

NOVACAN

Safety Data Sheet

OSHA HazCom Standard 29 CFR 1910.1200(g) and UN GHS Rev 6

Revision date: Oct 29,2019

NOVACAN BLACK PATINA FOR ZINC

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SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier:

Trade name: **NOVACAN BLACK PATINA FOR ZINC**

1.2 Relevant identified use of the solution and uses advised against:

A wipe-on metal finishing solution to darken zinc metal used in the stained glass trade.
Do not apply by spraying.

1.3 Manufacturer Identification and address:

Novacan Industries Ltd
856 Washington Drive
Port Moody, BC V3H 3K8
Canada
Phone: 1.604.931.6422
E-Mail: info@novacan.net

1.4 EMERGENCY TELEPHONE NUMBER:

For spill, leak, fire or exposure call 24 HR Emergency Phone#:
CANUTEC 1.613.996.6666

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Classification according to Regulation	Hazard Classification
OSHA Hazard Communication Standard and United Nations GHS Rev 6	Acute Oral Toxicity – Category 5 Serious Eye Irritation – Category 2B Acute Short Term Aquatic Hazard – Category 3

2.2 Label elements:

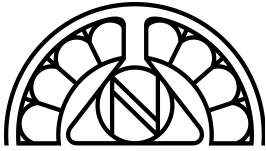
Hazard pictograms: None required.

Signal word:

Warning

Hazard statements:

H303 May be harmful if swallowed.
H320 Causes eye irritation
H402 Harmful to aquatic life



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Precautionary statements:

- P264 Wash hand thoroughly after handling.
- P273 Avoid Release to the environment.
- P312 Call a POISON CENTER / doctor if you feel unwell.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice / attention.
- P405 Store locked up.
- P501 Dispose of contents/container at an approved waste disposal facility.

2.3 Other relevant information and hazards overview:

Physical Description: Clear light blue liquid. Viscosity of water. Odorless.

Health Hazard: This solution contains Selenium Dioxide which could be fatal if swallowed in sufficient quantity to victims body weight. Call a Poison Center or doctor.

Fire Hazard: Not a known fire hazard.

Physical Hazard: Solution does not pose a physical hazard in an emergency response circumstance.

Environmental Hazard: Solution is harmful to both aquatic and animal life.

NFPA Ratings:

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
SPECIFIC HAZARD	N/A

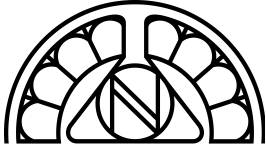
SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances or Mixtures:
See 3.2 Mixtures below.

3.2 Mixtures:
Description of the mixture:
Aqueous dilute solution of Copper Sulfate.

Hazardous ingredients:

An aqueous solution with ingredients that are below reportable limits of => 1% concentration under various regulations governing Safety Data Sheets. (or less than 0.1% concentration for carcinogens, reproductive toxins, respiratory sensitizers and mutagens).



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SECTION 4 FIRST AID MEASURES

4.1 Routes of Entry: (under normal conditions of use)

Skin Contact: Minor **Eye Contact:** Minor **Ingestion:** Minor **Inhalation:** Minor

Description of first aid measures.

Eye Contact: Flush eyes with lukewarm, gently running water for 30 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists. An allergic reaction may appear as redness and/or puffiness.

Skin Contact: Wash affected area with mild soap and water. Remove any contaminated clothing and launder before re-use.

Inhalation: This product is not expected to present an inhalation hazard at ambient conditions.

Ingestion: Rinse mouth with water. Dilute contents of stomach with 1-2 glasses of water. Do NOT induce vomiting. If vomiting occurs naturally have victim lean forward to reduce risk of aspiration. Seek immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed.

Acute:

Eye Contact: Selenium in solution will irritate eyes. An allergic reaction may appear as redness and / or puffiness.

