

SAFETY DATA SHEET

Tuffbond 312A

SECTION 1: IDENTIFICATION

1.1. Product identifier

Trade name: Tuffbond 312A

Product no.: MS-312A

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture: Adhesive
Restricted to professional users.

Uses advised against : None known.

1.3. Details of the supplier of the safety data sheet

Company and address: **Hernon Manufacturing Inc**
121 Tech Drive
FL 32771 Sanford
USA
T: +1-407-322-4000
www.hernon.com

Contact person: Hernon SDS Coordinator

E-mail: customerservice@hernon.com

SDS date: 3/1/2025

SDS Version: 1.0

1.4. Emergency telephone number

Contact the poison control at 1-800-222-1222 (24/7) or use the webpoisoncontrol (triage.webpoisoncontrol.org) to get specific guidance for your case.

VelocityEHS:

+1-800-255-3924 (USA)

+1-813-248-0585 (International)

1-300-954-583 (Australia)

0-800-591-6042 (Brazil)

400-120-0751 (China)

000-800-100-4086 (India)

800-099-0731 (Mexico)

Contract #: (MIS0002665)

SECTION 2: HAZARD(S) IDENTIFICATION

OSHA/HCS status

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

2.1. Classification of the substance or mixture

Skin Irrit. 2; H315, Causes skin irritation.
Skin Sens. 1; H317, May cause an allergic skin reaction.
Eye Irrit. 2; H319, Causes serious eye irritation.

2.2. Label elements

Hazard pictogram(s):



Signal word:

Warning

Hazard statement(s):

Causes skin irritation. (H315)
May cause an allergic skin reaction. (H317)
Causes serious eye irritation. (H319)

Precautionary statement(s):

General:

-

Prevention:

Avoid breathing mist/vapour. (P261)
Wash hands thoroughly after handling. (P264)
Contaminated work clothing should not be allowed out of the workplace. (P272)
Wear eye protection/protective clothing. (P280)

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)
If skin irritation or rash occurs: Get medical advice/attention. (P333+P313)
If eye irritation persists: Get medical advice/attention. (P337+P313)
Take off contaminated clothing and wash it before reuse. (P362+P364)

Storage:

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Disposal:

Dispose of contents/container in accordance with local regulation (P501)

Additional labelling:

Not applicable.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Bisphenol-A-(epichlorohydrin)	CAS No.: 25068-38-6	60-100%	Skin Irrit. 2, H315 (SCL: 5.00 %) Skin Sens. 1, H317 Eye Irrit. 2, H319 (SCL: 5.00 %)	
Bisphenol a Diglycidyl Ether Resin	CAS No.:	5-30%	Skin Irrit. 2, H315 Skin Sens. 1, H317	

			Eye Irrit. 2, H319	
Glass, oxide, chemicals	CAS No.: 65997-17-3	1-10%		[19]
Titanium dioxide	CAS No.: 13463-67-7	<0.25%		

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[19] UVCB = Unknown or variable composition, complex reaction products or of biological materials

SECTION 4: FIRST-AID MEASURES

4.1. Description of first aid measures

General information:

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation:

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact:

IF ON SKIN: Wash with plenty of water and soap.

Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

Eye contact:

If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

Ingestion:

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns:

Not applicable.

4.2. Most important symptoms and effects, both acute and delayed

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact. Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

4.3. Indication of any immediate medical attention and special treatment needed

If eye irritation persists: Get medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Some metal oxides

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material: Always store in containers of the same material as the original container.

Storage conditions: Keep at temperatures between 7 and 29 °C.
Dry, cool and well ventilated
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

Incompatible materials: Acids
Bases
Amines
Strong oxidizing agents

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Glass, oxide, chemicals

Long term exposure limit (OSHA Table Z-1) (mg/m³): 15 (as Fibrous Glass)

Long term exposure limit (ACGIH TLV) (mg/m³): 5 (continuous filament glass fibers, inhalable particulate matter); 0.2 f/cc (refractory ceramic fibers [F])

Long term exposure limit (ACGIH TLV) (ppm): 1 fiber/cc (continuous filament glass fibers, glass wool fibers, rock wool fibers, slag wool fibers and special purpose glass fibers, [F])

Ceiling value (NIOSH REL) (mg/m³): 5 (total)

Ceiling value (NIOSH REL) (ppm): 3 fibers/cm³ (fibers ≤3.5 µm in diameter, ≥10 µm in length)

Titanium dioxide

Long term exposure limit (ACGIH TLV) (mg/m³): 10

Long term exposure limit (NIOSH REL) (mg/m³): Potential occupational carcinogen; (ultrafine particles) / 2.4 (fine) / 0.3 (ultrafine)

Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations: Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios: There are no exposure scenarios implemented for this product.

Exposure limits: Professional users are subjected to the legally set maximum concentrations for occupational exposure. See

<i>Appropriate technical measures:</i>	occupational hygiene limit values above. The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked. Apply standard precautions during use of the product. Avoid inhalation of vapours.
<i>Hygiene measures:</i>	Take off contaminated clothing and wash it before reuse.
<i>Measures to avoid environmental exposure:</i>	No specific requirements.


Individual protection measures, such as personal protective equipment

Generally: Use only protective equipment with a recognized certification mark, e.g. the UL mark.

Respiratory Equipment:

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.


