

1 PRODUCT AND COMPANY IDENTIFICATION

Common Name Arborite® DecoMetal

Manufacturer ARBORITE, DIVISION DE/OF ITW CANADA
385 LAFLEUR
LASALLE (QUÉBEC) CANADA H8R 3H7
INFORMATION PHONE: 800-996-0366

Trade Name Arborite® DecoMetal

Material Uses Decorative Surfacing

Revision # 3

In Case of Emergency Contact:

1 613 996 6666 Transport Canada's Canadian Transport Emergency Centre (CANUTEC)

2 HAZARDS IDENTIFICATION

Route of Entry: None for product as sold. For dust, chips, or fumes generated during fabrication operations: eye contact, skin contact, and inhalation.

Target Organs: None for product as sold. For dust, chips, or fumes generated during fabrication operations: eye contact, skin contact, and inhalation.

Inhalation: No hazard for product as sold. Fabrication operations such as milling, cutting, grinding, welding, brazing, etc., may produce dust, chips, or fumes that may be irritating or harmful if inhaled. See Section 8.

Acute Effects: Excessive inhalation of fumes from freshly formed metal oxide particles may produce an acute reaction known as "metal fume fever". Symptoms include chills and fever similar to flu symptoms, dryness and irritation of the throat, metallic taste in the mouth, followed by muscle weakness and pain. Symptom onset after excessive exposure to fumes is generally a few hours after exposure and lasting 12 to 48 hours.

Chronic Effects: Chronic inhalation of metallic fumes is associated with the following conditions. Iron oxide fume inhalation is associated with the development of benign pneumoconiosis, known as Siderosis. Iron oxide is listed as an IARC Group 3 material. The health hazards associated with the exposure to Chromium are dependent upon the oxidation state. The metal form (as it exists in this product) is of low toxicity.

Skin Contact: Solid sheet may be abrasive to, or cut skin. Fabrication operations such as milling, cutting, grinding, welding, brazing, etc., may produce dust, chips, or fumes that may be irritating.

Eye Contact: No hazard for product as sold. Fabrication operations such as milling, cutting, grinding, welding, brazing, etc., may produce dust, chips, or fumes that may be irritating.

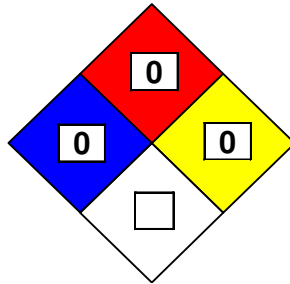
Ingestion: Not an expected route of entry.

HMIS (United States):

NFPA (United States):

WHMIS (Canada): D2B

HEALTH	0
FLAMMABILITY	0
REACTIVITY	0
PPE	B



3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS#	% by Weight
Iron	7439-89-6	> 91.00
Aluminum	7429-90-5	0.25 – 4.64
Carbon	7440-44-0	0.14 – 0.89
Chromium	7440-47-3	0.04 – 0.70
Copper	7440-50-8	0.05 – 0.40
Manganese	7439-96-5	0.05 – 2.00
Nickel	7440-02-0	0.00 – 0.50
Silicon	7440-21-3	0.01 – 1.00
Zinc	7440-66-6	0.20 – 3.84
Styrene-Acrylic Copolymer	100-42-5	0.02 – 0.06

Material may contain trace or residual elements. The following are typical percentages for the elements identified: Boron – 0.001%, Calcium – 0.0003%, Molybdenum – 0.006%, Niobium (Columbium) – 0.04%, Phosphorus – 0.04%, Sulfur – 0.015%, Tin – 0.004%, Titanium – 0.06%, and Vanadium – 0.001%.

4 FIRST AID MEASURES

Inhalation:	No hazard for product as sold. Fabrication operations such as milling, cutting, grinding, etc., may produce dust or chips that may be irritating or harmful if inhaled. If irritation persists, seek medical attention.
Skin Contact:	Solid sheet may be abrasive to, or cut skin. Fabrication operations such as milling, cutting, grinding, etc., may produce dust or chips that may be irritating. If irritation persists, seek medical attention.
Eye Contact:	No hazard for product as sold. Fabrication operations such as milling, cutting, grinding, etc., may produce dust or chips that may be irritating. For dust or chips, flush eyes with water. If irritation persists, seek medical attention.
Ingestion:	Not an expected route of entry with normal use of product.