Skin Contact: Solution may irritate the skin and area under nails. May lead to dermatitis and sensitization.

Inhalation: Not anticipated as a health hazard under normal conditions of use. Selenium is a severe irritant with immediate or delayed effects: cough, difficult breathing, chills, garlic breath, fever, headache, chemical pneumonia, and bronchial spasms.

Ingestion: May irritate mouth, throat, esophagus, and stomach. May cause nausea, pallor, coated tongue, and gastrointestinal disorders May irritate mouth, throat, esophagus, and stomach.

Chronic: Repeated skin exposure can lead to dermatitis.

Eye contact may result in an allergic reaction that appears as redness and/or puffiness.

4.3 Indication of any immediate medical attention and special treatment needed.

Eye contamination: Gently flush eyes immediately with water for 15 minutes. Remove contact lenses if present and easy to do. Continue to irrigate eyes until medical assistance arrives.

Ingestion: Rinse mouth and dilute contents of stomach with up to 200 ml of water. Do not induce vomiting unless instructed by a physician.



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SECTION 5 FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media: No specific media is recommended. Use water, foam, dry powder, carbon dioxide, halon or others.

Un-suitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture.

Hazardous combustion products: May release toxic selenium and hydrogen selenide fumes, If heated to dryness, copper fumes may be produced.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD INDEX:

HEALTH = 1	Exposure may cause irritation with only minor residual injury
FLAMMABILITY = 0	Not Flammable
REACTIVITY = 0	Normally stable
SPECIFIC HAZARDS	None

5.3 Advice for fire-fighters.

Fire may produce toxic selenium and hydrogen selenide fumes
Prevent run-off water from entering storm drains, bodies of water or other environmentally sensitive areas.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

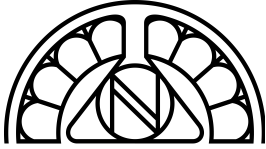
For small spills under 1 gallon, wear appropriate personal protective equipment, rubber gloves and safety glasses. Ventilate area. Do not touch spilled product without proper personal protection. Absorb spilled solution with absorbent pad or other suitable absorbent material.

For emergency responders:

For spills over 1 gallon, wear rubber gloves, safety glasses or goggles, chemical resistant coveralls or apron, rubber boots. Absorb spilled solution with absorbent pads or other suitable absorbent material.

6.2 Environmental precautions:

Implement spill control plan. Stop or reduce leak if safe to do so. Prevent from entering sanitary or storm sewers, waterways, or confined spaces. Use inert materials such as earth or sand to form a dike. Keep from contacting aquatic life.



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6.3 Methods and material for containment and cleaning up:

If spill is large enough to require containment, use inert materials such as earth or sand to form a containment dike. Absorb spilled solution with absorbent pads or other suitable material.

6.4 Reference to other sections:

See SECTION 8 for exposure levels and detailed personal protective equipment recommendations.

See SECTION 13 for waste handling guidelines.

SECTION 7 HANDLING AND STORAGE

7.1 Precautions for safe handling:

Persons using this product must become familiar with the potential hazards associated with the product, and take precautions to ensure its safe use. Be prepared in advance to take the required remedial action if there is a health exposure or a spill. Have emergency equipment readily available. Keep containers closed and in a secure location when not in use. Keep out of reach of children.

Advice on general occupational hygiene:

Do not to eat, drink or smoke in the vicinity where this product is used.
Avoid contact eyes. Do not rub eyes with hands that have been exposed to the solution.
Wash hands with soap and water after use, and before eating, drinking or smoking.
Remove contaminated clothing before entering eating areas.
Launder contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities:

Store away from populated work areas. Ensure containers are correctly labeled and not damaged. Ensure caps are tightly closed to prevent leakage.

7.3 Specific end uses:

This product is intended as an antiquing agent for use on zinc metal used in the stained glass trade. It is sometimes used in off-label applications to obtain unique results when applied to other metals suitable to the user by experimentation.

