

SAFETY DATA SHEET

Issue Date 21-Feb-2017 Revision Date 21-Feb-2017 Version 1

1. IDENTIFICATION

Product identifier

Product Name Tuffbond 23932A

Other means of identification

Product Code MS-23932A UN/ID no. None Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Epoxy Adhesive. Uses advised against Epoxy And Epoxy Adhesive. None known

Details of the supplier of the safety data sheet

Manufacturer Address Hernon Manufacturing Inc. 121 Tech Drive Sanford, FL 32771 800-527-0004

Emergency telephone number

Company Phone Number 407-322-4000

Emergency Telephone Chemtel 800-255-3924

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Carcinogenicity	Category 2
Flammable liquids	Category 4

Label elements

Emergency Overview

Warning

Hazard statements

Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
Suspected of causing cancer
Combustible liquid



Appearance No information available Physical state Liquid Odor Unpleasant

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/protective clothing/eye protection/face protection

Wash face, hands and any exposed skin thoroughly after handling

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace

Keep away from flames and hot surfaces. - No smoking

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see supplemental first aid instructions on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN: Wash with plenty of water and soap

Take off contaminated clothing and wash it before reuse

If skin irritation or rash occurs: Get medical advice/attention

In case of fire: Use CO2, dry chemical, or foam to extinguish

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical Name	CAS No.	Weight-%	Trade Secret
Epoxy Resin / Bisphenyl A epoxy resin	25068-38-6	60 - 100	*
TITANIUM DIOXIDE	13463-67-7	1 - 5	*

^{*}The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a physician.

Skin contact Wash with soap and water. Flush skin with water for several minutes. Remove

contaminated clothing and shoes. If irritation develops, seek medical attention. Wash

clothing before reuse.

Inhalation Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give

artificial respiration. Get medical attention immediately.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a

POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physiciansTreat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use CO2, dry chemical, or foam.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

No information available.

Hazardous combustion products Irritating organic vapors.

Explosion data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Ensure adequate ventilation, especially in

confined areas.

Environmental precautions

Environmental precautions Do not allow into any sewer, on the ground or into any body of water. Collect spillage. See

Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning upSoak up with inert absorbent material. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Wash thoroughly

after handling. Ensure adequate ventilation, especially in confined areas.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep at temperatures between 7 and 29 °C.

Incompatible materials None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
TITANIUM DIOXIDE 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust	IDLH: 5000 mg/m ³

Appropriate engineering controls

Engineering Controls Showers

> **Evewash stations** Ventilation systems.

Individual protection measures, such as personal protective equipment

Wear safety glasses with side shields (or goggles). Eye/face protection

Skin and body protection No special technical protective measures are necessary.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved

respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be

provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid

No information available **Appearance** Odor Unpleasant

Color White **Odor threshold** No information available

Remarks • Method **Property** <u>Values</u>

Does not apply

Melting point / freezing point No information available

Boiling point / boiling range > 149 °C / 300 °F 93 °C / 200 °F Flash point **Evaporation rate** No information available

Flammability (solid, gas) No information available Flammability Limit in Air

Upper flammability limit: No information available Lower flammability limit: No information available

Vapor pressure > 50 mm at 80°F

Vapor densityNo information available

Relative density 1.19

Water solubility Slightly soluble

Solubility in other solvents No information available **Partition coefficient** No information available **Autoignition temperature** No information available **Decomposition temperature** No information available Kinematic viscosity No information available Dynamic viscosity No information available **Explosive properties** No information available Oxidizing properties No information available

Other Information

Softening point
Molecular weight
VOC Content (%)
Density
No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

None.

Hazardous Decomposition Products

None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation No data available.

Eye contact Irritating to eyes.

Skin contact Irritating to skin.

Ingestion No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Epoxy Resin / Bisphenyl A epoxy	= 11400 mg/kg (Rat)	-	-
resin			
25068-38-6			
TITANIUM DIOXIDE	> 10000 mg/kg (Rat)	-	-

13463-67-7

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

No information available. Sensitization Germ cell mutagenicity No information available.

