

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Mixture
Product Name / Trade Name	Closed Cell Spray Foam A-Component
CAS No.	Mixture

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

Identified Use(s)	Component for the manufacture of polyurethane polymers
Uses Advised Against	None

Details of the supplier of the safety data sheet

Company Identification	SES Foam LLC 4008 Louetta Road #538 Spring, Texas 77388 United States of America www.sesfoam.com
Telephone	(713) 239-0252

Emergency telephone number

CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887
(Collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200)	Acute Tox. 4; Eye Irrit. 2; Skin Irrit. 2; Skin Sens. 1; Resp. Sens. 1; STOT SE 3; STOT RE 2
-----------------------------	--

Label elements

Hazard Symbol



Signal Word(s)

DANGER

Hazard Statement(s)

H332: Harmful if inhaled.
H319: Causes serious eye irritation.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335: May cause respiratory irritation.
H372: Causes damage to organs through prolonged or repeated exposure.
Inhalation, respiratory system.

Precautionary Statement(s)

Prevention

P280: Wear protective gloves/protective clothing/eye protection/face protection.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P271: Use only outdoors or in a well-ventilated area.
P285: In case of inadequate ventilation wear respiratory protection.
P264: Wash (hands and exposed skin) thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P272: Contaminated work clothing should not be allowed out of the workplace.

Response

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P333+P313: If skin irritation or rash occurs: Get medical advice/attention. P363: Wash contaminated clothing before reuse.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical advice/attention.
P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P310: Immediately call a POISON CENTER/doctor.
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P342 + P311: If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P314: Get medical advice/attention if you feel unwell.

Storage

P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.

Disposal

P501: Disposal should be in accordance with local, state or national legislation.

Other hazards

None

Additional Information

None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Composition/information on ingredients	%W/W	CAS No.	Hazard Statement(s)
Polymethylene polyphenyl isocyanate (PMDI)	30 - 70	9016-87-9	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334
4,4'-Methylenediphenyl diisocyanate (MDI)	30 - 70	101-68-8	Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 1; H372

Additional Information - None

SECTION 4: FIRST AID MEASURES



Description of first aid measures



Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is labored, administer oxygen. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
Skin Contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If irritation (redness, rash, blistering) develops, get medical attention. Wash contaminated clothing before reuse.
Eye Contact	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.
Ingestion	Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
Most important symptoms and effects, both acute and delayed	May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Indication of any immediate medical attention and special treatment needed	IF SWALLOWED: Immediately call a POISON CENTER/doctor.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media	
-Suitable Extinguishing Media -Unsuitable Extinguishing Media	Extinguish with water spray, dry chemical, sand or carbon dioxide. None anticipated.
Special hazards arising from the substance or mixture	Water contamination of product will cause generation of carbon dioxide. Reacts vigorously with water at temperatures above 50 °C. Polymeric MDI decomposes rapidly above 204°C. Closed containers may rupture violently when heated. Forms: carbon monoxide, carbon dioxide, hydrogen cyanide, 4,4'-methylene dianiline, and nitrogen oxides.
Advice for fire-fighters	Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Put on protective equipment before entering danger area. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection.
Environmental precautions	Contain spillages with sand, earth or any suitable adsorbent material. Do not allow to enter drains, sewers or watercourses.
Methods and material for containment and cleaning up	Contain spillages with sand, earth or any suitable adsorbent material. Transfer to a container for disposal or recovery. Wash the spillage area with water. If possible prevent water running into sewers.
Reference to other sections Additional Information	None None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling	Wear protective gloves/protective clothing/eye protection/face protection. Wash hands and exposed skin after use. Do not breathe dust / fume / gas / mist / vapors / spray. Contaminated work clothing should not be allowed out of the workplace. Use only outdoors or in a well-ventilated area. In case of
--------------------------------------	---

inadequate ventilation wear respiratory protection.

Conditions for safe storage, including any incompatibilities

-Storage temperature: Store at room temperature. Keep container tightly closed and in a well-ventilated place.

-Incompatible materials: Water, acids, bases, amines, alcohols, organotin catalysts, amides, phenols, mercaptans, urethanes, ureas, surfactants and detergents, and metal compounds. All can react vigorously and violently with this material.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA)		(STEL)		Note:
		PEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
4,4'-Methylenediphenyl diisocyanate	101-68-8	-----	0.005 ppm	0.02 ppm, ceiling	-----	-----

- STEL: Short Term Exposure Limit

Exposure controls

Appropriate engineering controls

Aerosol or mist formation: Local exhaust ventilation is required.

Personal protection equipment

Eye/face protection

Goggles giving complete protection to eyes.



Skin protection (Hand protection/ Other)

Gloves (Butyl rubber or Neoprene). **The following to be used as necessary:** Suitable protective clothing. Check with protective equipment manufacturer's data.



Respiratory protection

Aerosol or mist formation: In case of inadequate ventilation wear respiratory protection. Check with protective equipment manufacturer's data.



Thermal hazards

Not normally required.

Environmental Exposure Controls

Do not allow to enter drains, sewers or watercourses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Viscous liquid

Color.

