

Excelsior Epoxy Wet Set Adhesive

Version Revision Date: MSDS Number: Date of last issue: -

1.0 9/26/2016 USD-810 – Part A Date of first issue: 03/04/2016

SECTION 1. IDENTIFICATION

Product name : Excelsior USD-810 - Part A

Product Description: Urethane Wet Set ESD Adhesive

Supplier : RHC

Address : 1602 N. Union St.

Fostoria, OH 44830

Telephone : (844) 393 - 4044

Fax : (419) 436 - 2482

Emergency Telephone : CHEMTREC: 1 (800) 424-9300

Number CANUTEC: (613) 996 - 6666

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification : H315 – Skin Irrit. 2

H318 – Eye Dam. 1 H317 – Skin Sens. 1 H361 – Repr. 2

H402 – Aquatic Acute 2 H412 – Aquatic Chronic 3

See section 16 for full text of H-Phrases

GHS Label Elements

Hazard Pictograms



Signal Word : Danger

Hazard Statements : H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H361 - Suspected of damaging fertility or the unborn child.

H401 - Toxic to aquatic life.

H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements: P261 - Avoid breathing vapors, mist, or spray.

P264 - Wash hands, forearms, and other exposed areas

thoroughly after handling.

P273 - Avoid release to the environment.

P280 - Wear protective gloves, protective clothing, and eye



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protection.

P302+P352 - IF ON SKIN: Wash with plenty of 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.

Other Hazards : Exposure may aggravate those with pre-existing eye, skin or

respiratory conditions.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Classification : Mixtures

Description : Adhesive

Hazardous Components

CAS#	Chemical Name	Percentage
25068-38-6	Bisphenol A-epichlorohydrin polymer	15 - 40
102900-03-8	Oxirane, methyl-, polymer with oxirane, ether with 1,2-propanediol (2:1), polymer with 1,3-diisocyanatomethylbenzene, nonylphenol-blocked (Polyurethane Prepolymer)	15 - 40
68609-97-2	Alkyl (C12-14) glycidyl ether	7 - 13
1333-86-4	Carbon Black*	1-5
27138-31-4	Propanol, oxybis-, dibenzoate	1 - 5
84852-15-3	Phenol, 4-nonyl-, branched	0.5 – 1.5

^{*}This product contains a material that may be hazardous when present as an airborne dust. Since this product is in a liquid form, the material is not able to become airborne and cannot be inhaled. Thus, the hazards usually associated with this material are not applicable to this product.

SECTION 4. FIRST AID MEASURES

First Aid Measures

General : Never give anything by mouth to an unconscious person. If

you feel unwell, seek medical advice (show the label if

possible).

Inhalation : If inhaled, remove to fresh air and keep at rest in a position

comfortable for breathing. Obtain medical attention if

breathing difficulty persists.

Skin Contact : In case of skin contact, immediately flush skin with plenty of

water for at least 60 minutes. Remove/Take off immediately all

contaminated clothing. Get immediate medical

advice/attention.



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Eye Contact: In case of eye contact, rinse cautiously with water for several

minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a

POISON CENTER or doctor/physician.

Ingestion : Do NOT induce vomiting. Rinse mouth. Immediately call a

POISON CENTER or doctor/physician.

Most Important Symptoms and effects, Both Acute and Delayed

General : Causes serious eye damage. Suspected of damaging fertility.

Suspected of damaging the unborn child. May cause an

allergic skin reaction. Causes skin irritation.

Inhalation : May cause respiratory irritation.

Skin Contact: May cause an allergic skin reaction. Causes skin irritation.

Symptoms may include: Redness, pain, swelling, itching,

burning, dryness, and dermatitis.

Eye Contact : Causes serious eye damage. Symptoms may include:

Redness, pain, swelling, itching, burning, tearing, and blurred vision. Causes permanent damage to the cornea, iris, or

conjunctiva.

Ingestion : Not available.

Chronic Symptoms : Suspected of damaging fertility or the unborn child. May cause

an allergic skin reaction.

Indications of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical attention (show product label where possible).

SECTION 5. FIREFIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing

Media

: Water spray, fog, carbon dioxide (CO₂), alcohol-resistant

foam, dry chemical, or sand.

Unsuitable Extinguishing

Media

: Do not use heavy water stream, as this may spread fire.

Specific Hazards Arising From Substance or Mixture

Fire Hazard : Potentially violent decomposition can occur above 662° F

(350 °C).



