



SAFETY DATA SHEET

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Product Names: MP5400, 5401, 5402, 5404

Technical Name: Epoxy Resin

Section 2: Hazards Identification

Emergency Overview: Skin and eye irritation, skin sensitization.

Sample Preparation/Mixture classification:

GHS Classification:  29 CFR191O.1200 (d)			Skin irritation 2 Skin Sensitization 1 Eye irritation 2B Carcinogenicity 2 Reproductive Toxicity 1B Aquatic Chronic 2
		Signal Word:	Danger
Hazard classification(s)	Hazard phrases		
H315	Causes skin irritation		
H317	May cause an allergic skin reaction		
H320	Causes eye irritation		
H351	Suspected of causing cancer		
H360	May damage fertility or the unborn child		
H411	Toxic to aquatic life with long lasting effects		
Precautionary Statement (s)			
PREVENTION:			
P201: Obtain special instructions before use			
P202: Do not use until all safety precautions have been read and understood			
P261: Avoid breathing fumes or vapors			
P264: Wash hands and face thoroughly after handling			
P272: Contaminated work clothes should not be allowed out of the workplace.			
P273: Avoid release to the environment			
P280: Wear protective gloves			
P281: Wear personal protective equipment as required			
P391: Collect spillage			
RESPONSE:			
P302 + P352: IF ON SKIN: Wash with plenty of soap and water			
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.			
P308 + P313: If exposed or concerned: Get medical advice/attention			
P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention			
P337 + P313: If eye irritation persists: Get medical advice/attention			

P362: Take off contaminated clothing and wash before reuse

STORAGE:

P40S: Store locked up

DISPOSAL:

PS01: Dispose of contents and container to an approved disposal facility.

Hazards Not Otherwise Classified (HNOC):

Aluminum is considered a Specific Target Organ Toxicity Repeated Exposure hazard when inhaled. Aluminum is not inhalable in product form and is unlikely to pose a human health hazard during normal material handling. Aluminum is also not water reactive when encapsulated in the epoxy resin.

This product contains Bisphenol A (BPA) at less than 1. BPA is a suspected endocrine disruptor and has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

Section 3: Composition and information on Hazardous Ingredients

Ingredient	CAS #	GHS Classification(s)	Weight
Epoxy resin blend	25068-38-6	Skin IIT 2 H315 Eye IIT. 2 H319 Skin Sens 1 H317 Aquatic Chronic 2 H411	45-55
+Aluminum	7429-90-5	Water Reactive 2 H261 Flam solid 1 H228	<30
* Talc	14807-96-6	Not classified as hazardous Included because of Occupational Exposure limits. See Section 8 of this MSDS.	<4
* Amorphous fumed silica	67762-90-7	Not classified as hazardous Included because of Occupational Exposure limits. See Section 8 of this MSDS.	<4
2-Methylimidazole	693-98-1	Acute tox 4 oral H302 Skin COIT 1 B H314 Eye dam 1 H318 Carc2 H351 Repro Tox 1 H360	< 1

Additional Information

* Not an inhalation hazard in product form

NOTE: Material is not flammable or water reactive in product form.

Section 4: First Aid Measures

General Notes: Immediately remove contaminated clothing. Do not reuse contaminated clothing until properly cleaned.

Contaminated leather products must be discarded.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.

Skin Contact: Flush the affected area of the skin thoroughly with plenty of water. Follow by washing with soap and water. Get medical attention if irritation persists.

Ingestion: Dilute by giving plenty of water to drink, if victim is conscious and alert. Never give anything by mouth to a drowsy, unconscious, or convulsing person. Get immediate attention.

Inhalation: Remove victim to fresh air. Provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get immediate medical attention.

Most Important Symptoms/Effects (Acute and Delayed):

Irritation. Pre-existing skin problems may be aggravated by prolonged or repeated contact.

Notes to physician: Treat symptomatically

Special Hazards: No further hazards known

Section 5: Fire Fighting Measures

Recommended Extinguishing Media: CO₂, dry chemical, water fog, foam.

Flammable Limits: Lower explosion Limit: Not determined for this preparation/mixture

Upper explosion Limit: Not determined for this preparation/mixture

Unusual Fire or Explosion Hazard: Toxic or irritating fumes may develop when material is exposed to open flame or extreme temperatures.

