

SAFETY DATA SHEET

ES Kits



Section 1. Identification

GHS product identifier	: ES Kits	
Chemical name	: ES Kit – Part A	Aromatic Isocyanate
	: ES Kit – Part B	Polyether polyol blend
Other means of identification	: ES Kit – Part A	Polymethylene Polyphenylisocyanate
	: ES Kit – Part B	Not available.
Product code	: ES Kit – Part A	RU2161
	: ES Kit – Part B	UR0126

Identified uses

Splice encapsulation / potting.

Supplier's details

: Uraseal, Inc.
 1 Washington Street, Suite 2156
 Dover, NH 03820
 Tel: 1-603-749-1004 Emergency Number: 1-800-582-0773

Emergency telephone number (with hours of operation)

: Transportation emergencies only: CHEMTREC, U.S. : 1-800-424-9300
 International: +1-703-527-3887 (24/7)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

The product formed after Part A and Part B are mixed and reacted is non-hazardous.

Classification of the substance or mixture

: **ES Kit – Part A** ACUTE TOXICITY (inhalation) - Category 2
 SKIN CORROSION/IRRITATION - Category 2
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
 RESPIRATORY SENSITIZATION - Category 1
 SKIN SENSITIZATION - Category 1
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

ES Kit – Part B Not classified.

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 1.2%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.2%

GHS label elements

Hazard pictograms



Section 2. Hazards identification

Signal word	: ES Kit – Part A ES Kit – Part B	Warning No signal word.
Hazard statements	: ES Kit – Part A	Causes serious eye irritation. Causes skin irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure.
	ES Kit – Part B	No known significant effects or critical hazards.

Precautionary statements

Prevention	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P281 - Use personal protective equipment as required. P280 - Wear protective gloves. Wear eye or face protection. P284 - Wear respiratory protection. P285 - In case of inadequate ventilation wear respiratory protection. P271 - Use only outdoors or in a well-ventilated area. P260 - Do not breathe vapor. P264 - Wash hands thoroughly after handling. P272 - Contaminated work clothing should not be allowed out of the workplace.
Response	: P314 - Get medical attention if you feel unwell. P308 + P313 - IF exposed or concerned: Get medical attention. P304 + P340 + P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or physician. P302 + P352 + P362-2 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. P333 + P313 - If skin irritation or rash occurs: Get medical attention. 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 attention.
Storage	: P405 - Store locked up.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified (HNOC)	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.
<u>CAS number/other identifiers</u>	
CAS number	: Not applicable.
Product code	: Not available.

Section 3. Composition/information on ingredients

Ingredient name	%	CAS number
ES Kit – Part A		
4,4'-Methylenediphenyl diisocyanate	≥ 50.0 - < 75.0	101-68-8
Isocyanic acid, polymethylenepolyphenylene ester	≥ 25.0 - ≤ 50.0	9016-87-9
Methylenediphenyl diisocyanate	≥ 7.0 - ≤ 10.0	26447-40-5
Isocyanic Acid, polymethylenepolyphenylene ester, polymer with alpha-hydro-omega-hydroxypoly (oxy-1,2-ethanedilyl)	≥ 1.0 - ≤ 3.0	57636-09-6
Benzene, 1,1'-methylenebis[4-isocyanato-,homopolymer	≥ 1.0 - ≤ 3.0	25686-28-6
diphenylmethane-2,4'-diisocyanate	≥ 0.0 - ≤ 0.2	5873-54-1
ES Kit – Part B		
Thiabendazol	≥ 0.025 - ≤ 0.1	148-79-8

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.
- Skin contact** : Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : **ES Kit – Part A** Causes serious eye irritation.
ES Kit – Part B No known significant effects or critical hazards.
- Inhalation** : **ES Kit – Part A** Fatal if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
ES Kit – Part B No known significant effects or critical hazards.
- Skin contact** : **ES Kit – Part A** Causes skin irritation. May cause an allergic skin reaction.
ES Kit – Part B No known significant effects or critical hazards.