5 FIRE FIGHTING MEASURES

Flash Point:	Not Applicable.	LEL:	Not Applicable.
Flash Point Method:	Not Applicable.	UEL:	Not Applicable.
Autoignition Temp.:	Not Applicable.		
Burning Rate:	Not Applicable.		

Use extinguishing media appropriate for surrounding fire. Wear fire protective equipment appropriate for the surrounding fire. Do not release runoff from fire control measures to sewers and/or waterways.

Unusual Fire and Explosion Hazards

Product as sold does not present an explosion hazard. Finely divided dust generated by fabrication operations such as milling, cutting, grinding, etc., can create an explosion hazard if the airborne dust concentration exceeds 900 grams per cubic meter and it contacts an ignition source greater than 8 Joules. (A person standing in a uniformly dispersed dust cloud of 50 grams per cubic meter will not be able to see his/her outstretched hand.)

6 ACCIDENTAL RELEASE MEASURES

Small Spill or Leak: Not Applicable.

Large Spill or Leak: Not Applicable.

7 HANDLING AND STORAGE

Handling Precautions: No specific usage precautions required. Follow normal good hygiene practices. Protect exposed areas from cuts and abrasions.

Storage Requirements: Store in a dry well-ventilated area. Store away from acids and other incompatible materials.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: No special ventilation requirements for product as sold. Provide adequate ventilation to meet exposure guideline if fabrication operations generate dust, chips, or fumes.

Protective Equipment: No specific recommendations made, but respiratory protection must be used if the general level exceeds the Occupational Exposure Level (OEL).

Gloves suitable for protection against cuts and abrasions from sharp edges are recommended.

Wear safety glasses or goggles during fabrication operations that may produce dust or chips.

Exposure Guidelines / Other:

Product Name	Exposure Limits
Base metal	Iron: OSHA PEL: 10 mg/m ³ Respirable (as iron oxide) ACGIH TWA: 5 mg/m ³ Respirable (as iron oxide)
	Manganese: OSHA PEL: 5 mg/m ³ Respirable ACGIH TWA: 5 mg/m ³ Respirable
Metallic coating	Aluminum: OSHA PEL: 10 mg/m ³ Respirable ACGIH TWA: 10 mg/m ³ Respirable
	Zinc: OSHA PEL: 5 mg/m ³ Respirable (as zinc oxide) ACGIH TWA: 5 mg/m ³ Respirable (as zinc oxide)
	Silicon: OSHA PEL: 15 mg/m ³ Respirable ACGIH TWA: 10 mg/m ³ Respirable
	Styrene Acrylic Copolymer: OSHA STEL: 200 ppm ACGIH TWA: 20 ppm ACGIH STEL: 40 ppm
Resin coating	Chromium: OSHA PEL: 1.0 mg/m ³ (as chromium metal) 0.5 mg/m ³ (as chromium II & III) 0.05 mg/m ³ (as chromium VI) ACGIH TLV: 0.5 mg/m ³ (as chromium metal)

0.5 mg/m³ (as chromium II & III)
0.05 mg/m³ (as chromium VI)

Material may contain trace or residual elements. The following are typical percentages for the elements identified: Boron – 0.001%, Chromium – 0.02%, Copper – 0.02%, Molybdenum – 0.006%, Nickel – 0.02%, Niobium (Columbium) – 0.04%, Phosphorus – 0.04%, Sulfur – 0.015%, Tin – 0.004%, Titanium – 0.06%, and Vanadium – 0.001%

Consult local authorities and regulations for exposure limits.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid Decorative Sheet	Boiling Point:	Not Applicable
Physical State:	Solid	Freezing / Melting point:	Base metal M.P. ~ 2750°F
Odor:	None	Solubility:	Not Soluble
pH:	Not Applicable	Specific Gravity (H₂O=1):	7.85
Vapor Pressure:	Not Applicable	Density:	490 lbs /ft ³
Vapor Density:	Not Applicable		
VOC:	Not Applicable		

10 STABILITY AND REACTIVITY

Stability:	Product is stable as supplied.
Conditions to Avoid:	Reacts with strong acids to evolve hydrogen. Dust from product may react with calcium hypochlorite to evolve oxygen.
Materials to Avoid (incompatibility):	None.
Hazardous Decomposition Products:	Coatings may yield carbon oxides (CO and CO ₂). Thermal oxidation of product can produce fumes containing the oxides of iron, zinc, and aluminum as well as other metal elements present in the product.
Hazardous Polymerization:	Will not polymerize.

