SHINAGAWA
SPECIALTY CERAMICS

SAFETY DATA SHEET

SHINDURAPAK™ 614 - Hardener

SDS No: 99.0027-H
Date Prepared: 02/15/2023
Revision: 1

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SHINDURAPAK™ 614 - Hardener
GENERAL USE: Epoxy Hardener
PRODUCT DESCRIPTION: High Temperature Wearing Compound
PRODUCT CODE: SHINDURAPAK™

MANUFACTURER

Shinagawa Specialty Ceramics Americas, LLC.
4702 Route 982
Latrobe, PA 15650
Customer Service: 724-539-6000

24 HR. EMERGENCY TELEPHONE NUMBERS

INFOTRAC:
1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Eye Irritation, Category 2
Serious Eye Damage, Category 2
Skin Sensitization, Category 1
Skin Irritation, Category 2
Acute Toxicity (Oral), Category 4
Acute Toxicity (Dermal), Category 4
Target Organ Toxicity (Repeated exposure), Category 2

Environmental:

Acute Hazards to the Aquatic Environment, Category 1
Chronic Hazards to the Aquatic Environment, Category 1

GHS LABEL PICTOGRAMS



GHS07 GHS09 GHS08

SIGNAL WORD: WARNING

HAZARD STATEMENTS

H302: Harmful if swallowed.
H312: Harmful in contact with skin.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
H373: May cause damage to organs.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.
H413: May cause long lasting harmful effects to aquatic life.

PRECAUTIONARY STATEMENTS

Prevention:

P103: Read label before use.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P262: Do not get in eyes, on skin, or on clothing.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P285: In case of inadequate ventilation wear respiratory protection.

Response:

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312: Call a POISON CENTER/doctor/...if you feel unwell.
P363: Wash contaminated clothing before reuse.

Storage:

P402+P404: Store in a dry place. Store in a closed container.

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Grey gritty paste

IMMEDIATE CONCERNS: Substance may be harmful if swallowed. May cause vomiting. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness). Contact may cause eye irritation. Prolonged or repeated contact may cause skin irritation.

POTENTIAL HEALTH EFFECTS

EYES: Serious eye damage/eye irritation

SKIN: Skin corrosion/irritation

SKIN ABSORPTION: May be absorbed through skin with prolonged and widespread contact.

INGESTION: Harmful if swallowed. May cause vomiting. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. May cause cardiovascular disorder and damage.

INHALATION: Prolonged or repeated exposure to fumes or mists may cause irritation.

MEDICAL CONDITIONS AGGRAVATED: Breathing problems, skin problems.

ROUTES OF ENTRY: Inhalation, ingestion, eyes, skin.

TARGET ORGAN STATEMENT: Respiratory system, lungs, skin, eyes.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
Ceramic Microspheres	70 - 75	66402-68-4
cyclohexanamine, 4,4'-methylenebis-	10 - 15	1761-71-3
Diethylmethylbenzenediamine	10 - 15	68479-98-1
glass, oxide, chemicals	1 - 5	65997-17-3
Silica, Amorphous, Fumed	1 - 5	112945-52-5

COMMENTS: Exact percentages of ingredients are proprietary and are withheld as a trade secret.

4. FIRST AID MEASURES

EYES: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists. Get medical advice/attention.

SKIN: Take off contaminated clothing. Wash with soap and water. If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

INGESTION: Get immediate medical attention. Do not induce vomiting unless instructed to do so by poison center or physician.

INHALATION: Remove to fresh air. Oxygen or artificial respiration if needed. Call a physician if you feel unwell.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Treat symptoms

SKIN: Treat symptoms

SKIN ABSORPTION: Treat symptoms

INGESTION: Treat symptoms

INHALATION: Treat symptoms

ACUTE EFFECTS: Corrosive to eyes, skin and mucous membranes, which can result in strong irritation, burning and tissue damage. High vapor concentrations can cause severe eye and respiratory tract irritation, coughing and labored breathing. Prolonged or repeated contact may cause asthma, skin sensitization and other allergic responses.

NOTES TO PHYSICIAN: Treat symptomatically.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water spray (fog). Carbon dioxide (CO2). Dry chemical. Foam.

EXPLOSION HAZARDS: None Expected.

FIRE FIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus operated in pressure-demand mode, (NIOSH approved or equivalent) and full protective gear.

FIRE FIGHTING EQUIPMENT: Carbon Dioxide, dry chemical or foam

FIRE EXPLOSION: None Expected.

SENSITIVE TO STATIC DISCHARGE: None

SENSITIVITY TO IMPACT: None

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Absorb spilled material and place in appropriate container for disposal.

LARGE SPILL: Use same methods described for small spills.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Keep out of sewers, streams and waterways.

SPECIAL PROTECTIVE EQUIPMENT: Refer to Section 8, Exposure Control/Personal Protection.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Handle in accordance with good industrial hygiene and safety practice. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Use personal protection recommended in Section 8. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace.