Carcinogenicity

Chemical Name	ACGIH	IARC	NTP	OSHA
TITANIUM DIOXIDE	-	Group 2B	-	X
13463-67-7		·		

Reproductive toxicity No information available. STOT - single exposure No information available. STOT - repeated exposure No information available. Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral) 11,374.00 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and

regulations.

Contaminated packaging Do not reuse container.

14. TRANSPORT INFORMATION

DOT Not regulated

UN/ID no. None

Proper shipping name Not regulated

Hazard Class None **Packing Group** None **Special Provisions** None

IATA Not regulated

UN/ID no. None

Proper shipping name Not regulated **Hazard Class** None

Packing Group None **Special Provisions** None

IMDG Not regulated

UN/ID no. None

Proper shipping name Not regulated **Hazard Class** None

Packing Group None

Not regulated

UN/ID no. None

Proper shipping name Not regulated **Hazard Class** None **Packing Group** None **Special Provisions** None

ADR Not regulated

UN/ID no. None

Proper shipping name Not regulated **Hazard Class** None

Packing Group None **Special Provisions** None

15. REGULATORY INFORMATION

International Inventories

TSCA Complies **DSL/NDSL** Complies **EINECS/ELINCS** Complies **ENCS** Complies **IECSC** Complies **KECL** Complies **PICCS** Complies AICS Complies

All ingredients are on the inventory or are exempt from listing.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard

No

Chronic Health HazardNoFire hazardNoSudden release of pressure hazardNoReactive HazardNo

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
TITANIUM DIOXIDE - 13463-67-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
TITANIUM DIOXIDE	X	X	X
13463-67-7			

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA Health hazards 0 Flammability 0 Instability 0 Physical and Chemical

Properties -

HMIS Health hazards 2* Flammability 1 Physical hazards 0 Personal protection X

Prepared BySDS coordinatorIssue Date21-Feb-2017Revision Date21-Feb-2017

Revision Note

No information available

Disclaimer

The information provided in this Material 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.

End of Safety Data Sheet



SAFETY DATA SHEET

Issue Date 21-Feb-2017 Revision Date 21-Feb-2017 Version 1

1. IDENTIFICATION

Product identifier

Product Name Tuffbond 23932B

Other means of identification

Product Code MS-23932B UN/ID no. None Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Hardener.
Uses advised against None known

Details of the supplier of the safety data sheet

Manufacturer Address Hernon Manufacturing Inc. 121 Tech Drive Sanford, FL 32771 800-527-0004

Emergency telephone number

Company Phone Number 407-322-4000

Emergency Telephone Chemtel 800-255-3924

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Flammable liquids	Category 4

Label elements

Emergency Overview

Warning

Hazard statements

Harmful if swallowed Harmful in contact with skin Combustible liquid



Appearance No information available Physical state Liquid Odor Fishv

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Keep away from flames and hot surfaces. - No smoking

Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Specific treatment (see supplemental first aid instructions on this label)

IF ON SKIN: Wash with plenty of water and soap

Call a POISON CENTER or doctor if you feel unwell

Take off contaminated clothing and wash it before reuse

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

In case of fire: Use CO2, dry chemical, or foam to extinguish

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Causes mild skin irritation

Very toxic to aquatic life with long lasting effects

Very toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical Name	CAS No.	Weight-%	Trade Secret
Aliphatic Amine	MIXTURE	60 - 100	*
VERSAMINE	90-72-2	5 - 10	*
Formaldehyde Polymer with Toluene	25155-81-1	5 - 10	*

^{*}The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a physician.

Skin contact Wash with soap and water. Flush skin with water for several minutes. Remove

contaminated clothing and shoes. If irritation develops, seek medical attention. Wash

clothing before reuse.

Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give Inhalation

artificial respiration. Get medical attention immediately.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a

POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, dry chemical, dry sand, limestone powder.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

No information available.

Hazardous combustion products Carbon monoxide. Irritating organic vapors.

Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Ensure adequate ventilation, especially in

confined areas.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Do not allow into any sewer, on the ground or into any body of water. Collect spillage. See

Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in

confined areas. Wash thoroughly after handling. Avoid breathing vapors or mists.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep at temperatures between 7 and 29 °C.

Incompatible materials Sodium hypochlorite. Organic acids. Mineral acids. Reactive Metals. Oxidizing agents.

Strong acids. Peroxides.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational

exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Controls Showers

> Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

Wear safety glasses with side shields (or goggles). Face protection shield. Eye/face protection

Skin and body protection Wear protective gloves and protective clothing. Wear protective nitrile rubber gloves.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved

respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be

provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid

No information available **Appearance** Odor Fishv

Color Odor threshold Amber No information available

Remarks • Method Values **Property**

Does not apply

Melting point / freezing point No information available Boiling point / boiling range > 149 °C / 300 °F

Flash point > 93 °C / 200 °F **Evaporation rate** No information available Flammability (solid, gas) No information available

Flammability Limit in Air

Upper flammability limit: No information available Lower flammability limit: No information available Vapor pressure No information available Vapor density No information available

Relative density 0.99

Water solubility Slightly soluble

Solubility in other solvents No information available Partition coefficient No information available **Autoignition temperature** No information available **Decomposition temperature** No information available Kinematic viscosity No information available

Dvnamic viscosity No information available **Explosive properties** No information available Oxidizing properties No information available

Other Information

Softening point No information available Molecular weight No information available **VOC Content (%)** No information available Density No information available **Bulk density** No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Incompatible materials.

Incompatible materials

Sodium hypochlorite. Organic acids. Mineral acids. Reactive Metals. Oxidizing agents. Strong acids. Peroxides.

Hazardous Decomposition Products

Nitric acid. Ammonia. Nitrogen oxides (NOx). Carbon monoxide. Carbon dioxide (CO2). Aldehydes. Hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation No data available.

Eve contact No data available.

Skin contact No data available.

Ingestion No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
VERSAMINE	= 1200 mg/kg (Rat)	= 1280 mg/kg (Rat)	-
90-72-2			

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available. Germ cell mutagenicity No information available. Carcinogenicity No information available. Reproductive toxicity No information available. STOT - single exposure No information available. STOT - repeated exposure No information available.

Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral) 1,704.00 mg/kg 1,100.00 mg/kg ATEmix (dermal)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and

regulations.

Contaminated packaging Do not reuse container.

14. TRANSPORT INFORMATION

Not regulated

UN/ID no. None

Proper shipping name Not regulated **Hazard Class** None

Packing Group None **Special Provisions** None

IATA Not regulated

UN/ID no. None

Proper shipping name Not regulated

Hazard Class None **Packing Group** None **Special Provisions** None

IMDG Not regulated

UN/ID no. None

Proper shipping name Not regulated

Hazard Class None **Packing Group** None

RID Not regulated

UN/ID no. None

Proper shipping name Not regulated

Hazard Class None

Packing Group None Special Provisions None

ADR Not regulated

UN/ID no. None

Proper shipping name Not regulated Hazard Class None Packing Group None

None

15. REGULATORY INFORMATION

International Inventories

Special Provisions

TSCA Complies **DSL/NDSL** Complies **EINECS/ELINCS** Complies **ENCS** Complies **IECSC** Complies **KECL** Complies **PICCS** Complies **AICS** Complies

All ingredients are on the inventory or are exempt from listing.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazardNoChronic Health HazardNoFire hazardNoSudden release of pressure hazardNoReactive HazardNo

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA Health hazards 0 Flammability 0 Instability 0 Physical and Chemical

Properties -

Health hazards 3* Flammability 1 Physical hazards 1 Personal protection X

Prepared By SDS coordinator Issue Date 21-Feb-2017 Revision Date SDS coordinator 21-Feb-2017

Revision Note

No information available

Disclaimer

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End of Safety Data Sheet