity

No relevant data found.

### **Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

#### COMPONENTS INFLUENCING TOXICOLOGY:

### Octamethyl Cyclotetrasiloxane

### **Acute oral toxicity**

LD50, Rat, male, > 4,800 mg/kg No deaths occurred at this concentration.

#### **Acute dermal toxicity**

LD50, Rat, male and female, > 2,400 mg/kg No deaths occurred at this concentration.



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#### **SECTION 12: ECOLOGICAL INFORMATION**

Ecotoxicological information appears in this section when such data is available.

# **Toxicity**

# Octamethyl Cyclotetrasiloxane

### Acute toxicity to fish

Not expected to be acutely toxic to aquatic organisms.

No toxicity at the limit of solubility

LC50, Oncorhynchus mykiss (rainbow trout), flow-through, 96 Hour, >

0.022 mg/l No toxicity at the limit of solubility

LCS0, Cyprinodon variegatus (sheepshead minnow), flow-through, 14 d, > 0.0063 mg/l

# Acute toxicity to aquatic invertebrates

No toxicity at the limit of solubility

EC50, Mysidopsis bahia (opossum shrimp), flow-through test, 96 Hour,>

0.0091 mg/INo toxicity at the limit of solubility

EC50, Oaphnia magna (Water flea), flow-through test, 48 Hour, > 0.015 mg/l

#### Acute toxicity to algae/aquatic plants

No toxicity at the limit of solubility

ErC50, Pseudokirchner iella subcapitata (green algae), 72 Hour, Growth rate, > 0.022 mg/l

# Chronic toxicity to fish

No toxicity at the limit of solubility

NOEC, Oncorhynchus mykiss (rainbowtrout), 93 d, >= 0.0044 mg/l

# Chronic toxicity to aquatic invertebrates

No toxicity at the limit of solubility

NOEC, Oaphnia magna (Water flea), 21 d, >= 0.0079 mg/l

#### Persistence and degradability

### Octamethyl Cyclotetrasiloxane

**Biodegradability:** Material is expected to biodegrade very slowly (in the environment). Failsto pass OECO/EEC tests for ready biodegradability.

10-day Window: Not applicable

**Biodegradation:** 3.7 % **Exposure time:** 28 d

Method: OECD Test Guideline 310



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# Stability in Water (1/2-life)

Hydrolysis, DT50, 69.3 - 144 Hour, pH 7, Half-life Temperature 24.6 °C, OECD Test Guideline 111

Photodegradation

Atmospheric half-life: 16 d

**Method:**Estimated.

# Bioaccumulative potential

#### Octamethyl Cyclotetrasiloxane

**Bioaccumulation:** Bioconcentration potential is high (BCF > 3000 or Log Pow between 5

Partition coefficient: n-octanol/water(log Pow): 6.49 Measured

Bioconcentration factor (BCF): 12,400 Pimephales promelas (fathead minnow) Measured

Mobility in soil

#### Octamethyl Cyclotetrasiloxane

Expected to be relatively immobile in soil (Koc > 5000).

### **SECTION 13: DISPOSAL CONSIDERATIONS**

**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY

OF WATER. All disposal practices must be in compliance with all Federal, State/Provincialand local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR

UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 15

**Treatment and disposal methods of used packaging:** Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.



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# **SECTION 14: TRANSPORT INFORMATION**

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code

Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

### **SECTION 15: REGULATORY INFORMATION**

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312 Reproductive toxicity

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

This material does not contain any components with a CERCLA RQ.



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# Pennsylvania Right To Know

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Dimethyl Siloxane, Dimethylvinylsiloxy-terminated	68083-19-2
Silicon dioxide	7631-86-9
Siloxanes and Silicones, di-Me, Me vinyl, vinyl group-	68083-18-1
terminated	
Polydimethylsiloxane hydroxy-terminated	70131-67-8

# California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birthdefects, or any other reproductive harm.

# **United States TSCA Inventory (TSCA)**

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

# **SECTION 16: OTHER INFORMATION**

# **Hazard Rating System**

#### **NFPA**

Health	Flammability	Instability
0	1	0

#### **HMIS**

Health	Flammability	Physical Hazard
0*	1	0

<sup>\* =</sup> Chronic Effects (See hazards Identification)

#### Revision

Identification Number: 1821059 / A776 / Issue Date: 10/17/2018 / Version: 5.0 Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document

#### Legend

TWA	8-hr TWA
US WEEL	USA. Workplace Environmental Exposure Levels
	(WEEL)

#### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the



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Testing of Materials: bw - Body weight: CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule: ENCS - Existing and New Chemical Substances (Japan): ErCx -Concentration associated with x% growth rate response; ERG - Emergency Response Guide: GHS - Globally Harmonized System: GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC -Inventory of Existing Chemical Substances in China: IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD -Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PST - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA -Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB – Very Persistent and Very Bioaccumulative

#### **Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups frominformation supplied by internal references within our company.