11 TOXICOLOGICAL INFORMATION

Toxicity to Animals: This product has not been tested for animal effects. This product, as sold, is not expected to be toxic to animals.

Toxicity to Humans: This product has not been tested for human effects. This product, as sold, is not expected to be toxic to humans.

This product, as sold, is generally classified as an "article" and does not constitute a hazardous material in solid form under the terms of the OSHA Hazard Communications Standard. Any article manufactured from this solid product would generally be classified as non-hazardous. However, some metallic elements contained in these products have been determined to be toxic and subject to regulatory control. These elements can be emitted as airborne contaminants under certain processing conditions such as, but not limited to, cutting, grinding, milling, machining, brazing, melting, welding, or burning.

Toxicity Data*: No LC₅₀ or LD₅₀ has been established for the product as sold. Information for elemental components is as follows: Iron LD₅₀ – 30 g/kg oral (rat). Aluminum LD₅₀ – No Data. Boron LD₅₀ 2000 mg/kg oral (mouse). Calcium LD₅₀ – No Data. Carbon LD₅₀ – No Data. Chromium LD₁₀ – 71mg/kg GIT oral (human). Columbium LD₅₀ – No Data. Copper LD₁₀ – 120 µg/kg GIT ipl (rat). Manganese LD₅₀ - 9g/kg oral (rat). Molybdenum LD₁₀ - 114 mg/kg ipr (rat). Nickel LD₁₀ – 5 mg/kg oral (guinea pig). Phosphorus LD₅₀ – No Data. Silicon

LD₅₀ – No Data. Sulfur LD₅₀ – No Data. Tin LD₅₀ – No Data. Titanium LD₅₀ – No Data.
Vanadium LD₅₀ – 59 mg/kg scu (rabbit).

Carcinogenic Effects: Chromium (base metal), nickel (base metal), and styrene (resin coating) have been classified 2B (Possible for human) by IARC.

Mutagenic Effects: Not Available.

Teratogenic Effects: Not Available.

*See the following NIOSH, RTECS references for additional information. Iron oxide – NO7400000. Aluminum oxide – BD1200000. Calcium – EV8040000. Boron – ED7350000. Carbon – FF5250000. Chromium – GB5425000. Copper – GL5325000. Manganese – OO9275000. Molybdenum – QA4680000. Nickel – QR5950000. Phosphorus – TH3500000. Silicon – WM0400000. Sulfur – WS4250000. Tin – XP7320000. Titanium – XR1700000. Vanadium Pentoxide – YW2460000.

12 ECOLOGICAL INFORMATION

Ecotoxicity: Not Available. Product as supplied is not considered ecotoxic. Individual components of the product have been found to be toxic to the environment.

BOD5 and COD: Not Available

Biodegradable / OECD: Not Available

Mobility: Dust and particulate may migrate into soil and groundwater and be ingested by wildlife or absorbed by plants.

Toxicity of the Products of Biodegradation: Not Available

Special Remarks on the Products of Biodegradation: Not Available

13 DISPOSAL CONSIDERATIONS

Waste from the product is considered a solid waste, not a hazardous waste. Any waste or excess product can be recycled for further use or disposed in an appropriately permitted waste landfill.

Dispose of in accordance with Federal, State, and local regulations.

14 TRANSPORT INFORMATION

Restrictions: None known.

DOT Requirements: Not a DOT controlled material (United States).

ADR Requirements: Not an ADR controlled material (Europe).

IMDG Requirements: Not an IMDG controlled material.

IATA Requirements: Not an IATA controlled material.

Marine Pollutant: Not expected to be a marine pollutant.

15 REGULATORY INFORMATION

U.S. Federal Regulations

This product as sold is not subject to regulation. However, components of said product are regulated as follows:

TSCA inventory: The chemicals in this product are listed.

