

Product Name: NSV-51 Glass
Synonyms: Borosilicate glass
Manufacturer Name: Nipro Glass Americas
Address: 1633 Wheaton Avenue
 Millville, NJ 08332
General Phone Number: 800-919-1718
Emergency Phone Number: 800-919-1718
CHEMTREC: Y
Canutec: Y
MSDS Creation Date: 03/14/2008
MSDS Revision Date: 03/14/2008



HMIS

Health Hazard	0
Fire Hazard	0
REACTIVITY	0
Personal Protection	X

* Chronic Health Effects:

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent
Silicon Dioxide	14808-60-7	60 - 100 by weight
Sodium Oxide	12401-86-4	1 - 10 by weight
Aluminum Oxide	1344-28-1	1 - 10 by weight
Boron Oxide	1303-86-2	5 - 15 by weight
Potassium Oxide	12136-45-7	1 - 5 by weight
Calcium Oxide	1305-78-8	1 - 5 by weight

SECTION 3 - HAZARDS IDENTIFICATION

Applies to Product :

Emergency Overview: No unusual conditions are expected from this product under normal conditions of use.

Potential Health Effects: The individual ingredients that make up this product may be toxic on their own. However, they present minimal health hazards when they exist in the form of glass. Glass is a solid material produced by melting various raw materials together and cooling them to a non-crystalline solid having its own unique properties. Keep in mind that grinding or generating small inhalable glass particles may generate free silica dust. Repeated and prolonged exposure top silica dust may cause cancer and silicosis. Silicosis will produce symptoms of cough and shortness of breath, developing gradually. Free silica particles on contact with the eye may cause a reaction that could damage vision.

Eye: Eye contact with dusts, powder or process fumes may cause irritation of the eyes.

Skin: Dust or powder may irritate the skin. Mechanical rubbing may increase skin irritation.

Inhalation: Dust may cause irritation of respiratory tract.

Ingestion: Dust or powder may cause temporary irritation of the throat, stomach, and gastrointestinal tract.

Chronic Health Effects: There is no known chronic health effect connected with long-term use or contact with this product.

Carcinogenicity: This material is not considered a carcinogen.

Potential Environmental Effects: There is no known ecological information for this material.

Target Organs:	Not available
Aggravation of Pre-Existing Conditions:	None known.

SECTION 4 - FIRST AID MEASURES

Eye Contact:	In case of eye contact with glass particles. Do not rub or scratch eyes. Seek medical attention immediately.
Skin Contact:	Cuts, lacerations and abrasions should be treated immediately by medical personnel. Affected area should be thoroughly cleaned to avoid infections.
Inhalation:	If dust from cutting or drilling is inhaled, remove the affected person to fresh air. If symptoms persist, get medical attention.
Ingestion:	Accidental ingestion of this material is unlikely. If ingested seek medical attention.
Note to Physicians:	None.

SECTION 5 - FIRE FIGHTING MEASURES

Flammable Properties:	Non Flammable.
Flash Point:	Does not apply.
Auto Ignition Temperature:	Does not apply.
Lower Flammable/Explosive Limit:	Not applicable.
Upper Flammable/Explosive Limit:	Not applicable.
Extinguishing Media:	Use any extinguishing media appropriate for the surrounding fires.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Hazardous Combustion Byproducts:	Material will begin softening at about 700I C, and will form irritating and toxic gaseous metallic oxides at extremely high temperatures
Universal Fire And Explosion Hazards:	None.

NFPA Ratings:

NFPA Flammability:	0
NFPA Health:	0
NFPA Reactivity:	0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Use proper personal protective equipment as listed in section 8.
Environmental Precautions:	Regulations vary. Consult local authorities before disposal. Glass products may be recycled.
Methods for containment:	Shovel or sweep up for re-use or disposal. Avoid creating dusty conditions.
Methods for cleanup:	Pick up and transfer to properly labeled containers.

SECTION 7 - HANDLING and STORAGE

Handling:	Avoid dust formation. Do not breathe dust. Wear personal protective equipment.
Storage:	No special storage conditions required. Keep in a dry place.
Hygiene Practices:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Eye/Face Protection:	Safety glasses with side-shields.
Skin Protection Description:	Protective gloves. Long sleeved shirt and long pants.
Respiratory Protection:	When workers are facing airborne particulate/dust concentrations above the exposure limit they must use appropriate certified respirators. A properly fitted NIOSH approved disposable N 95 type dust respirator or better is recommended. Consult with your company's local procedures for selection, training, inspection and maintenance of respirators. Otherwise, consult the NIOSH web site (http://www.cdc.gov/niosh/npptl/topics/respirators/disp_part) for a list of dust respirator types and approved suppliers.