Keep product away from children, animals and aquatic life.



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SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters:

Occupational exposure limits: No data available

BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS: Not established

DERIVED NO EFFECT LEVEL (DNEL): Not established

PREDICTED NO EFFECT CONCENTRATION (PNEC): Not established

8.2 Exposure controls:

Engineering Controls: Use general or local exhaust ventilation to maintain exposure below the exposure limits. Safety showers, eye wash stations and hand-washing facilities should be available.

Respiratory Protection: None needed under normal conditions of use. If respiratory protection is required, use an approved cartridge respirator.

Hand Protection: Neoprene gloves should be used for spill response. Latex gloves are sufficient for general use.

Eye Protection: Eye protection is required. Safety glasses are recommended. Wearing contact lenses is not recommended.

Body Protection: Use protection suitable to the task, such as lab coat, chemical apron or coveralls.

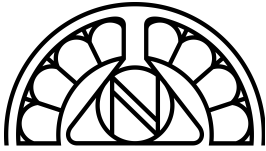
Footwear: As required by worksite rules.

Other: None required.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

- **Appearance:** Clear light blue liquid
- **Odor:** Odorless
- **Odor Threshold:** Not determined
- **pH:** 6.5
- **Freezing Point:** 0 °C
- **Boiling Point:** 105°C
- **Flash Point:** Not Flammable
- **Evaporation Rate:** Not Determined
- **Flammability:** Not Flammable
- **Upper / Lower Flammability or explosive limit:** Not Applicable
- **Vapor Pressure:** Not determined
- **Vapor Density:** Not determined
- **Relative Density:** 1.01 (water = 1)
- **Solubility:** Completely soluble in water
- **Partition Coefficient:** No data
- **Auto Ignition Temperature:** N/A
- **Decomposition Temperature:** N/A
- **Viscosity:** same as water



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SECTION 10 STABILITY AND REACTIVITY

- 10.1 Reactivity:** Not reactive under typical conditions of use.
- 10.2 Chemical stability:** Normally stable under standard temperatures and pressure.
- 10.3 Possibility of hazardous reactions:** Not reactive. Hazardous Polymerization will not occur.
- 10.4 Conditions to avoid:** None known.
- 10.5 Incompatible materials:** None known.
- 10.6 Hazardous decomposition products:** Thermal decomposition could liberate toxic fumes of sulfur oxides, hydrogen sulfide gas, and copper oxides.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Acute Toxicity:

The theoretical LD₅₀ (rat/oral) for Black Patina for Zinc is > 5000 mg/kg

Additional Acute Toxicity: May be hazardous in case of inhalation May irritate the respiratory tract and lungs.

Skin: May casue skin irritation to sensitive skin.

Eye: Causes eye irritation. .

Ingestion: May be harmful if swallowed. May be fatal to very small children if quantity to weight ratio is extremely high.

Inhalation: May cause irritation of the respiratory tract, lungs and mucous membranes.

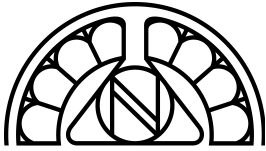
Chronic Toxicity: Chronic Potential Health Effects:

Inhalation: Prolonged or repeated inhalation may cause irritation of the respiratory tract, lungs and mucous membranes.

Skin: Prolonged or repeated skin contact may cause dermatitis, an allergic skin reaction

Carcinogenicity: Not known to be a carcinogen.

Reproductive Toxicity Information: The components of this mixture are not reported to cause harmful reproductive effects under normal exposure circumstances.



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Specific target organ toxicity (single exposure):

STOT SE: May cause eye irritation. May cause irritation to skin and mucous membranes.