SARA 302/304/322/312 Extremely hazardous substances: Chromium, Copper, Manganese, Nickel, Phosphorus, and Zinc are listed.

SARA 302/304 Emergency planning and notification: Chromium, Copper, Manganese, Nickel.

SARA 302/304/311/312 Hazardous chemicals: Chromium, Copper, Manganese, Nickel.

SARA 311/312 MSDS distribution, chemical inventory, hazard identification: None.

SARA 313 Toxic chemical notification and release reporting: Aluminum (fume or dust), Chromium, Copper, Manganese, Nickel, Phosphorus, and Zinc (fume or dust) are listed.

RCRA: Chromium and Nickel are listed.

CWA 307: Chromium, Copper, Nickel, and Zinc are listed.

CWA 311: Phosphorus & Styrene.

SDWA: Aluminum, Boron, Chromium, Copper, Iron, Manganese, Molybdenum, Nickel, Vanadium, & Zinc are listed.

CAA 112 Accidental release prevention: Styrene is listed.

CAA 112 Regulated flammable substances: None.

CAA 112 Regulated toxic substances: None.

International Regulations

DSL (Canada) – None.

EINECS – None.

WHIMS (Canada) – Classified as D2B.

State Regulations

Massachusetts RTK: None.

Minnesota: None.

New Jersey RTK:

Environmental Hazardous Substance: Aluminum (Fume or dust), Chromium, Copper, Manganese, Nickel, Phosphorus, Vanadium (fume or dust).

Pennsylvania RTK:

Hazardous Substances: Calcium, Molybdenum, Silicon, Sulfur, and Tin.

Environmental Hazards: Aluminum, Chromium, Copper, Manganese, Nickel, Phosphorus, Vanadium, and Zinc.

Special Hazard Substances: Chromium and Nickel.

Rhode Island: None.

California Proposition 65: This product contains the following ingredients know to the state of California to cause cancer or reproductive toxicity:

Chromium (CAS 7440-47-3) in trace amounts.

Nickel (CAS 7440-02-0) in trace amounts.

Lead (CAS 7439-92-1) in trace amounts.

16**OTHER INFORMATION**

References

Lewis, R. J., Rapid Guide to Hazardous Chemicals in the Workplace, 4th ed., Wiley-Interscience, New York, 2000.

NIOSH Pocket Guide to Chemical Hazards, Department of Health and Human Services, National Institute for Occupational Safety and Health, 2004.

TLVs and BEIs, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Agents, ACGI Worldwide, Cincinnati, 2003.

Glossary

ACGIH – American Conference of Governmental Industrial Hygienists

ASTM – American Society for Testing and Materials

ADR – Agreement on Dangerous Goods by Road (Europe)

BOD5 – Biological Oxygen Demand in 5 days

CAA – Clean Air Act

CAS – Chemical Abstracts Services

CEPA – Canadian Environmental Protection Act

CERCLA – Comprehensive Environmental Response, Compensations and Liability Act
CFR – Code of Federal Regulations
CWA – Clean Water Act
DOT – Department of Transportation
DSCL – Dangerous Substances Classification and Labeling (Europe)
DSL – Domestic Substance List (Canada)
EEC/EU – European Economic Community/European Union
EINECS – European Inventory of Existing Commercial Chemical Substances
HCS – Hazard Communication System
HMIS – Hazardous Material Information System
IARC – International Agency for Research on Cancer
LD50/LC50 – Lethal Dose/Concentration kill 50%
LDLo/LCLo – Lowest Published Lethal Dose/Concentration
NFPA – National Fire Prevention Association
NIOSH – National Institute for Occupational Safety & Health
NTP – National Toxicology Program
OSHA – Occupational Safety & Health Administration
PEL – Permissible Exposure Limit
RCRA – Resource Conservation and Recovery Act
SARA – Superfund Amendments and Reorganization Act
STEL – Short Term Exposure Limit (15 minutes)
TDG – Transportation of Dangerous Goods (Canada)
TLV-TWA – Threshold Limit Value-Time Weighted Average
TSCA – Toxic Substances Control Act
WHMIS – Workplace Hazardous Material Information System

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named manufacturer nor any of its subsidiaries assumes any liability whatsoever for accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

END OF MSDS DOCUMENT