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Explosion Hazard : Product is not explosive but if hazardous polymerization

occurs can have an oxidizing effect that could lead to fire and

possible explosion.

Reactivity Hazardous reactions may occur on contact with certain

chemicals. Refer to incompatible materials.

Advice for Firefighting

Precautionary Measures While Firefighting

: Exercise caution when fighting any chemical fire. Under fire

conditions, hazardous fumes may be present.

Specific Firefighting Instructions

Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. Do not allow run-off from firefighting to enter sewage systems or water course. Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations.

Specific Protection Equipment for Firefighters Do not enter fire area without proper protective equipment,

including respiratory protection.

Hazardous Combustion

Products

: Under fire conditions this material may produce hazardous carbon dioxide (CO2), carbon monoxide (CO), various low

molecular weight hydrocarbons, and smoke.

Other Information : Refer to Section 9 for flammability properties.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, **Protective Equipment & Emergency Procedures**

: Avoid all contact with skin, eyes or clothing. Do not breathe vapor, mist or spray. Use only outdoors or in a well-ventilated

area.

Instructions for Non-**Emergency Personnel** : Use appropriate personal protection equipment (PPE).

Evacuate unnecessary personnel.

Instructions for Emergency **Personnel**

Equip cleanup crew with proper protection. Upon arrival at the scene, a first responder is expected to recognize the presence

of dangerous goods, protect oneself and the public, secure the area and call for assistance of trained personnel as soon

as conditions permit.

Environmental Precautions Do not allow product to reach sewage systems or water

course. Inform respective authorities in case of seepage into

sewage or water course.

Methods & Materials for Containment and Cleaning Up

Contain any spills with dikes or inert absorbent material (e.g. sand, diatomite, universal binder) to prevent migration into sewage systems and water course. Do not absorb with



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combustible materials, such as saw dust or cellulosic material. Transfer spilled material to a suitable container for disposal. Clean up spills immediately and dispose of contaminated material according to section 13. Clean contaminated floors and objects thoroughly while observing environmental regulations. Inform respective authorities in case of seepage into sewage or water course. Use only non-sparking tools.

Reference to Other

Sections

See Section 8 for information on personal protection.

See section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When

Processed

: The substance will polymerize due to heating, on contact with incompatible materials, and under the influence of light. Heating may cause violent combustion or explosion producing acrid smoke. The substance may also spontaneously polymerize if it is not stabilized. Product to be handled in a closed system and under strictly controlled conditions.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures : Any proposed use of this product in elevated-temperature

processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained. Comply

with applicable regulations.

Storage Conditions : Store in a dry, cool and well-ventilated area. Keep container

closed when not in use. Keep/Store away from direct sunlight,

extremely high or low temperatures and incompatible

materials.

Incompatible Materials : Strong acids. Strong bases. Strong oxidizers.

Specific End Use(s) : No use specified.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with Workplace Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.



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Carbon black (1	1333-86-4)	
Mexico	OEL TWA (mg/m³)	3.5 mg/m ³
Mexico	OEL STEL (mg/m³)	7 mg/m ³
USA ACGIH	ACGIH TWA (mg/m³)	3 mg/m³ (inhalable fraction)
USA ACGIH	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown
		Relevance to Humans
USA OSHA	OSHA PEL (TWA) (mg/m³)	3.5 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m³)	3.5 mg/m ³
		0.1 mg/m³ (Carbon black in presence of Polycyclic
		aromatic hydrocarbons)
USA IDLH	US IDLH (mg/m³)	1750 mg/m ³
Alberta	OEL TWA (mg/m³)	3.5 mg/m³
British	OEL TWA (mg/m³)	3 mg/m³ (inhalable)
Columbia	-	
Manitoba	OEL TWA (mg/m³)	3 mg/m³ (inhalable fraction)
New Brunswick	OEL TWA (mg/m³)	3.5 mg/m³
Newfoundland	OEL TWA (mg/m³)	3 mg/m³ (inhalable fraction)
& Labrador		
Nova Scotia	OEL TWA (mg/m³)	3 mg/m³ (inhalable fraction)
Nunavut	OEL STEL (mg/m³)	7 mg/m³
Nunavut	OEL TWA (mg/m³)	3.5 mg/m³
Northwest	OEL STEL (mg/m³)	7 mg/m³
Territories		
Northwest	OEL TWA (mg/m³)	3.5 mg/m³
Territories		
Ontario	OEL TWA (mg/m³)	3 mg/m³ (inhalable)
Prince Edward	OEL TWA (mg/m³)	3 mg/m³ (inhalable fraction)
Island	\(\tag{2}\)	
Québec	VEMP (mg/m³)	3.5 mg/m³
Saskatchewan	OEL STEL (mg/m³)	7 mg/m³
Saskatchewan	OEL TWA (mg/m³)	3.5 mg/m³
Yukon	OEL STEL (mg/m³)	7 mg/m³
Yukon	OEL TWA (mg/m³)	3.5 mg/m³

Exposure Controls

Engineering Controls

: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure, but are not required. Product to be handled under strictly controlled conditions. Ensure all national/local regulations are observed. Gas detectors should be used when toxic gases may be released. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable

workplace exposure limits.