Specific target organ toxicity (repeated exposure):

STOT RE: No data available

SECTION 12 ECOLOGICAL INFORMATION

- 12.1 Toxicity:** This product may be harmful to plant and animal life.
- 12.2 Persistence and degradability:** The components of this product will biodegrade, dissipate via oxidation or chemically decompose via solar radiation
- 12.3 Bioaccumulative potential:** No data available
- 12.4 Mobility in soil:** This product is expected to have limited mobility in soil.
- 12.5 Results of PBT and vPvB assessment:** No data available.
- 12.6 Other adverse effects:** No data available.

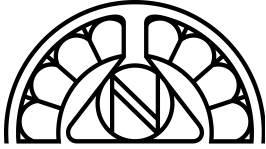
SECTION 13 DISPOSAL CONSIDERATIONS

- 13.1 Waste treatment methods:** Contain all products of a spill in approved containers, and transport to an approved waste disposal facility that complies with all state and federal regulations for hazardous waste disposal.

SECTION 14 TRANSPORT INFORMATION

Dangerous Goods Description and Transport Information:

- 14.1 DOT Hazardous Materials Shipping Regulations 49 CFR**
Not regulated for transport.
- 14.2 International Marine Organization (IMO) Hazardous Materials Shipping Regulations**
Not regulated for transport.



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14.3 International Air Transport Association (IATA) Hazardous Materials Shipping Regulations

Not regulated for transport.

14.4 European Agreement Concerning The Carriage of Dangerous Goods by Road (ADR):

Not applicable.

14.5 Environmental Hazards: Copper Sulfate is a Marine Pollutant

14.6 Special precautions for users: Not applicable

14.7 Transport in bulk: Not applicable

SECTION 15 REGULATORY INFORMATION

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

U.S. Regulations:

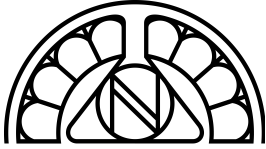
- **OSHA, 29 CFR 1910, Subpart Z:** Not classified
- **TSCA (Toxic Substance Control Act):** All components are listed in the inventory.
- **CERCLA, 40 CFR 302:** Reportable Quantities, Cupric sulphate 4.54 Kg (10 Lbs),
- **SARA 302, 40 CFR 355:** Threshold Planning Quantity 454 Kg (1000 Lbs)
- **SARA 313, 40 CFR 372:** Cupric sulfate is subject to the reporting requirements.
- **SARA 311/312, 40 CFR 370:** Immediate (Acute) Health, Delayed (Chronic) Health.

SECTION 16 OTHER INFORMATION

16.1 Indication of changes: Original authored May 20, 2016

16.2 Abbreviations and acronyms:

- OSHA** - Occupational Safety and Health Administration
- GHS** - Globally Harmonized System
- CAS#** - Chemical Abstract Service Number
- NFPA** - National Fire Protection Association
- ACGIH** - American Conference of Government Industrial Hygienists
- TWA** - Time Weighted Average



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TLV - Threshold Limit Value

STEL - Short Term Exposure Limit

PEL - Personal Exposure Limit

NIOSH - National Institute of Occupational Safety and Health

SE - Single Exposure

RE - Repeated Exposure

STOT - Specific Target Organ Toxicity

mg/m³ - Milligrams per cubic metre

ppm - Parts per Million

LD50 - The lethal dose which is fatal to 50% of the specified test subjects, by the specified means of entry.

SARA - Superfund Amendment and Reauthorization Act

CERCLA - Comprehensive Environmental Response Compensation and Liability Act

TSCA - Toxic Substance Control Act

CFR - Code of Federal Regulations

16.3 Key literature references and sources for data:

OSHA - Occupational Safety & Health Administration, Hazard Communication Standard
29 CFR 1910.1200

UNECE - United Nations Economic Commission for Europe
Globally Harmonized System of Classification and Labelling on Chemicals
GHS - Sixth Edition 2015 (Purple Book)

Code of Federal Regulations - Title 49, Subtitle B, Chapter 1, Subchapter C, Part 171 to 177