



SAFETY DATA SHEET

SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: ACU-SPF:2.8 – side B

Product Composition/ Use: Polyurethane Foam side B-Component

CAS Number: Component

Manufacturer Name: Advanced Coating Systems, Inc.

Street Address: 2230 Towne Lake Pkwy, Bldg.1000 Ste.150

City: Woodstock **State:** GA **Zip Code:** 30189 **Phone:** (678)445-0040

Emergency Telephone: INFOTRAC 24hrs, (800)535-5053

SECTION 2- HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canadian Workplace Hazardous Material Information System (WHMIS)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Reproductive toxicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Emergency Overview

Hazard statements

Harmful if swallowed

Causes skin irritation

Causes serious eye damage

May cause an allergic skin reaction

May damage fertility or the unborn child

May cause damage to organs through prolonged or repeated exposure.

PICTOGRAMS



SIGNAL WORD: DANGER

Appearance: viscous **Physical state:** liquid **Odor:** slight Amine

Precautionary Statements - Prevention

Obtain special instructions before use.

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

Wash face, hands and any exposed skin thoroughly after handling.

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

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace
Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

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

Continue rinsing Immediately call a POISON CENTER or doctor/physician

IF ON SKIN: Wash with plenty of soap and water

Take off contaminated clothing and wash before reuse

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

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

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Harmful to aquatic life with long lasting effects.

Unknown acute toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

SECTION 3- COMPOSITION AND INFORMATION ON INGREDIENTS*

Substance

Not Applicable

Mixture

Chemical Name	CAS No	Weight-%
Oxirane, 2-methyl-, polymer with oxirane, ether with 2,6-bis[[bis(2-hydroxyethyl)amino]methyl]-4-bromophenol *	940912-28-7	10 - 30
Polyol blend (non-hazardous) *	Proprietary	10 - 30
2-Propanol, 1-chloro-, phosphate (3:1) *	13674-84-5	10 - 30
(E)-1-Chloro-3,3,3-trifluoroprop-1-ene *	102687-65-0	5 - 10
Diethylene glycol *	111-46-6	3 - 7
2-Butoxyethanol *	111-76-2	1 - 5
N,N-Dimethylcyclohexylamine *	98-94-2	1 - 5
Glycerin *	56-81-5	1 - 5
1H-Imidazole, 1,2-dimethyl- *	1739-84-0	0.1 - 1

*The exact percentage (concentration) of composition has been withheld as a trade secret. If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

SECTION 4- FIRST-AID MEASURES

General advice

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If symptoms persist, call a physician.

Eye contact

Keep eye wide open while rinsing. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician. Wash contaminated clothing before reuse.

Inhalation	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If symptoms persist, call a physician.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting without medical advice. Rinse mouth. Never give anything by mouth to an unconscious person.
Self-protection of the first aider	Use personal protective equipment as required.
<u>Most important symptoms and effects, both acute and delayed</u>	
Symptoms	May cause redness and tearing of the eyes. Coughing and/ or wheezing. May cause skin irritation. May cause allergic skin reaction.
<u>Indication of any immediate medical attention and special treatment needed</u>	
Note to physicians	Treat symptomatically.

SECTION 5- FIRE AND EXPLOSION HAZARDS

<u>Suitable extinguishing media</u>	
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical, CO ₂ , sand, earth, water spray or regular foam.	
Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.	
<u>Specific hazards arising from the chemical</u>	
Thermal decomposition can lead to release of irritating and toxic gases and vapors.	
Hazardous combustion products Carbon oxides. Nitrogen oxides (NO _x). Hydrocarbons. Hydrogen chloride. Hydrogen fluoride. Hydrogen cyanide.	
<u>Explosion data</u>	
Sensitivity to Mechanical Impact None.	
Sensitivity to Static Discharge None.	
<u>Protective equipment and precautions for firefighters</u>	
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.	

SECTION 6- ACCIDENTAL RELEASE MEASURES

<u>Personal precautions, protective equipment and emergency procedures</u>	
Personal precautions	Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.
<u>Environmental precautions</u>	
Environmental precautions	See Section 12 for additional ecological information.
<u>Methods and material for containment and cleaning up</u>	
Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Use personal protective equipment as required. Dam up. Cover liquid spill with sand, earth or other non-combustible absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly.

SECTION 7- HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practice. Extremely slippery when spilled.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep in properly labeled containers. Keep away from heat.

Incompatible materials Strong oxidizing agents. Strong acids. Strong bases.

