

# Material Safety Data Sheet

Material Name: NuSmile Primary Crowns

## \*\*\* Section 1 - Chemical Product and Company Identification \*\*\*

### Manufacturer Information

NuSmile Primary Crowns  
5524 Cornish  
Houston, TX 77007

Phone: 713-861-0033  
Fax: 713-861-1722

## \*\*\* Section 2 - Hazards Identification \*\*\*

### Emergency Overview

No hazards anticipated under normal product handling and use conditions.

### Potential Health Effects: Eyes

None anticipated under normal product use conditions.

### Potential Health Effects: Skin

None anticipated under normal product use conditions.

### Potential Health Effects: Ingestion

None anticipated under normal product use conditions.

### Potential Health Effects: Inhalation

None anticipated under normal product use conditions.

HMIS Ratings: Health: 1 Fire: 0 HMIS Reactivity 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

## \*\*\* Section 3 - Composition / Information on Ingredients \*\*\*

CAS #	Component
Proprietary	Composite Paste
7439-89-6	Iron
7440-50-8	Copper
868-77-9	2-Hydroxyethyl methacrylate
7440-22-4	Silver
7440-47-3	Chromium
7440-02-0	Nickel
7440-66-6	Zinc
7439-96-5	Manganese
7440-21-3	Silicon
7439-98-7	Molybdenum
7440-48-4	Cobalt
7440-44-0	Carbon

## \*\*\* Section 4 - First Aid Measures \*\*\*

### First Aid: Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists get medical attention.

### First Aid: Skin

For skin contact, flush with large amounts of water. If irritation persists, get medical attention.

### First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting.

### First Aid: Inhalation

If the affected person is not breathing, apply artificial respiration.

## \*\*\* Section 5 - Fire Fighting Measures \*\*\*

### General Fire Hazards

See Section 9 for Flammability Properties.

None

### Hazardous Combustion Products

Not Determined

# Material Safety Data Sheet

**Material Name: NuSmile Primary Crowns**

## Extinguishing Media

Use appropriate extinguishing media for surrounding fire.

## Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear.

**NFPA Ratings: Health: 1 Fire: 0 Reactivity: 0**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

## \* \* \* Section 6 - Accidental Release Measures \* \* \*

### Containment Procedures

No special containment procedures needed.

### Clean-Up Procedures

Attempt to reclaim the free product, if this is possible.

### Evacuation Procedures

None

### Special Procedures

None

## \* \* \* Section 7 - Handling and Storage \* \* \*

### Handling Procedures

No special handling needed.

### Storage Procedures

No special storage needed.

## \* \* \* Section 8 - Exposure Controls / Personal Protection \* \* \*

### A: Component Exposure Limits

#### Copper (7440-50-8)

ACGIH: 0.2 mg/m3 TWA (fume)

OSHA: 0.1 mg/m3 TWA (dust, fume, mist, as Cu)

NIOSH: 1 mg/m3 TWA (dust and mist); 0.1 mg/m3 TWA (fume)

#### Silver (7440-22-4)

ACGIH: 0.1 mg/m3 TWA (dust and fume)

OSHA: 0.01 mg/m3 TWA

NIOSH: 0.01 mg/m3 TWA (dust)

#### Chromium (7440-47-3)

ACGIH: 0.5 mg/m3 TWA

OSHA: 1 mg/m3 TWA

NIOSH: 0.5 mg/m3 TWA

#### Nickel (7440-02-0)

ACGIH: 1.5 mg/m3 TWA (inhalable fraction)

OSHA: 1 mg/m3 TWA

NIOSH: 0.015 mg/m3 TWA

#### Manganese (7439-96-5)

ACGIH: 0.2 mg/m3 TWA

OSHA: 1 mg/m3 TWA (fume)

3 mg/m3 STEL (fume)

5 mg/m3 Ceiling

NIOSH: 1 mg/m3 TWA (fume)