Environmental Exposure Controls

: Do not allow product to be released into the environment.

Consumer Exposure Controls

: Do not eat, drink or smoke during use.

SAFETY DATA SHEET



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Personal Protective Equipment



General: : Wear protective goggles, gloves and protective clothing. In

case of insufficient ventilation, wear respiratory protection.

Materials for Protective

Clothing

: Chemically resistant materials and fabrics.

Respiratory Protection : If exposure limits may be exceeded or irritation is

experienced, use a NIOSH-approved respirator or self-

contained breathing apparatus.

Hand Protection : Wear chemically resistant protective gloves.

Eye Protection : Chemical safety goggles and face shield.

Skin & Body Protection: Wear suitable protective clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Thick Paste

Physical State : Paste

Color : Black

Odor : No data available

Odor Threshold : No data available

pH : No data available

Evaporation Point : No data available

Melting Point / Range : No data available

Freezing Point : $32^{\circ} F (0^{\circ} C)$

Boiling Point / Range : ~425° F (218° C)

Flash Point : >200° F (93° C)

Flammability : No data available

Auto-Ignition Temperature : No data available



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Decomposition : No data available

Temperature

Specific Gravity : 1.1

Water Solubility : No data available

Partition Coefficient (Noctanol/Water)

: No data available

Viscosity : 250,000 – 400,000 CPS

Explosion Data – : Not expected to present an explosion hazard due to

Mechanical Impact mechanical impact

Explosion Data – Static

Discharge

: Not expected to present an explosion hazard due to static

discharge

VOC : < 12 g/l (<0.01 lbs/gal)

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Hazardous reactions may occur on contact with certain

chemicals. Refer to incompatible materials.

Chemical Stability : Stable under recommended handling and storage conditions

(see section 7)

Possibility of Hazardous

Reactions

: Hazardous polymerization will not occur under normal

conditions.

Conditions to Avoid : Direct sunlight. Extremely high or low temperatures. Ignition

sources. Incompatible materials.

Incompatible Materials : Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition

Products

Under fire conditions this material may produce hazardous

carbon dioxide (CO₂), carbon monoxide (CO), various low

molecular weight hydrocarbons, and smoke.

SECTION 11. TOXICOLOGICAL INFORMATION

<u>Toxicological Effects (Product)</u>

Acute Toxicity : Not available

Skin Corrosion / Irritation: Causes skin irritation.

Serious Eye Damage /

Irritation

: Causes serious eye irritation.



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Respiratory or Skin

Sensitization:

: May cause an allergic skin reaction.

Germ Cell Mutagenicity : Not classified

Teratogenicity : Not classified

Carcinogenicity : Not classified

Reproductive Toxicity : Suspected of damaging fertility or the unborn child (oral).

Aspiration Hazard : Not classified

Specific Target Organ Toxicity (Single or Repeated Exposure) : Not classified

Symptoms / Injuries After

Inhalation

: May cause respiratory irritation

Symptoms / Injuries After

Skin Contact

: Causes skin irritation. Symptoms may include: Redness, pain,

swelling, itching, burning, dryness, and dermatitis.

Symptoms / Injuries After

Skin Contact

Causes serious eye irritation. Symptoms may include:

Redness, pain, swelling, itching, burning, tearing, and blurred

vision.

Symptoms / Injuries After

Skin Contact

: Ingestion is likely to me harmful or have adverse effects.

Chronic Symptoms : Suspected of damaging fertility or the unborn child (oral).

Toxicological Effects (Ingredients)

Acute toxicity :

Carbon black (1333-86-4)		
LD50 Oral Rat	> 8000 mg/kg	
Bisphenol A-epichlorohydrin polymer (25068-38-6)		
LD50 Oral Rat	> 2000 mg/kg	
LD50 Dermal Rat	> 2000 mg/kg	
Phenol, 4-nonyl-, branched (84852-15-3)		
LD50 Oral Rat	580 mg/kg	
LD50 Dermal Rabbit	2031 mg/kg	
Carbon black (1333-86-4)		
IARC Group	2B	
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.	