SECTION 8- EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

Exposure Guidelines The American Industrial Hygiene Association’s (AIHA) Documentation of the Workplace Environmental Exposure Limits (WEELs) (latest edition).
(E)-1-Chloro-3,3,3-trifluoroprop-1-ene - 800 ppm.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH REL/IDLH
2-Butoxyethanol 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24
Glycerin 56-81-5	-	TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction	-

NIOSH REL/IDLH Recommended Exposure Limit/Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

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

Skin and body protection Wear protective gloves and protective clothing.

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.

SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties.

Physical state	liquid	Odor	Slight Amine
Appearance	viscous	Odor threshold	No information available
Color	amber		

Property	Values	Remarks - Method
pH	No information available	Not applicable
Melting point / freezing point	No information available	
Boiling point / boiling range	19 – 342 °C	
Flash point	>200 °C / 392 °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	>1	
Relative density	1.18	
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	>100 mm2/s	@ 40 °C
Dynamic viscosity	No information available	
Explosive properties	Not an explosive	
Oxidizing properties	Not applicable	
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	

SECTION 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

Elevated Temperature. Incompatible materials.

Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon oxides. Nitrogen oxides (NOx). Hydrogen cyanide. Hydrogen chloride. Hydrogen fluoride.

SECTION 11 – TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation

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

Eye contact Corrosive to the eyes and may cause severe damage including blindness.

Skin contact Irritating to skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Harmful if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2-Propanol, 1-chloro-, phosphate (3:1) 13674-84-5	= 1500 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	> 5.05 mg/L (Rat) 4 h
Diethylene glycol 111-46-6	= 12565 mg/kg (Rat)	= 11890 mg/kg (Rabbit)	> 4600 mg/m ³ (Rat) 4 h
2-Butoxyethanol 111-76-2	= 470 mg/kg (Rat)	= 99 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h = 486 ppm (Rat) 4 h
N,N-Dimethylcyclohexylamine 98-94-2	= 272 mg/kg (Rat)	-	= 1889 mg/m ³ (Rat) 2 h
Glycerin 56-81-5	= 12600 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 570 mg/m ³ (Rat) 1 h

Information on toxicological effects

Symptoms May cause an allergic skin reaction. May cause skin irritation. May cause redness and tearing of the eyes. May result in permanent damage including blindness. Coughing and/ or wheezing.

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

Sensitization May cause sensitization by skin contact.

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

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

Chemical Name	ACGIH	IARC	NTP	OSHA
2-Butoxyethanol 111-76-2	A3	Group 3	-	-

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity Product is or contains a chemical which is a known or suspected reproductive hazard.

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Chronic toxicity May cause adverse effects on the bone marrow and blood-forming system.

Target Organ Effects May cause adverse liver effects.
blood, Central nervous system, Eyes, kidney, liver, Respiratory system, Skin, Urinary Tract, Hematopoietic System.

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

Numerical measures of toxicity - Product Information

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

ATEmix (oral) 1,067.00 mg/kg

ATEmix (dermal) 6,190.00 mg/kg

ATEmix (inhalation-dust/mist) 18 mg/l

SECTION 12- ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects

Persistence and degradability

No information available.

Bioaccumulation

Chemical Name	Partition coefficient
2-Propanol, 1-chloro-, phosphate (3:1) 13674-84-5	2.59
Diethylene glycol 111-46-6	-1.98
2-Butoxyethanol 111-76-2	0.81
N,N-Dimethylcyclohexylamine 98-94-2	2.01
Glycerin 56-81-5	-1.76

Other adverse effects

No information available

SECTION 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.

SECTION 14- TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG Not regulated

SECTION 15- REGULATORY INFORMATION

International Inventories	Complies
TSCA	Complies
DSL/NDSL	Complies
EINECS/DLINC	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

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 contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
2-Butoxyethanol - 111-76-2	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

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
Diethanolamine - 111-42-2	Carcinogen
1,4-Dioxane - 123-91-1	Carcinogen
Formaldehyde - 50-00-0	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
2-Butoxyethanol 111-76-2	X	X	X
N,N-Dimethylcyclohexylamine 98-94-2	X	-	-
Glycerin 56-81-5	X	X	X
Ethylene glycol 107-21-1	X	X	X
Diethanolamine 111-42-2	X	X	X
1,4-Dioxane 123-91-1	X	X	X
Formaldehyde 50-00-0	X	X	X

U.S. EPA Label Information

EPA Pesticide Regulation Number: Not applicable.

SECTION 16- OTHER INFORMATION**NFPA****Health hazards 3****Flammability 1****Instability 0****Physical and
Chemical Properties –****HMIS****Health hazards 3*****Flammability 1****Physical hazards 0****Personal Protection X***Chronic Hazard Star Legend*** = Chronic Health Hazard*

Safety Data Sheet issued by Product Safety Department

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End of Material Safety Data Sheet