Special Fire Fighting Procedures: Isolate fire area. Do not use direct water stream. Fire may spread. Use water spray to cool fire exposed containers and fire affected zones until fire is out and danger of re-ignition has passed. Move container from fire area if this is possible without hazard. Contain fire water run-off, if possible. Fire water run-off, if not contained, may cause environmental damage. Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with SCBA. For protective equipment in post-fire or non-fire clean up situations, refer to the relevant sections.

Section 6: Accidental Release Measures

Spill response operations must be conducted in accordance with the provisions of OSHA 29CFR 1910.120 or relevant Country provisions. Review the entire SDS before proceeding with spill response.

Small Spills: Activate available exhaust ventilation equipment in the immediate spill area. Wipe up or absorb spilled material with vermiculite or other similar material. Wash area with soapy water to remove residue. Collect absorbed material and water rinses in appropriate containers. Dispose of in accordance with current Federal, State, local or Country regulations.

Large Spills: Limit access to the immediate spill area. Shut off source of the release if this can be done without risk of injury.

Activate available exhaust ventilation systems in the area. Dike area to contain the spill and prevent releases to sewers, drains, or other waterways. Collect spilled material for salvage or disposal. Apply absorbent material to soak up residue. Wash area with soapy water. Prevent runoff from entering waterways. Transfer absorbed material and water rinses to appropriate water containers. Dispose of in accordance with current Federal, State, local or Country regulations.

General Notes: Immediately remove contaminated clothing. Do not reuse contaminated clothing until properly cleaned.

Contaminated leather products must be discarded.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.

Skin Contact: Flush the affected area of the skin thoroughly with plenty of water. Follow by washing with soap and water. Get medical attention if irritation persists.

Ingestion: Dilute by giving plenty of water to drink, if victim is conscious and alert. Never give anything by mouth to a drowsy, unconscious, or convulsing person. Get immediate attention.

Section 7: Handling and Storage

The recommendations described in this section are provided as general guidance for minimizing exposure when handling this product. Because usage conditions will vary depending on customer application, specific safe handling procedures should be developed by a person knowledgeable in the intended usage conditions and equipment. Employees must be properly trained in safe handling of this product prior to use.

Ventilation Recommendations: Provide effective mechanical exhaust ventilation to draw vapors, mists, or fumes generated during processing away from the worker and prevent routine inhalation. This is necessary especially during elevated temperature processing. Ventilation must be sufficient to maintain airborne levels of Section 8 ingredients below their PEL/TLV values.

Handling: Review Safety Data Sheet (SDS) and Technical Data Sheet (TDS) completely before handling product.

Storage: Store in a cool, dry location with adequate ventilation. Keep container tightly sealed when not in use. Keep away from open flames and heat sources. Consult the product Technical Bulletin for detailed storage information.

Section 8: Exposure Control/Personal Protection

Personal Protection:

General precautions: Wash hands and face thoroughly after handling this product and before eating, drinking, or smoking.

Emergency eye wash facilities and safety shower should be available.

Eye protection: This product can cause eye irritation. Prevent eye contact through the use of chemical safety glasses, splash-proof goggles, or face shields.

Skin protection: This product can cause skin irritation and may cause allergic skin reactions. Wear appropriate gloves that are rated for breakthrough. Nitrile glove material is recommended for use with epoxies. If necessary, a proper chemical resistant apron and additional impervious protective equipment should be used to prevent skin contact and contamination of clothing. Normal work clothing should be washed before re-use.

Respiratory Protection: Use an appropriate, properly fitted respirator if exposures exceed PEL/TLV/OEL value listed below. The type of protection selected. (SCBA, air purifying, etc.) will depend upon the conditions of use. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Occupational Exposure Limits (OELs):

Material	OSHA PEL	ACGIH TLV
Aluminum	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)	1 mg/m ³ TWA (respirable fraction)
Talc	20 mppcf TWA (if 1 Quartz or more, use Quartz limit)	Talc (containing no asbestos fibers)
Amorphous fumed silica	20 mppcf TWA; (80)/(SiO ₂) mg/m ³ TW A	0.025 mg/m ³ TWA (respirable fraction)

Section 9: Physical and Chemical Properties

Appearance: Gray viscous liquid

Odor: Mild

Odor Threshold: Not determined for this preparation/mixture

pH: No data available

Melting Point (0e): No data available

Boiling Point (0e): No data available

Flash point: 251°C

Lower explosion Limit: Not determined for this preparation/mixture

Upper explosion Limit: Not determined for this preparation/mixture

Evaporation rate: No data available

Vapor Pressure: No data available

Vapor density: No data available

Specific Gravity/Density: 1.46 glcc

Solubility: No data available

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature [NFPA]: No data available

Explosive properties and Oxidizing properties: Refer to Section 10: Stability and Reactivity

Section 10: Stability and Reactivity

Reactivity:	Exothermic reactions including polymerization may occur in contact with amines. Caustic soda (sodium hydroxide) can induce vigorous polymerization at temperatures around 200°C.
Chemical Stability:	Stable in closed containers when stored away from prolonged heat, sparks and flames.