Section 4. First aid measures

Ingestion : **ES Kit – Part A** Irritating to mouth, throat and stomach.
ES Kit – Part B No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness

Inhalation : Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
 wheezing and breathing difficulties
 asthma

Skin contact : Adverse symptoms may include the following:
 irritation
 redness

Ingestion : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 nitrogen oxides

Special protective actions for fire-fighters : No special measures are required.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
ES Kit – Part A 4,4'-Methylenediphenyl diisocyanate	ACGIH TLV (United States, 4/2014). TWA: 0.005 ppm 8 hours. NIOSH REL (United States, 10/2013). CEIL: 0.2 mg/m ³ 10 minutes. CEIL: 0.02 ppm 10 minutes. TWA: 0.05 mg/m ³ 10 hours. TWA: 0.005 ppm 10 hours. OSHA PEL (United States, 2/2013). CEIL: 0.2 mg/m ³ CEIL: 0.02 ppm

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state	: ES Kit – Part A ES Kit – Part B	Liquid. [Barely translucent.] Liquid. [Translucent.]
Color	: ES Kit – Part A ES Kit – Part B	Amber.[Dark] Black. [Purplish]
Odor	: ES Kit – Part A ES Kit – Part B	Faint, Musty. Castor Oil / sweetish.
Odor threshold	: Not available.	
pH	: Not available.	
Melting point	: ES Kit – Part A ES Kit – Part B	<0°C (<32°F) Not available.
Boiling point	: ES Kit – Part A ES Kit – Part B	200°C (392°F) Not available.
Flash point	: ES Kit – Part A ES Kit – Part B	Open cup: 199°C (390.2°F) [Cleveland.] Open cup: >300°C (>572°F) [Cleveland.]
Evaporation rate	: ES Kit – Part A ES Kit – Part B	Not available. >1 (Water = 1)
Flammability (solid, gas)	: Not available.	
Lower and upper explosive (flammable) limits	: Not available.	
Vapor pressure	: Not available.	
Vapor density	: Not available.	
Relative density	: ES Kit – Part A ES Kit – Part B	1.22 1
Solubility	: ES Kit – Part A ES Kit – Part B	Reacts with water. Slightly soluble in water.
Partition coefficient: n-octanol/water	: Not available.	
Auto-ignition temperature	: Not available.	
Decomposition temperature	: Not available. :	
Viscosity	: ES Kit – Part A ES Kit – Part B :	Dynamic: 25 mPa·s (25 cP) Dynamic: 500 to 800 mPa·s (500 to 800 cP)
Volatility	: Not available. :	
VOC (w/w)	: 34 % (w/w)	

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials.

Section 10. Stability and reactivity

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ES Kit – Part A 4,4'-Methylenediphenyl diisocyanate Isocyanic acid, polymethylenepolyphenylene ester	LD50 Oral	Rat	9200 mg/kg	-
	LC50 Inhalation Vapor	Rat	490 mg/m ³	4 hours
	LD50 Dermal	Rabbit	>9400 mg/kg	-
ES Kit – Part B Thiabendazol	LD50 Oral	Rat	49 g/kg	-
	LD50 Oral	Rat	2080 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ES Kit – Part A 4,4'-Methylenediphenyl diisocyanate Isocyanic acid, polymethylenepolyphenylene ester	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Eyes - Mild irritant	Rabbit	-	100 mg	-

Sensitization

There is no data available.

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP	ACGIH	EPA	NIOSH
ES Kit – Part A 4,4'-Methylenediphenyl diisocyanate Isocyanic acid, polymethylenepolyphenylene ester	-	-	-	-	-	-
	-	-	-	-	-	-
ES Kit – Part B Silicon dioxide	-	-	-	-	-	-

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
ES Kit – Part A 4,4'-Methylenediphenyl diisocyanate Isocyanic acid, polymethylenepolyphenylene ester Methylenediphenyl diisocyanate	Category 3	Not applicable.	Respiratory tract irritation
	Category 3	Not applicable.	Respiratory tract irritation
	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
ES Kit – Part A 4,4'-Methylenediphenyl diisocyanate Isocyanic acid, polymethylenepolyphenylene ester Methylenediphenyl diisocyanate	Category 2	Not determined	Not determined
	Category 2	Not determined	respiratory system
	Category 2	Not determined	Not determined

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Section 11. Toxicological information

Potential acute health effects

Eye contact	: ES Kit – Part A ES Kit – Part B	Causes serious eye irritation. No known significant effects or critical hazards.
Inhalation	: ES Kit – Part A	Fatal if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	ES Kit – Part B	No known significant effects or critical hazards.
Skin contact	: ES Kit – Part A ES Kit – Part B	Causes skin irritation. May cause an allergic skin reaction. No known significant effects or critical hazards.
Ingestion	: ES Kit – Part A ES Kit – Part B	Irritating to mouth, throat and stomach. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing wheezing and breathing difficulties asthma
Skin contact	: Adverse symptoms may include the following: irritation redness
Ingestion	: No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	: No known significant effects or critical hazards.
Potential delayed effects	: No known significant effects or critical hazards.