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SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Ecology - General : Harmful to aquatic life with long lasting effects.

Ecotoxicity :

Carbon black (1333-86-4)		
EC50 Daphnia 1	5600 mg/l (Exposure time: 24 h - Species: Daphnia magna)	

Bisphenol A-epichlorohydrin polymer (25068-38-6)		
LOEC (acute)	1 mg/l Daphnia magna	
NOEC chronic crustacea	0.3 mg/l Daphnia magna	

Phenol, 4-nonyl-, branched (84852-15-3)		
LC50 Fish 1 0.135 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])		
EC50 Daphnia 1	EC50 Daphnia 1 0.14 mg/l (Exposure time: 48 h - Species: Daphnia magna)	
LC 50 Fish 2	0.1351 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])	

Persistence & Degradability

: Not available

Bioaccumulative Potential

Phenol, 4-nonyl-, branched (84852-15-3)	
BCF Fish 1	271

Mobility in Soil : Not available

Other Adverse Effects : None known

Other Information : Avoid release into the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Sewage Disposal : This material is hazardous to the aquatic environment. Keep out of sewers and waterways. Do not empty into drains;

dispose of this material and its container in a safe way.

dispose of the material and the comainer in a care t

Waste Disposal : Dispose of waste material in accordance with international, national, federal, state/provincial and local regulations.

Ecology – Waste Materials : Avoid release to the environment.



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SECTION 14. TRANSPORT INFORMATION

International Regulation

DOT : Not regulated as a dangerous good

IMDG-Code : Not regulated as a dangerous good

IATA-DGR : Not regulated as a dangerous good

UNRTDG : Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

US Federal Regulations

SARA 311/312	Immediate (acute) health hazard
Hazard Classes	Delayed (chronic) health hazard

Bisphenol A-epichlorohydrin polymer (25068-38-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Phenol, 4-nonyl-, branched (84852-15-3)	
Listed on the United States TSCA (Toxic Substance	ces Control Act) inventory
Listed on United States SARA Section 313	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA. S - S - indicates a substance that is identified in a proposed or final Significant New Uses Rule.
SARA Section 313 - Emission Reporting	1.0 %

Alkyl (C12-14) glycidyl ether (68609-97-2)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a	
	Section 4 test rule under TSCA.	

Propanol, oxybis-, dibenzoate (27138-31-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Quartz (14808-60-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Oxirane, methyl-, polymer with oxirane, ether with 1,2-propanediol (2:1), polymer with 1,3-diisocyanatomethylbenzene, nonylphenol-blocked (102900-03-8) (Polyurethane Prepolymer)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Carbon black (1333-86-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory



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US Federal Regulations

Carbon black (1333-86-4)

U.S. - Massachusetts - Right To Know List

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List Special Hazardous Substances
- U.S. Pennsylvania RTK (Right to Know) List

Canadian Regulation

WHMIS Classification



Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Bisphenol A-epichlorohydrin polymer (25068-38-6)
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Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Phenol, 4-nonyl-, branched (84852-15-3)

Listed on the Canadian DSL (Domestic Substances List)

Class D Division 2 Subdivision A - Very toxic material causing other toxic WHMIS Classification effects

Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Alkyl (C12-14) glycidyl ether (68609-97-2)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Propanol, oxybis-, dibenzoate (27138-31-4)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification | Uncontrolled product according to WHMIS classification criteria

Oxirane, methyl-, polymer with oxirane, ether with 1,2-propanediol (2:1), polymer with 1,3-diisocyanatomethylbenzene, nonylphenol-blocked (102900-03-8) (Polyurethane Prepolymer)

Listed on the Canadian DSL (Domestic Substances List)

Carbon black (1333-86-4)

Listed on the Canadian DSL (Domestic Substances List)

Listed on the Canadian IDL (Ingredient Disclosure List)

IDL Concentration 1 %

WHMIS Classification Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this SDS contains all of the information required by CPR.



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SECTION 16. OTHER INFORMATION

Revision Date : 9.26.2016

Other Information : This document has been prepared in accordance with the

SDS requirements of OSHA Hazard Communication Standard

29 CFR 1910.1200.

GHS Full Text Phrases

GHS Code	GHS Phrase
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H361	Suspected of damaging fertility or the unborn child
H401	Toxic to aquatic life
H402	Harmful to aquatic life

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.