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DDP SPECIALTY ELECTRONIC MATERIALS US 9, LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version. US

This is to certify that the above designated material has been tested and did comply with the listed specifications (with listed exceptions) when supplied in original container. The material is subject to the conditions listed on the invoice. The above is a copy of information on file. The lot acceptance data are available for examination. This is a computer-generated document that is valid without a signature. The information above is supplied in good faith and, to the best of our knowledge, is based on available sources believed to be reliable and accurate. This document and any information provided herein are for your guidance only. The use by the requestor is beyond Factor II control; therefore, the responsibility for appropriate and safe use of the above information lies with the End user. Factor II shall not be responsible for any misuse and/or misapplication of the information in this document.

Factor II, Inc. urges each customer or recipient of this SDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology and/or fire prevention as necessary or appropriate to the use and understanding of the data contained in this SDS. To promote safe handling each customer or recipient should 1) notify and furnish its employees, agents, contractors, customers and/or others whom it knows or believes will use this material of the information regarding hazards or safety, and 2) request its customers to notify their employees, customers and other users of the product of this information.



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#### **SECTION 1: IDENTIFICATION**

# PRODUCT IDENTIFIER

Product Name : HCR Silicone Elastomer 20 Dur Biomed Grade

Product Code : A-120 Part B

Intended Use(s): For professional use only

# CONTACT INFORMATION FOR SUPPLIER OF SAFETY DATA SHEET

Factor II, Incorporated 5642 White Mountain Ave PO Box 1339 Lakeside AZ 85929 928-537-8387 www.factor2.com sales@factor2.com

# **EMERGENCY TELEPHONE NUMBERS**

928-368-7502

# **SECTION 2: HAZARD(S) IDENTIFICATION**

Hazard classification
GHS classification in accordance with 29 CFR
1910.1200Reproductive toxicity - Category 2

Label elements Hazard pictograms



Signal word: WARNING!

Hazards

Suspected of damaging fertility or the unborn child.



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#### Precautionary statements

Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood. Keep away from heaUsparks/open flames/hot surfaces. No smoking.

Keep only in original container.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

IF exposed or concerned: Get medical advice/ attention.

Storage

Store in a well-ventilated place. Store locked up.

Disposal

Dispose of contents/ container to an approved waste disposal plant.

Other hazards
No data available

### **SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

**Chemical nature:** Silicone This product is a mixture.

Component	CASRN	Concentration
Octamethyl Cyclotetrasiloxane	556-67-2	>= 0.33 - <= 0.45 %

# **SECTION 4: FIRST-AID MEASURES**

Description of first aid measures

General advice:

First Aid responders should pay attention to self-protection and use the recommended protective

clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

Skin contact: Seek first aid or medical attention as needed. If molten material comes in



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contact with the skin, do not apply ice but cool under ice water or running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage. Seek medical attentionimmediately. Suitable emergency safety shower facility should be immediately available.

**Eye contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**Ingestion:** If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not givelaxatives. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed: Treat symptomatically and supportively.

Indication of any immediate medical attention and special treatment needed Notes to physician: If burn is present, treat as any thermal burn, after decontamination. If lavage isperformed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

#### **SECTION 5: FIRE-FIGHTING MEASURES**

**Suitable extinguishing media:** Water spray Alcohol-resistant foam Carbon dioxide (CO2) Drychemical

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture

Hazardous combustion products: Silicon oxides Carbon oxides Formaldehyde

**Unusual Fire and Explosion Hazards:** Exposure to combustion products may be a hazard to health. Fire burns more vigorously than would be expected.

Advice for firefighters

**Fire Fighting Procedures:** Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.



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**Special protective equipment for firefighters:** In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures:** Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

**Environmental precautions:** Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

**Methods and materials for containment and cleaning up:** Sweep up or vacuum up spillage and collect in suitable container for disposal. Local or national 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 regulations are applicable. Sections 13 and 15 of this SOS provide information regarding certain local or national requirements. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. See sections: 7, 8, 11, 12 and 13.

#### **SECTION 7: HANDLING AND STORAGE**

**Precautions for safe handling:** Do not swallow. Avoid contact with eyes. Avoid prolonged orrepeated contact with skin. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice.

Use only with adequate ventilation. See Engineering measures under EXPOSURECONTROLS/PERSONAL PROTECTION section.