EXPOSURE GUIDELINES

Silicon Dioxide :

Guideline ACGIH:	ACGIH TLV-TWA 0.025 mg/m3
Guideline OSHA:	OSHA PEL-TWA [10 mg/m3]/[100% SiO ₂ + 2]

Aluminum Oxide :

Guideline ACGIH:	ACGIH TLV-TWA 10 mg/m3
Guideline OSHA:	OSHA PEL-TWA 5 mg/m3

Boron Oxide :

Guideline ACGIH:	TLV-TWA: 10 mg/m3
Guideline NIOSH:	REL-TWA: 10 mg/m3

Calcium Oxide :

Guideline ACGIH:	ACGIH TLV-TWA 2 mg/m3
Guideline OSHA:	OSHA PEL-TWA 5 mg/m3

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State:	Solid
Color:	Clear
Odor:	Odorless
Flash Point:	Not applicable.
Boiling Point:	Not applicable.
Melting Point:	1480 - 1540 °C
Specific Gravity:	2.3 (Ref: water = 1).
Solubility:	Insoluble in water.
Vapor Density:	Not applicable.
Vapor Pressure:	Not applicable.
Evaporation Rate:	Not applicable.
pH:	Not applicable.
Viscosity:	Not applicable.
Flash Point:	Does not apply.
Auto Ignition Temperature:	Does not apply.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under normal conditions.
Hazardous Polymerization:	Hazardous polymerization does not occur.
Conditions to Avoid:	None expected
Incompatible Materials:	No materials to be especially mentioned.
Special Decomposition Products:	See Section 5 of MSDS for hazardous decomposition products during a fire.

SECTION 11 - TOXICOLOGICAL INFORMATION

Applies to Product :

Acute Toxicity: Dusts may cause mechanical irritation to eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. High exposures may cause difficulty breathing, congestion, and chest tightness.

Silicon Dioxide :

Inhalation: Inhalation. - Rat TCLo - Lowest published toxic concentration: 1 mg/kg - [Lungs, Thorax, or Respiration - other changes Biochemical - Metabolism (Intermediary) - effect on inflammation or mediation of inflammation] (RTECS)

Ingestion: Oral - Rat TDLo - Lowest published toxic dose: 120 gm/kg - [Gastrointestinal - hypermotility, diarrhea Gastrointestinal - other changes] (RTECS)

Carcinogenicity: IARC: Group 1: Carcinogenic to humans.
NTP: Reasonably anticipated to be a human carcinogen.

Boron Oxide :

Eye: Eye - Rabbit; Standard Draize Test.: 50 mg (RTECS)

Skin: Skin - Rabbit Standard Draize Test.: 1 gm (RTECS)

Inhalation: Inhalation. - Rat LCLo: 150 mg/m³/2H [Details of toxic effects not reported other than lethal dose value.
Inhalation. - Rat TCLo: 77 mg/m³/6H/24W (intermittent)
[Kidney/Ureter/Bladder - urine volume increased; Kidney/Ureter/Bladder - other changes in urine composition](RTECS)

Ingestion: Oral - Rat LD50: 3150 mg/kg [Details of toxic effects not reported other than lethal dose value.]
Oral - Mouse LD50: 3163 mg/kg [Details of toxic effects not reported other than lethal dose value.](RTECS)

SECTION 12 - ECOLOGICAL INFORMATION

Applies to Product :

Ecotoxicity: This material is not expected to cause harm to animals, plants or fish.

Bioaccumulation: Not available.

Biodegradation: Not available.

Mobility In Environmental Media: Not available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Applies to Product :

Waste Disposal: Dispose of in accordance with Local, State, Federal and Provincial regulations.

RCRA Number: No EPA Waste Numbers are applicable for this product's components.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Not Regulated.

IATA Shipping Name: Not Regulated.

Canadian Shipping Name: Not Regulated.

IMDG Shipping Name : Not Regulated.

ADR Shipping Name : Not Regulated.

RID Shipping Name : Not Regulated.

ICAO Shipping Name: Not Regulated.

MEX Shipping Name : Not Regulated.

SECTION 15 - REGULATORY INFORMATION

Silicon Dioxide :

TSCA Inventory Status: Listed
EINECS Number: 238-877-9
State Regulations: Listed in the State of Massachusetts Hazardous Substance List.
Listed in the Pennsylvania State Hazardous Substances List.

Sodium Oxide :

TSCA Inventory Status: Listed
California PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.
Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 1%. Item: 1406(1491)

Aluminum Oxide :

TSCA Inventory Status: Listed
State Regulations: Listed in the State of Massachusetts Hazardous Substance List.
Listed in the New Jersey State Right to Know List.
Listed in the Pennsylvania State Hazardous Substances List.

Boron Oxide :

TSCA Inventory Status: Listed
EINECS Number: 215-125-8
State Regulations: Listed in the State of Massachusetts Hazardous Substance List.
Listed in the Pennsylvania State Hazardous Substances List.
Canada DSL: Listed
Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 1%. Item: 205(228)
EC Number: 215-125-8

Potassium Oxide :

TSCA Inventory Status: Listed

Calcium Oxide :

TSCA Inventory Status: Listed
State Regulations: Listed in the State of Massachusetts Hazardous Substance List.
Listed in the Pennsylvania State Hazardous Substances List.

Applies to Product :

SARA: This product contains chemicals which are subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III (40CFR, Part 372).
Clean Air Act: This product does not contain any Hazardous Air Pollutants (HAPs).
California PROP 65: The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
This product does not contain any Proposition 65 chemicals.
Canada WHMIS: Not controlled.

WHMIS Pictograms



SECTION 16 - ADDITIONAL INFORMATION

HMIS Fire Hazard: 0
HMIS Health Hazard: 0
HMIS Reactivity: 0
HMIS Personal Protection: X
MSDS Creation Date: 03/14/2008
MSDS Revision Date: 03/14/2008
MSDS Author: KK