Conditions to avoid:	May react exothermically with curing agents. Produces ammonia if decomposing with water.
Incompatible materials:	Amines, strong oxidizers, acids and bases
Hazardous Decomposition Products:	CO and CO ₂ , nitrogen and silicon oxides, aldehydes, phenolics and acid smoke.

Mutagenicity: Not determined for this preparation/mixture.

Specific Toxic Organ Toxicity:

Single Exposure: Not classified

Repeated Exposure: Not classified

Toxicity for reproduction: Not determined for this preparation/mixture. This product contains a component that is considered to be a reproductive hazard.

Mutagenicity: Not determined for this preparation/mixture.

Section 11: Toxicological Information

Acute Toxicity Effects Data: Not determined for this preparation/mixture.

Component information:

Chemical name	Oral LD ₅₀ (rat)	Dermal LD ₅₀ (rabbit)	Inhalation LD ₅₀ (rat)
Epoxy resin	30000 mg/kg,	> 2000 mg/kg	No data available
Aluminum	No data available	No data available	No data available
Talc (containing no asbestos fibers)	No data available	No data available	No data available
Amorphous silica	> 5000 mg/kg.	No data available	No data available
2-Methylimidazole	1500 mg/kg	> 2000 mg/kg Rat	No data available

37 of this product is of unknown toxicity.

Irritation Effects Data:

Skin irritation: Causes skin irritation

Eye irritation: Causes eye irritation

Skin sensitization: Can cause skin sensitization in predisposed individuals

Chronic toxicity or effects from long term exposures:

Carcinogenicity:

Chemical Name	IARC	NTP	ACGIH	OSHA
Talc	Group 3-Not classifiable as carcinogenic to humans	A4 - Not Classifiable as a Human Carcinogen (containing no asbestos fibers)	Male Rat - Some Evidence; Female Rat - Clear Evidence; Male Mice - No Evidence; Female Mice - No Evidence (TR-421); Human epidemiological studies reporting an increased risk of cancer among workers exposed to talc. (occupational exposure)	No data available
2-Methylimidazole	Group2B (Possibly Carcinogenic to Humans) Monograph 101 [2012]	Not established	Male Rat - Some Evidence; Female Rat - Clear Evidence; Male Mice - Some Evidence; Female Mice - Some Evidence (TR-516)	Hazard Communication Carcinogens Present

No other components of this product, present at levels greater than or equal to 0.1 , are identified a carcinogen per IARC, ACGIH, NTP, or OSHA.

Toxicity for reproduction: Not determined for this preparation/mixture. This product contains a component that is considered to be a reproductive hazard.

Section 12: Ecological Information

Not determined for this preparation/mixture. Follow spill and disposal recommendations.

Component information:

Biodegradability: Not determined for this preparation/mixture.

Bioaccumulation: Not determined for this preparation/mixture.

Ecotoxicity effects

Chemical name	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates.	Toxicity to algae	Toxicity to bacteria
Bisphenol-A-(epichlorhydrin) epoxy resin (reaction product)	No data available	No data available	No data available	No data available
Aluminum	No data available	No data available	No data available	No data available
Talc (containing no asbestos fibers)	LC50 Brachydanio rerio (Zebra fish) > 100 g/L/24 hr; semistatic	No data available	No data available	No data available
Amorphous silica	Fish (Brachydanio rerio) LC50 (96 h): > 10,000 mg/l; (Method: OECD 203)	No data available	Algae (Scenedesmus subspicatus) EC50 (96 h) > 10,000 mg/l (Method: OECD 201)	No data available
2-Methylimidazole	LC50 Leuciscus idus: 190 mg/l / 96 h	EC50 Daphnia magna (Water flea): 225 mg/l / 48 h	EC50 scenedesmus subspicatus: 190 mg/l / 72h	EC50: 460 mg/l / 17 h

Section 13: Disposal Considerations

Waste Disposal: Comply with all current Federal, State, local or Country regulations.