Dark brown

Odor

Musty, Earthy odor

Odor Threshold (ppm)

Not available.

pH (Value)

Not available.

Melting Point (°C) / Freezing Point (°C)

Not available



Boiling point/boiling range (°C):	>204 (Decomposes)
Flash Point (°C)	230 (446°F)
Evaporation Rate	Not available.
Flammability (solid, gas)	Not applicable.
Explosive Limit Ranges	Not available.
Vapour pressure (Pascal)	0.013 @40°C
Vapour Density (Air=1)	Not available
Density (g/ml)	1.25 @ 25°C (10.43 lb/gal @ 25°C)
Specific Gravity	1.25
Solubility (Water)	Insoluble
Solubility (Other)	Not available.
Partition Coefficient (n-Octanol/water)	Not available.
Auto Ignition Point (°C)	230 (446°F)
Decomposition Temperature (°C)	>300
Kinematic Viscosity (cSt)	160 +/- 40 @25°C
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Other information	Not available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable.
Possibility of hazardous reactions	Polymethylene polyphenyl isocyanate (PMDI) may undergo uncontrolled exothermic polymerization upon contact with incompatible materials or if heated above 175 - 204°C. The resulting pressure build-up could rupture closed containers. May cause some corrosion to copper alloys and aluminum.
Conditions to avoid	Incompatible materials. Avoid contact with: heat and direct sunlight. Protect from moisture.
Incompatible materials	Water, acids, bases, amines, alcohols, organotin catalysts, amides, phenols, mercaptans, urethanes, ureas, surfactants and detergents, and metal compounds. All can react vigorously and violently with this material.
Hazardous decomposition product(s)	Combustion or thermal decomposition will evolve toxic and irritant vapours; acrid smoke. . Forms: carbon monoxide, carbon dioxide, hydrogen cyanide, 4,4'-methylene dianiline, and nitrogen oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact

Information on toxicological effects

Acute toxicity (estimated / calculated)	Oral: LD50: > 2000 mg/kg (rat) Dermal: LD50: > 2000 mg/kg (rat) Inhalation: 0.3 - 0.49 mg/L
Corrosivity / Irritation	Causes skin irritation. Causes serious eye irritation.
Sensitization	May cause sensitization by skin contact. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Repeated dose toxicity	Causes damage to organs through prolonged or repeated exposure: Inhalation, Respiratory system



Mutagenicity Not to be expected.

Carcinogenicity Not to be expected.

NTP	IARC	ACGIH	OSHA
No.	No.	No.	No.

Toxicity for reproduction Not to be expected.

Other information None known.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Acute toxicity LC50(96 hour): >100 mg/l (fish)
 EC50(48 hour): >100 (Daphnia magna)
 EC50 (72 hour): >100 mg/l (algae)

Long Term Toxicity No data.

Persistence and degradability

Not readily biodegradable.

Bioaccumulative potential

The product has no potential for bioaccumulation.

Mobility in soil

The product has low mobility in soil.

Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

Additional Information None known.

SECTION 14: TRANSPORT INFORMATION

	Land transport (U.S. DOT) *	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	Not regulated for ground shipments in non-bulk (>5,000) packaging or in quantities below the Reportable Quantity	Not classified as dangerous for transport.	
Proper Shipping Name			
Transport hazard class(es)			
Packing group			
Environmental hazards			
Special precautions for user			

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

* For bulk packages: UN 3082, Environmentally hazardous substance, liquid, n.o.s. (contains 4,4'-Methylenediphenyl diisocyanate (MDI)), 9, III, RQ.

SECTION 15: REGULATORY INFORMATION

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

TSCA (Toxic Substance Control Act) - Inventory Status: All components listed or polymer exempt.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
4,4'-Methylenediphenyl diisocyanate	101-68-8	30 - 70	5000



SARA 311/312 - Hazard Categories:

Fire Sudden Release Reactivity Immediate (acute) Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
Polymethylene polyphenyl isocyanate	9016-87-9	30 - 70
4,4'-Methylenediphenyl diisocyanate	101-68-8	30 - 70

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)	TPQ (Pounds)
None	-----	-----	-----	-----

Proposition 65 (California):

Chemical Name	CAS No.	Typical %wt.	Hazards
None	-----	-----	-----

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1 - 16.

Date of preparation: May 5, 2017

Hazard Statement(s) Listed in: SECTION 3

- H315: Causes skin irritation.
- H317: May cause an allergic skin reaction.
- H319: Causes serious eye irritation.
- H332: Harmful if inhaled.
- H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335: May cause respiratory irritation.
- H372: Causes damage to organs through prolonged or repeated exposure: Inhalation, respiratory system.

Additional Information: None.

The descriptions, data, designs and information contained herein are presented in good faith and believed to be accurate. This information is provided for guidance ONLY. Many factors will affect the processing or application of SES Foam LLC products, it is necessary that you make tests to determine ultimate suitability for SES Foam LLC products for your particular application. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described, data or designs presented. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. You expressly agree to release SES Foam LLC from all liability in tort or contract based on the technical information provided. All such information is accepted at your own risk.