3 mg/m3 STEL

#### Silicon (7440-21-3)

OSHA: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)

NIOSH: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)

# Material Safety Data Sheet

Material Name: NuSmile Primary Crowns

## Molybdenum (7439-98-7)

ACGIH: 10 mg/m3 TWA (inhalable fraction); 3 mg/m3 TWA (respirable fraction)  
OSHA: 10 mg/m3 TWA

## Cobalt (7440-48-4)

ACGIH: 0.02 mg/m3 TWA  
OSHA: 0.05 mg/m3 TWA (dust and fume)  
NIOSH: 0.05 mg/m3 TWA (dust and fume)

## Engineering Controls

Use general ventilation.

## PERSONAL PROTECTIVE EQUIPMENT

### Personal Protective Equipment: Eyes/Face

None needed under normal product use conditions.

### Personal Protective Equipment: Skin

None needed under normal product use conditions.

### Personal Protective Equipment: Respiratory

None needed under normal product use conditions.

### Personal Protective Equipment: General

None

## \*\*\* Section 9 - Physical & Chemical Properties \*\*\*

<b>Appearance:</b>	White and metallic	<b>Odor:</b>	None
<b>Physical State:</b>	Solid	<b>pH:</b>	NA
<b>Vapor Pressure:</b>	ND	<b>Vapor Density:</b>	ND
<b>Boiling Point:</b>	ND	<b>Melting Point:</b>	ND
<b>Solubility (H2O):</b>	ND	<b>Specific Gravity:</b>	>1
<b>Evaporation Rate:</b>	ND	<b>VOC:</b>	ND
<b>Octanol/H2O Coeff.:</b>	ND	<b>Flash Point:</b>	ND
<b>Flash Point Method:</b>	ND	<b>Upper Flammability Limit (UFL):</b>	ND
<b>Lower Flammability Limit (LFL):</b>	ND	<b>Burning Rate:</b>	ND
<b>Auto Ignition:</b>	ND		

## \*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\*

### Chemical Stability

This is a stable material.

### Chemical Stability: Conditions to Avoid

None

### Incompatibility

Not Determined

### Hazardous Decomposition

Not Determined

### Possibility of Hazardous Reactions

Will not occur.

## \*\*\* Section 11 - Toxicological Information \*\*\*

### Acute Dose Effects

#### A: General Product Information

No information available for the product.

#### B: Component Analysis - LD50/LC50

##### Iron (7439-89-6)

Oral LD50 Rat 984 mg/kg

# Material Safety Data Sheet

Material Name: NuSmile Primary Crowns

**2-Hydroxyethyl methacrylate (868-77-9)**

Oral LD50 Rat 5050 mg/kg; Dermal LD50 Rabbit >3000 mg/kg

**Silver (7440-22-4)**

Oral LD50 Rat >2000 mg/kg

**Nickel (7440-02-0)**

Oral LD50 Rat >9000 mg/kg

**Manganese (7439-96-5)**

Oral LD50 Rat 9 g/kg

**Silicon (7440-21-3)**

Oral LD50 Rat 3160 mg/kg

**Cobalt (7440-48-4)**

Inhalation LC50 Rat >10 mg/L 1 h; Oral LD50 Rat 6170 mg/kg

**Carbon (7440-44-0)**

Oral LD50 Rat >10000 mg/kg

## Carcinogenicity

### A: General Product Information

No information available for the product.

### B: Component Carcinogenicity

**Chromium (7440-47-3)**

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 49 [1990] (listed under Chromium and Chromium compounds); Supplement 7 [1987] (Group 3 (not classifiable))

**Nickel (7440-02-0)**

ACGIH: A5 - Not Suspected as a Human Carcinogen

NIOSH: potential occupational carcinogen

NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)

IARC: Monograph 49 [1990]; Supplement 7 [1987] (Group 2B (possibly carcinogenic to humans))

**Cobalt (7440-48-4)**

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC: Monograph 86 [2006] (without tungsten carbide); Monograph 52 [1991] (Group 2B (possibly carcinogenic to humans))

* * * Section 12 - Ecological Information * * *
---

## Ecotoxicity

### A: General Product Information

No information available for the product.