HANDLING: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Use personal protection recommended in Section 8. Avoid breathing dust or fume. Contaminated work clothing should not be allowed out of the workplace.

STORAGE: Keep container tightly closed and in a well-ventilated place. Keep container dry.

STORAGE TEMPERATURE: 15°C (60°F) Minimum to 30°C (85°F) Maximum

SHELF LIFE: 1 Year

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Ensure adequate ventilation, especially in confined areas.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety glasses with side shields. Chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent) are recommended.

SKIN: Coveralls or work clothes covering skin. Rubber gloves.

RESPIRATORY: Not normally needed if used in well ventilated area. In case of insufficient ventilation, wear suitable respiratory equipment.

PROTECTIVE CLOTHING: Impervious clothing as necessary to prevent skin contact.

WORK HYGIENIC PRACTICES: Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Ammonia

APPEARANCE: Thick Gritty Paste

COLOR: Black

pH: Not Determined

PERCENT VOLATILE: None known.

FLASH POINT AND METHOD: > 249°C (480°F)

Notes: Closed Container

AUTOIGNITION TEMPERATURE: > 249°C (480°F)

VAPOR PRESSURE: Not Determined

VAPOR DENSITY: Not Determined

BOILING POINT: Not Determined

FREEZING POINT: Not Determined

MELTING POINT: Not Determined

POUR POINT: Not Determined

THERMAL DECOMPOSITION: Not Determined

SOLUBILITY IN WATER: Slight

EVAPORATION RATE: Not Determined

DENSITY: Not Determined

SPECIFIC GRAVITY: 2.46

VISCOSITY: Not Determined

MOLECULAR WEIGHT: Not Determined

10. STABILITY AND REACTIVITY

REACTIVITY: No

STABILITY: Stable

CONDITIONS TO AVOID: Extreme heat.

POSSIBILITY OF HAZARDOUS REACTIONS: Not reactive under normal conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: When product burns it may form toxic materials such as carbon dioxide, carbon monoxide, various hydrocarbons, etc.

INCOMPATIBLE MATERIALS: Strong oxidizing agents. Strong Acids. Strong Bases.

11. TOXICOLOGICAL INFORMATION

CARCINOGENICITY

NOTES: This product does not contain any component(s) known to be carcinogenic.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: Not Determined

BIOACCUMULATION/ACCUMULATION: Not Determined

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of this product in accordance with all applicable local, state and federal regulations.

PRODUCT DISPOSAL: Combine resin and curative. The final cured material is considered nonhazardous. Landfill sealed containers with stabilized and solidified liquids in an approved area. May be incinerated at an appropriate facility. Unreacted components are a special waste. Check local, state and national/federal regulations and comply with the most stringent requirement.

EMPTY CONTAINER: Disposal should be in accordance with applicable regional, national and local laws and regulations.

EUROPEAN WASTE CATALOGUE: 08 04 09

GENERAL COMMENTS: Combine resin and curative. The final cured material is considered nonhazardous. Landfill sealed containers with stabilized and solidified liquids in an approved area. May be incinerated at an appropriate facility. Unreacted components are a special waste. Check local, state and national/federal regulations and comply with the most stringent requirement.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATIO N)

PROPER SHIPPING NAME: Not regulated for transport as a dangerous material.

PLACARDS: None

ROAD AND RAIL (ADR/RID)

PROPER SHIPPING NAME: Not regulated for transport as a dangerous material.

SPECIAL PROVISIONS: No special precautions.

AIR (ICAO/IATA)

SHIPPING NAME: Not regulated for transport as a dangerous material.

VESSEL (IMO/IMDG)

SHIPPING NAME: Not regulated for transport as a dangerous material.

CANADA TRANSPORT OF DANGEROUS GOODS

SHIPPING NAME: Not regulated for transport as a dangerous material.

15. REGULATORY INFORMATION

UNITED STATES

DOT LABEL SYMBOL AND HAZARD CLASSIFICATION

Not classified as hazardous.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
Ceramic Microspheres	66402-68-4
cyclohexanamine, 4,4'-methylenebis-	1761-71-3
Diethylmethylbenzenediamine	68479-98-1
glass, oxide, chemicals	65997-17-3

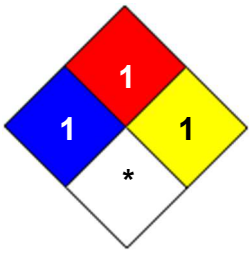
16. OTHER INFORMATIO N

PREPARED BY: David Closser
REVISION DATE: 05/01/2026

HMIS™ RATING

HEALTH	*	1
FLAMMABILITY		1
PHYSICAL HAZARD		1
PERSONAL PROTECTION		*

NFPA CODES



COMMENTS: * = Section 8

Approximate HMIS and NFPA Ratings Legend:

0 = Low or None; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe

MANUFACTURER DISCLAIMER: The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.