Skin protection:

Recommended	Type/Category	Standards	
-	Protective Clothing		

Hand protection:

Nitrile Rubber

Eye protection:

Type	Standards	
Safety glasses with side shields.	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<i>Physical state:</i>	Liquid
<i>Color:</i>	White
<i>Odor:</i>	Mild
<i>Odor threshold (ppm):</i>	No data available
<i>pH:</i>	No data available
<i>Density (g/cm³):</i>	1.21
<i>Kinematic viscosity:</i>	No data available
<i>Particle characteristics:</i>	No data available

Phase changes

<i>Melting point/freezing point (°F):</i>	No data available
<i>Softening point/range (°F):</i>	Does not apply to liquids.
<i>Boiling point (°F):</i>	>300
<i>Boiling point (°C):</i>	>149
<i>Vapor pressure:</i>	No data available
<i>Relative vapor density:</i>	No data available
<i>Decomposition temperature (°F):</i>	No data available

Data on fire and explosion hazards

<i>Flash point (°F):</i>	>200
<i>Flash point (°C):</i>	>93,3
<i>Flammability (°F):</i>	No data available
<i>Auto-ignition temperature (°F):</i>	No data available
<i>Explosion limits (% v/v):</i>	No data available

Solubility

<i>Solubility in water:</i>	Insoluble
<i>n-octanol/water coefficient (LogKow):</i>	No data available
<i>Solubility in fat (g/L):</i>	No data available

9.2. Other information

<i>Evaporation rate (n-butylacetate = 100):</i>	No data available
<i>Other physical and chemical parameters:</i>	No data available.
<i>Oxidizing properties:</i>	No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions, including those associated with foreseeable emergencies

None known.

10.4. Conditions to avoid

Incompatible Materials
Extremes of temperature
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

10.5. Incompatible materials

Acids
Bases
Amines

Strong oxidizing agents

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Long term effects

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Other information

Titanium dioxide has been classified by IARC as a group 2B carcinogen.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

No data available.

12.2. Persistence and degradability

Based on available data, the classification criteria are not met.

12.3. Bioaccumulative potential

Based on available data, the classification criteria are not met.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)



None of the components are listed


Specific labelling

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other informat ion:
DOT	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A(epichlorohydrin))	Transport hazard class: 9 Label: 9 Classification code: M6 	III	No	Limited quantitie s: 5 L Tunnel restrictio n code: (-) See below for additiona l informati on.
IMDG	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A(epichlorohydrin))	Transport hazard class: 9 Label: 9 Classification code: M6 	III	No	Limited quantitie s: 5 L EmS: F-A S-F See below for additiona l informati

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other informat ion:
						on.
IATA	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A(epichlorohydrin))	Transport hazard class: 9 Label: 9 Classification code: M6 	III	No	See below for additiona l informati on.

* Packing group

** Environmental hazards

Additional information

These substances when carried in single or combination packaging's containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of DOT/IMDG/IATA provided the packaging's meet the general specifications for packaging: Part 178 (DOT) / 4.1.1.1, 4.1.1.2, 4.1.1.4 - 4.1.1.8 (IMDG) / 5.0.2.4.1, 5.0.2.6.1.1, 5.0.2.8 (IATA).

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DOT / See § 172.101 Hazardous Materials Table for any information on special provisions, requirements, or warnings in connection with transport. See § 172.602, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport. IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to IMO instruments

No data available.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2. U.S. Federal regulations

TSCA (the non-confidential portion):

Bisphenol-A(epichlorohydrin) is listed
Glass, oxide, chemicals is listed
Titanium dioxide is listed

Clean Air Act:

None of the components are listed

EPCRA Section 302:

None of the components are listed

EPCRA Section 304:

None of the components are listed

EPCRA section 313:

None of the components are listed

CERCLA:

None of the components are listed

Hazardous chemical inventory

This product is subject to Tier II reporting.

reporting:

State regulations

California / Prop. 65:	None of the components are listed
Massachusetts / Right To Know Act:	Titanium dioxide is listed
New Jersey / Right To Know Act:	Titanium dioxide / Substance number: 1861
	—
New York / Right To Know Act:	Titanium dioxide is listed Titanium dioxide is regulated with a Treshold Reporting Quantity (TRQ) of: 100 pounds
	—
Pennsylvania / Right To Know Act:	Titanium dioxide is listed
	—

15.4. Restrictions for application

Restricted to professional users.

15.5. Demands for specific education

No specific requirements.

15.6. Additional information

Not applicable.

15.7. Chemical safety assessment

No

15.8. Sources

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: OTHER INFORMATION

Full text of H-phrases as mentioned in section 3

H315, Causes skin irritation.

H317, May cause an allergic skin reaction.

H319, Causes serious eye irritation.

The full text of identified uses as mentioned in section 1

None known.

Abbreviations and acronyms

ACGIH = American Conference of Governmental Industrial Hygienists

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CERCLA = Comprehensive Environmental Response Compensation and Liability Act

DOT = Department of Transportation

EINECS = European Inventory of Existing Commercial chemical Substances

EPCRA = Emergency Planning and Community Right-To-Know Act

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

HCIS = Hazardous Chemical Information System

HNOC = Hazards Not Otherwise Classified
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety and Health
OECD = Organisation for Economic Co-operation and Development
OSHA = Occupational Safety and Health Administration
PBT = Persistent, Bioaccumulative and Toxic
RCRA = Resource Conservation and Recovery Act
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SARA = Superfund Amendments and Reauthorization Act
SCL = A specific concentration limit.
STEL = Short-term exposure limits
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TSCA = The Toxic Substances Control Act
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by HCS (29 CFR 1910.1200).

The safety data sheet is validated by

SDS Coordinator

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.

Country-language: US-en