

Safety Data Sheet

*** Section 1 - Product and Company Identification ***

Material Name: NuSmile Signature Pediatric Crowns

Manufacturer Information

NuSmile Ltd.
3315 West 12th St.
Houston, TX 77008

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

*** Section 2 - Hazards Identification ***

The product as manufactured is an article as defined by OSHA. Under normal product handling and use conditions, no hazards are anticipated. The following classification information is applicable to the components in the product.

GHS Classification:

Skin Sensitization - Category 1
Carcinogenicity - Category 1B
Specific Target Organ Toxicity Repeat Exposure - Category 1
Hazardous to the Aquatic Environment Acute - Category 1

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

Danger

Hazard Statements

May cause an allergic skin reaction.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life.

Precautionary Statements

Prevention

Do not breathe dust.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid release to the environment.

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Response

If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Get medical advice/attention if you feel unwell.

Collect spillage.

Storage

Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

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

CAS #	Component
Proprietary	Composite Paste
7439-89-6	Iron
7440-50-8	Copper
7440-22-4	Silver
868-77-9	2-Hydroxyethyl methacrylate
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

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Extinguishing Media

Use appropriate extinguishing media for surrounding fire.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear.

*** Section 6 - Accidental Release Measures ***

Recovery and Neutralization

No special containment procedures needed.

Materials and Methods for Clean-Up

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

Emergency Measures

None

Personal Precautions and Protective Equipment

None

Environmental Precautions

Avoid release to the environment.

Prevention of Secondary Hazards

None

*** Section 7 - Handling and Storage ***

Handling Procedures

No special handling needed.

Storage Procedures

No special storage needed.

Incompatibilities

Not Determined.

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

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

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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)

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 Measures

Use general ventilation.

Personal Protective Equipment: Respiratory

None needed under normal product use conditions.

Personal Protective Equipment: Hands

None needed under normal product use conditions.

Personal Protective Equipment: Eyes

None needed under normal product use conditions.

Personal Protective Equipment: Skin and Body

None needed under normal product use conditions.

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

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

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

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

None

Incompatible Products

Not Determined

Hazardous Decomposition Products

Not Determined

*** Section 11 - Toxicological Information ***

Acute Toxicity

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

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)

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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

Potential Health Effects: Skin Corrosion Property/Stimulativeness

None anticipated under normal product handling conditions.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

None anticipated under normal product handling conditions.

Potential Health Effects: Ingestion

None anticipated under normal product handling conditions.

Potential Health Effects: Inhalation

None anticipated under normal product handling conditions.

Respiratory Organs Sensitization/Skin Sensitization

Exposure to components of this product may cause an allergic skin reaction.

Generative Cell Mutagenicity

This product is not reported to have any mutagenic effects.

Carcinogenicity

A: General Product Information

Exposure to components of this product may cause cancer. Under normal product handling, no exposure is anticipated.

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))

Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

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Specified Target Organ General Toxicity: Single Exposure

This product is not reported to have any single exposure specific target organ toxicity effects.

Specified Target Organ General Toxicity: Repeated Exposure

Exposure to components of this product may cause damage to organs through prolonged or repeated exposure. Under normal product handling conditions, this is unlikely.

Aspiration Respiratory Organs Hazard

Not an aspiration hazard.

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

A: General Product Information

Components of this product may be very toxic to aquatic life.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Iron (7439-89-6)

Test & Species

	Conditions
96 Hr LC50 Morone saxatilis	13.6 mg/L [static]
96 Hr LC50 Cyprinus carpio	0.56 mg/L [semi-static]

Copper (7440-50-8)

Test & Species

	Conditions
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

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

Silver (7440-22-4)

Test & Species

Conditions

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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]

Nickel (7440-02-0)

Test & Species	Conditions
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]

Zinc (7440-66-6)

Test & Species	Conditions
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
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	Conditions
96 Hr LC50 Brachydanio rerio	>100 mg/L [static]

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Persistence/Degradability

No information available for the product.

Bioaccumulation

No information available for the product.

Mobility in Soil

No information available for the product.

*** Section 13 - Disposal Considerations ***

Waste Disposal Instructions

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

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

*** Section 14 - Transportation Information ***

DOT Information

Shipping Name: Not Regulated.

*** Section 15 - Regulatory Information ***

Regulatory 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 >100 µm); 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 >100 µm)

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 >100 µm); 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 >100 µm)

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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 >100 µm); 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 >100 µm)

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 >100 µm); 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 >100 µm)

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 >100 µm); 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 >100 µm)

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 (powder)

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	No
Silver	7440-22-4	Yes	Yes	Yes	Yes	Yes	No
Chromium	7440-47-3	Yes	Yes	Yes	Yes	Yes	No
Nickel	7440-02-0	Yes	Yes	Yes	Yes	Yes	No
Zinc	7440-66-6	Yes	Yes	No	Yes	Yes	No
Manganese	7439-96-5	Yes	Yes	Yes	Yes	Yes	No
Silicon	7440-21-3	No	Yes	Yes	Yes	Yes	No
Molybdenum	7439-98-7	Yes	Yes	Yes	Yes	Yes	No
Cobalt	7440-48-4	Yes	Yes	Yes	Yes	Yes	No

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

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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 * * *

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.

Literature References

None

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.

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