### B: Component Analysis - Ecotoxicity - Aquatic Toxicity

**Iron (7439-89-6)**

**Test & Species**

96 Hr LC50 Morone saxatilis

13.6 mg/L [static]

96 Hr LC50 Cyprinus carpio

0.56 mg/L [semi-static]

**Conditions**

**Copper (7440-50-8)**

**Test & Species**

**Conditions**

# Material Safety Data Sheet

## Material Name: NuSmile Primary Crowns

96 Hr LC50 Pimephales promelas	0.0068 - 0.0156 mg/L
96 Hr LC50 Pimephales promelas	<0.3 mg/L [static]
96 Hr LC50 Pimephales promelas	0.2 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	0.052 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	1.25 mg/L [static]
96 Hr LC50 Cyprinus carpio	0.3 mg/L [semi-static]
96 Hr LC50 Cyprinus carpio	0.8 mg/L [static]
96 Hr LC50 Poecilia reticulata	0.112 mg/L [flow-through]
72 Hr EC50 Pseudokirchneriella subcapitata	0.0426 - 0.0535 mg/L [static]
96 Hr EC50 Pseudokirchneriella subcapitata	0.031 - 0.054 mg/L [static]
48 Hr EC50 Daphnia magna	0.03 mg/L [Static]

### 2-Hydroxyethyl methacrylate (868-77-9)

#### Test & Species

96 Hr LC50 Pimephales promelas	213-242 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	227 mg/L

#### Conditions

### Silver (7440-22-4)

#### Test & Species

96 Hr LC50 Pimephales promelas	0.00155-0.00293 mg/L [static]
96 Hr LC50 Oncorhynchus mykiss	0.0062 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	0.064 mg/L [static]
48 Hr EC50 Daphnia magna	0.00024 mg/L [Static]

#### Conditions

### Nickel (7440-02-0)

#### Test & Species

96 Hr LC50 Brachydanio rerio	>100 mg/L
96 Hr LC50 Cyprinus carpio	1.3 mg/L [semi-static]
96 Hr LC50 Cyprinus carpio	10.4 mg/L [static]
72 Hr EC50 Pseudokirchneriella subcapitata	0.18 mg/L
96 Hr EC50 Pseudokirchneriella subcapitata	0.174 - 0.311 mg/L [static]
48 Hr EC50 Daphnia magna	>100 mg/L
48 Hr EC50 Daphnia magna	1 mg/L [Static]

#### Conditions

### Zinc (7440-66-6)

#### Test & Species

96 Hr LC50 Pimephales promelas	2.16-3.05 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	0.211-0.269 mg/L [semi-static]
96 Hr LC50 Pimephales promelas	2.66 mg/L [static]
96 Hr LC50 Cyprinus carpio	30 mg/L

#### Conditions

# Material Safety Data Sheet

**Material Name: NuSmile Primary Crowns**

96 Hr LC50 Cyprinus carpio	0.45 mg/L [semi-static]
96 Hr LC50 Cyprinus carpio	7.8 mg/L [static]
96 Hr LC50 Lepomis macrochirus	3.5 mg/L [static]
96 Hr LC50 Oncorhynchus mykiss	0.24 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	0.59 mg/L [semi-static]
96 Hr LC50 Oncorhynchus mykiss	0.41 mg/L [static]
96 Hr EC50 Pseudokirchneriella subcapitata	0.11 - 0.271 mg/L [static]
72 Hr EC50 Pseudokirchneriella subcapitata	0.09 - 0.125 mg/L [static]
48 Hr EC50 Daphnia magna	0.139 - 0.908 mg/L [Static]

## Cobalt (7440-48-4)

### Test & Species

96 Hr LC50 Brachydanio rerio

>100 mg/L [static]

### Conditions

## \*\*\* Section 13 - Disposal Considerations \*\*\*

### US EPA Waste Number & Descriptions

#### Component Waste Numbers

##### Silver (7440-22-4)

RCRA: 5.0 mg/L regulatory level

##### Chromium (7440-47-3)

RCRA: 5.0 mg/L regulatory level

#### Disposal Instructions

All wastes must be handled in accordance with local, state and federal regulations.