**Conditions for safe storage:** Keep in properly labelled containers. Store in original container. Store locked up. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents. Unsuitable materials for containers: None known.



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### **SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

# Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation
Octamethyl	US WEEL	TWA	10 ppm
Cyclotetrasiloxane			

Although some of the components of this product may have exposure guidelines, no exposure would be expected under normal handling conditions due to the physical state of the material.

#### **Exposure controls**

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

# Individual protection measures

**Eye/face protection:** Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. If exposure causes eye discomfort, use a full-face respirator. **Skin protection** 

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use gloves to protect from mechanical injury. Selection of gloves will depend on the task. Use gloves with insulation for thermal protection, when needed. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier Other protection: When prolonged or frequently repeated contact could occur, useprotective clothing chemically resistant to this material. Selection of specific items such as faceshield, boots, apron, or full-body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. Use an approved air-purifying respirator when vapors are generated at increased temperatures or when dust or mist is present. The following should be effective types of air-purifying respirators: When dust/mist are



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present use a/an Particulate filter. When combinations of vapors, acids, or dusts/mists are present use a/an Organic vapor cartridge with a particulate pre-filter.

#### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** 

Physical state
Color
Col

Odor Threshold
pH
No data available
Not applicable
No data available
Not applicable
Not applicable
Not applicable
Not applicable

Flammability (solid, gas)

Not applicable

Not classified as a flammability hazard

Lower explosion limit
Upper explosion limit
Vapor Pressure
Relative Vapor Density (air = 1)
No data available
No data available
Not applicable
No data available

Relative Density (water = 1)  $\frac{1}{1:1}$ 

Water solubility
Partition coefficient: n-octanol/water
Auto-ignition temperature
Decomposition temperature
Dynamic Viscosity
Kinematic Viscosity
Explosive properties
No data available

Oxidizing properties

The substance or mixture is not classified as

oxidizing.

Molecular weight
Particle size
No data available
No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.



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### **SECTION 10: STABILITY AND REACTIVITY**

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

**Possibility of hazardous reactions:** Can react with strong oxidizing agents. When heated to temperatures above 150 °C (300 °F) in the presence of air, product can form formaldehyde vapours. Safe handling conditions may be maintained by keeping vapour concentrations within the occupational exposure limit for formaldehyde. Hazardous decomposition products will be formed at elevated temperatures.

Conditions to avoid: None known.

Incompatible materials: Oxidizing agents

**Hazardous decomposition products:** Formaldehyde.

#### **SECTION 11: TOXICOLOGICAL INFORMATION**

Toxicological information appears in this section when such data is available.

#### **Acute toxicity**

### **Acute oral toxicity**

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

May cause choking if swallowed.

As product: Single dose oral LD50 has not been determined.

LD50, > 5,000 mg/kg Estimated.

### Acute dermal toxicity

No adverse effects anticipated by skin absorption.

As product: The dermal LD50 has not been determined.

LD50, > 2,000 mg/kg Estimated.

### **Acute inhalation toxicity**

No adverse effects are anticipated from single exposure to dust. Vapors released during thermal processing may cause respiratory irritation.



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The LD50 has not been determined.,

# Skin corrosion/irritation

Prolonged contact is essentially nonirritating to skin.

Mechanical injury only.

Under normal processing conditions, material is heated to elevated temperatures; contact with the

material may cause thermal burns.

# Serious eye damage/eye irritation

Solid or dust may cause irritation or corneal injury due to mechanical action. Elevated temperatures may generate vapor levels sufficient to cause eye irritation. Effects may include discomfort and redness.

#### Sensitization

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

# **Specific Target Organ Systemic Toxicity (Single Exposure)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

### Specific Target Organ Systemic Toxicity (Repeated Exposure)

No relevant data found.

# Carcinogenicity

No relevant data found.

# **Teratogenicity**

No relevant data found.

#### Reproductive toxicity

Contains component(s) which have interfered with fertility in animal studies. Contains component(s) which have been shown to interfere with reproduction in animal studies.

# Mutagenicity

No relevant data found.

#### **Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.



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### **SECTION 12: ECOLOGICAL INFORMATION**

Ecotoxicological information appears in this section when such data is available.