Section 14: Transport Information

DOT Non-Bulk (less than 450L 1119 gallons or 400 kgs (882lbs) Classification: Not hazardous for transport within US per CFR 49 §171.4(c)

DOT BULKHA T AJIMDG Classification:

Shipping Name: Environmentally Hazardous Substance, liquid, N.O.S. (liquid Epoxy Resin)

UN/NA Number: UN3082

Shipping Class: 9

Packing Group: III

Shipping Label: Miscellaneous and Environmental Hazard label

Severe Marine Pollutant or potential Marine Pollutant: (49 CFR § 172.101 Appendix B) Not listed in CFR 49 § 172.101 Appendix B. Meets criteria in UN Model Regulations 2.9.3.

IATA Special Provision A-158: Mixtures of solids which are not subject to these regulations and liquids or solids classified by the shipper as environmentally hazardous substances (UN 3077 or UN 3082) may be transported under this entry, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging is closed. Sealed packets and articles containing less than 10 mL of an environmentally hazardous liquid, absorbed into a solid material but with no free liquid in the packet or article, or containing less than 109 of an environmentally hazardous solid, are not subject to these regulations.

Excepted Quantity: Maximum quantity per inner packaging 30 g/30mL / Maximum net quantity per outer packaging 1kg/1L
(NOTE: Use for UN 3082 or UN-3077)

IATA Special Provision A197-Special provision assigned to environmentally substances, UN 3077 and UN 3082 that allows these substances to be shipped as "not restricted" provided that the net quantity in any receptacle does not exceed 5 kg or 5 L and the packaging used meets defined standards.

Section 15: Regulatory Information

TSCA Status: All components of this product are listed in the EPA Toxic Substance Control Act Inventory. No components are listed under TSCA Section 4 or 5 nor are subject to a TSCA 12 (b) Export Notification.

EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances:

None

Section 304 CERCLA Hazardous Substances:

None

Section 311/312 Hazard Class(es):

Acute: Yes

Chronic: Yes

Fire: No

Pressure: No

Reactive: No

Section 313 Toxic Chemicals:

None

Chemical Inventories: All components of this product are listed or in compliance with the following global chemical inventories

Australian Inventory of Chemical Substances (AICS)

Canadian Domestic Substance List (DSL) or Non-Domestic Substance List (NDSL)

China. Inventory of Existing Chemical Substances

European Inventory of Existing Commercial Substances (EINECS), No Longer Polymers list (NLP) -or-

European Chemicals Agency (ECHA) Pre-registered Substance List

Korean Existing Chemicals Inventory (KECL)

Japan. Existing and New Chemical Substances (ENCS) Kashin-Hou Law List

Philippines -Inventory of Chemicals and Chemical Substances (PICCS)

State Right to Know (RTK) lists: Available upon request

Canada Workplace Hazardous Information System (WHMIS) Classification: D2A, D2B

Section 16: Additional Information

HMIS Rating:

Health: 1

Flammability: 1

Reactivity: 1

Personal Protection: C

List of Component Hazard (II) phrases:

H228: Flammable solid

H261: In contact with water releases flammable gas

H302: Harmful if swallowed

H314: Causes severe skin burns and eye damage

H315: Causes skin irritation

H317: May cause an allergic skin reaction

H318: Causes serious eye damage

H320: Causes eye irritation

H351: Suspected of causing cancer

H360: May damage fertility or the unborn child

H372: Causes damage to organs through prolonged or repeated exposure

H411: Toxic to aquatic life with long lasting effects

Version Number:	Revision Date	Revisions:
9	June 13,2012	Updated shipping information for IATAIIMDG
10	November 25, 2014	Updated GHS classification based on component information
11	February27,2015	Added IATA Special Provisions and Excepted Quantity to Shipping

NON-WARRANTY: Information contained herein is based on tests we believe to be reliable and accurate. It is offered in good faith for the benefit of the consumer. Adhesive Systems shall not be liable for any injury, loss, or damage in the use of its chemical products since the conditions of use are beyond our control. In every case we urge and recommend the user conduct tests to determine to their own satisfaction that the product is of acceptable quality and is suitable for their particular purpose under their own operating conditions. Statements concerning the possible use of our products are not intended as recommendations to use our products in the infringement of any patent. Because of changing reporting requirements and other variables it is impossible to guarantee the accuracy of the information contained in this document. It is the responsibility of the user to determine proper personal protection based on the actual condition of use and to comply with all Federal, State, and Local laws and regulation.

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