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

## \*\*\* Section 14 - Transportation Information \*\*\*

### US DOT Information

**Shipping Name:** Not Regulated

## \*\*\* Section 15 - Regulatory Information \*\*\*

### US Federal Regulations

#### A: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

##### Copper (7440-50-8)

SARA 313: 1.0 % de minimis concentration

CERCLA: 5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)

# Material Safety Data Sheet

**Material Name: NuSmile Primary Crowns**

**Silver (7440-22-4)**

SARA 313: 1.0 % de minimis concentration  
 CERCLA: 1000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers); 454 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)

**Chromium (7440-47-3)**

SARA 313: 1.0 % de minimis concentration  
 CERCLA: 5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)

**Nickel (7440-02-0)**

SARA 313: 0.1 % de minimis concentration  
 CERCLA: 100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)

**Zinc (7440-66-6)**

SARA 313: 1.0 % de minimis concentration (dust or fume only)  
 CERCLA: 454 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers); 1000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)

**B: Component Marine Pollutants**

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Component	CAS #	
Copper	7440-50-8	DOT regulated severe marine pollutant

**State Regulations**

**Component Analysis - State**

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Iron	7439-89-6	Yes	No	No	No	No	No
Copper	7440-50-8	Yes	Yes	Yes	Yes	Yes	Yes
Silver	7440-22-4	Yes	Yes	Yes	Yes	Yes	Yes
Chromium	7440-47-3	Yes	Yes	Yes	Yes	Yes	Yes
Nickel	7440-02-0	Yes	Yes	Yes	Yes	Yes	Yes
Zinc	7440-66-6	Yes	Yes	No	Yes	Yes	Yes
Manganese	7439-96-5	Yes	Yes	Yes	Yes	Yes	Yes
Silicon	7440-21-3	No	Yes	Yes	Yes	Yes	Yes
Molybdenum	7439-98-7	Yes	Yes	Yes	Yes	Yes	Yes
Cobalt	7440-48-4	Yes	Yes	Yes	Yes	Yes	Yes
Carbon	7440-44-0	No	No	No	No	No	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

# Material Safety Data Sheet

Material Name: NuSmile Primary Crowns

WARNING! This product contains a chemical known to the state of California to cause cancer.

## Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Copper	7440-50-8	1 %
2-Hydroxyethyl methacrylate	868-77-9	1 %
Silver	7440-22-4	1 %
Chromium	7440-47-3	0.1 %
Nickel	7440-02-0	0.1 %

## Additional Regulatory Information

### Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Iron	7439-89-6	Yes	DSL	EINECS
Copper	7440-50-8	Yes	DSL	EINECS
2-Hydroxyethyl methacrylate	868-77-9	Yes	DSL	EINECS
Silver	7440-22-4	Yes	DSL	EINECS
Chromium	7440-47-3	Yes	DSL	EINECS
Nickel	7440-02-0	Yes	DSL	EINECS
Zinc	7440-66-6	Yes	DSL	EINECS
Manganese	7439-96-5	Yes	DSL	EINECS
Silicon	7440-21-3	Yes	DSL	EINECS
Molybdenum	7439-98-7	Yes	DSL	EINECS
Cobalt	7440-48-4	Yes	DSL	EINECS
Carbon	7440-44-0	Yes	DSL	EINECS

### \*\*\* Section 16 - Other Information \*\*\*

#### Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

#### Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.