Long term exposure

Potential immediate effects	: No known significant effects or critical hazards.
Potential delayed effects	: No known significant effects or critical hazards.

Potential chronic health effects

General	: May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	: No carcinogenic substances as defined by IARC / NTP or OSHA
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Numerical measures of toxicity

Section 11. Toxicological information

Acute toxicity estimates

Route	ATE value
ES Kit – Part A Inhalation (vapors) Inhalation (dusts and mists)	1.443 mg/L 2.463 mg/L

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
ES Kit – Part A 4,4'-Methylenediphenyl diisocyanate	Acute IC50 1.5 mg/L	Algae	72 hours
ES Kit – Part B Thiabendazol	Acute EC50 0.31 ppm Fresh water Acute LC50 0.56 ppm Fresh water	Daphnia - Daphnia magna Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	48 hours 96 hours
	Chronic NOEC 0.042 ppm Marine water Chronic NOEC 0.11 ppm	Daphnia - Daphnia magna Fish - Pimephales promelas	21 days 33 days

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
ES Kit – Part A 4,4'-Methylenediphenyl diisocyanate	4.51	200	low
Methylenediphenyl diisocyanate	4.51	200	low
ES Kit – Part B Thiabendazol	2.47	-	low

Mobility in soil

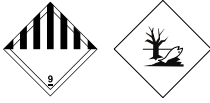


Soil/water partition coefficient (K_{oc}) : There is no data available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT	IMDG	IATA
UN number	UN3316	UN3316	UN3316
UN proper shipping name	CHEMICAL KITS. Marine pollutant (Isocyanic acid, polymethylenepolyphenylene ester) RQ (4,4'-Methylenediphenyl diisocyanate)	CHEMICAL KITS	CHEMICAL KITS
Transport hazard class(es)	9 	9 	9 
Packing group	III	III	III
Environmental hazards	No.	No.	No.
Additional information	<p>The marine pollutant mark is not required when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes.</p> <p>Reportable quantity 9999.4 lbs / 4539.7 kg Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p> <p>Remarks Limited Quantity Exemption</p>	<p>Emergency schedules (EmS) F-A, S-P</p> <p>Remarks Limited Quantity Exemption</p>	<p>The environmentally hazardous substance mark may appear if required by other transportation regulations.</p> <p>Remarks Limited Quantity Exemption</p>

AERG : 171

DOT-RQ Details : **ES Kit – Part A**
4,4'-Methylenediphenyl diisocyanate 5000 lbs / 2270 kg

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR:** 4,4'-Methylenediphenyl diisocyanate; Methylenediphenyl diisocyanate; Siloxanes and Silicones, di-Me, reaction products with silica
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
TSCA 8(c) calls for record of SAR: 4,4'-Methylenediphenyl diisocyanate; Isocyanic acid, polymethylenepolyphenylene ester; Methylenediphenyl diisocyanate
United States inventory (TSCA 8b): Not determined.
Clean Water Act (CWA) 307: 4,4'-Methylenediphenyl diisocyanate; Zinc neodecanoate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Section 15. Regulatory information

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
ES Kit – Part A						
4,4'-Methylenediphenyl diisocyanate	30 - 60	No.	No.	No.	Yes.	Yes.
Isocyanic acid, polymethylenepolyphenylene ester	30 - 60	No.	No.	No.	Yes.	Yes.
Methylenediphenyl diisocyanate	5 - 10	No.	No.	No.	Yes.	Yes.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	ES Kit – Part A		
	4,4'-Methylenediphenyl diisocyanate	101-68-8	30 - 60
	Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	30 - 60
Supplier notification	ES Kit – Part A		
	4,4'-Methylenediphenyl diisocyanate	101-68-8	30 - 60
	Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	30 - 60

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: 4,4'-Methylenediphenyl diisocyanate
- New York** : The following components are listed: 4,4'-Methylenediphenyl diisocyanate
- New Jersey** : The following components are listed: 4,4'-Methylenediphenyl diisocyanate; Isocyanic acid, polymethylenepolyphenylene ester; Methylenediphenyl diisocyanate
- Pennsylvania** : The following components are listed: 4,4'-Methylenediphenyl diisocyanate

California Prop. 65

No products were found.

Section 16. Other information

History

Date of issue mm/dd/yyyy : 06/11/2018

Version : 3

Prepared by : Uraseal, Inc.

Key to abbreviations

: ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

Notice to reader

The information and recommendations contained herein are based upon data believed to be correct. However, since much of the information has been received from sources outside our company, we cannot guarantee its accuracy or completeness. Health and safety precautions contained within this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this data in order to comply with all applicable laws and regulations. Additionally, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.