# **Toxicity**

# **Octamethyl Cyclotetrasiloxane**

### Acute toxicity to fish

Not expected to be acutely toxic to aquatic organisms

No toxicity at the limit of solubility

LD50, Oncorhynchus mykiss (rainbow trout), flow-through, 96 Hour, > 0.022mg/l

No toxicity at the limit of solubility

LC50, Cyrinodon variegatus (sheepshead minnow), flow-through, 14 d, > 0.0063 mg/l

### Acute toxicity to aquatic invertebrates

No toxicity at the limit of solubility

EC50, Mysidopsis bahia (opossum shrimp), flow-through test, 96 Hour, > 0.0091 mg/l No toxicity at the limit of solubility

EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, > 0.015 mg/l

# Acute toxicity to algae/aquatic plants

No toxicity at the limit of solubility

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, >0.022 mg/l

#### Chronic toxicity to fish

No toxicity at the limit of solubility

NOEC, Oncorhynchus mykiss (rainbow trout), 93 d, >=0.0044 mg/l

# Chronic toxicity to aquatic invertebrates

No toxicity at the limit of solubility

NOEC, Daphnia magna (Water flea), 21 d, >=030079 mg/l

### Persistence and degradability

# Octamethyl Cyclotetrasiloxane

Biodegradability: Material is expected to biodegrade very slowly (in the environment).

Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Not applicable

Biodegradation: 3.7% Exposure time: 28 d

**Method: OECD test Guideline 310** 

# Stability in Water (1/2-life)

Hedrolysis, DT50, 69.3-144 Hour, pH 7, Half-life Teperature 24.6°C, OECD Test

Guidline 111



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Photodegradation Atmospheric half-life: 16 d

**Method:** Estimated.

# **Bioaccumulative potential**

#### **Octamethyl Cyclotetrasiloxane**

**Bioaccumulation:** Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7)

Partition coefficient: n-octanol/water(log Pow): 6.49 Measured

Bioconcentration factor (BCF): 12,400 Pimephales promelas (fathead minnow)

Measured

# Mobility in soil

# Octamethyl Cyclotetrasiloxane

Expected to be relatively immobile in soil (Koc>5000).

### **SECTION 13: DISPOSAL CONSIDERATIONS**

**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY

OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and locallaws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR

UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section10 Regulatory Information, MSDS Section 15

**Treatment and disposal methods of used packaging:** Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.



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# **SECTION 14: TRANSPORT INFORMATION**

DOT

Not regulated for transport

# **Classification for SEA transport (IMO-IMDG):**

Not regulated for transport

Transport in bulk Consult IMO regulations before transporting ocean bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code

# Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

# **SECTION 15: REGULATORY INFORMATION**

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312 Reproductive toxicity

# Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This material does not contain any chemical components with known CAS numbers that exceed the

threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

# Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

This material does not contain any components with a CERCLA RO.

### Pennsylvania Right To Know

The following chemicals are listed because of the additional requirements of Pennsylvania law:



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Components	CASRIN
Dimethyl Siloxane, Dimethylvinylsiloxy-terminated	68083-19-2
Silicon dioxide	7631-86-9
Siloxanes and Silicones, di-Me, Me vinyl, vinyl group-	68083-18-1
terminated	
Polydimethylsiloxane hydroxy-terminated	70131-67-8

### California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

# **United States TSCA Inventory (TSCA)**

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

### **SECTION 16: OTHER INFORMATION**

# **Hazard Rating System**

### **NFPA**

<u> </u>		
Heath	Flammability	Instability
0	1	0

# **HMIS**

Health	Flammability	Physical Hazard
0*	1	0

<sup>\*=</sup> Chronic Effects (See Hazards Identification)

#### Revision

Identification Number: 1821067 / A776 / Issue Date: 10/17/2018 / Version: 6.0 Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

#### Legend

TWA	8-hr TWA
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

#### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate



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response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP- Good Laboratory Practice: HMIS - Hazardous Materials Identification System: IARC - International Agency for Research on Cancer; IATA - International Air Transport Association: IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National FireProtection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Cooperation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RO - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SOS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transportof Dangerous Goods: vPvB - Very Persistent and Very Bioaccumulative

#### Information Source and References

This SOS is prepared by Product Regulatory Services and Hazard Communications Groups frominformation supplied by internal references within our company.

DDP SPECIALTY ELECTRONIC MATERIALS US 9, LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure



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that the (M)SDS you have is current, please contact us for the most current version. us

This is to certify that the above designated material has been tested and did comply with the listed specifications (with listed exceptions) when supplied in original container. The material is subject to the conditions listed on the invoice. The above is a copy of information on file. The lot acceptance data are available for examination. This is a computer-generated document that is valid without a signature. The information above is supplied in good faith and, to the best of our knowledge, is based on available sources believed to be reliable and accurate. This document and any information provided herein are for your guidance only. The use by the requestor is beyond Factor II control; therefore, the responsibility for appropriate and safe use of the above information lies with the End user. Factor II shall not be responsible for any misuse and/or misapplication of the information in this document.

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