

Safety Data Sheet



1. Product and Company Identification

Product Name: **UP-9 Black Part A**
Material Uses: High Performance Urethane Potting & Molding System
(M)SDS#: UP9BlackA-20250117
Validation Date: January 17, 2025
Supplier/Manufacturer: Specialty Polymers & Services, Inc. (SP&S, Inc.)
27822 Fremont Court
Valencia, California (CA) 91355, U.S.A.
Non-emergency phone number: (661) 294-1790 (7AM – 5PM PST)
E-mail: msds@spolymers.com

In case of emergency: Chemtrec (800) 424-9300 or (703) 527-3887

2. Hazards Identification

GHS CLASSIFICATION OF SUBSTANCE OR MIXTURE:

Skin corrosion/irritation:	Category 2, H315	Eye damage/irritation:	Category 2A, H319
Skin sensitization:	Category 1, H317	Acute Toxicity (Inhalation)	Category 3, H331
Reproductive Toxicity:	Category 2, H361	Carcinogenicity:	Category 2, H351
Respiratory sensitization:	Category 1, H334		

GHS LABEL ELEMENTS:

HAZARD SYMBOLS:



SIGNAL WORDS: Danger!

HAZARD STATEMENTS:

H315 Causes skin irritation.	H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.	H331 Toxic if inhaled.
H361 Suspected of damaging fertility or the unborn child.	H351 Suspected of causing cancer.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.	

PRECAUTIONARY STATEMENTS:

PREVENTION: P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash face, hands and any exposed skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves, clothing, and eye/face protection.
P285 In case of inadequate ventilation wear respiratory protection.

RESPONSE: P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.

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

DISPOSAL: P501 Dispose of contents and containers in accordance with local, regional and international regulations.

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS) – Annex III

See toxicological information (section 11)

General Information: Read entire MSDS for a more thorough evaluation of the hazards

3. Composition / Information on Ingredients

Name	CAS Number	%
Toluene diisocyanate	584-84-9	>= 17 - < 18
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	>= 0.1 - < 1
2-Methyl-m-phenylene diisocyanate	91-08-7	>= 0.1 - < 1

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

4. First Aid Measures

General Advice	Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.
Eye Contact:	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
Skin Contact:	If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
Inhalation:	Call a physician or poison control center immediately. If unconscious, place in recovery position and seek medical advice.
Ingestion:	Induce vomiting immediately and call a physician. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
Note to physician:	No specific treatment. Treat symptomatically. Call poison control center if large quantities were ingested. 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.

5. Fire-Fighting Measures

Unsuitable extinguishing media	High volume water jet
Specific hazards during firefighting	Do not allow run-off from fire fighting to enter drains or water courses.
Further information	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	Special protective equipment for firefighters

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental precautions	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

7. Handling and Storage

Advice on safe handling Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage Store under conditions specified on the product Technical Data Sheet to maintain product quality. Prevent unauthorized access. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

8. Exposure Controls / Personal Protection

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Toluene diisocyanate	584-84-9	TWA	0.005 ppm	ACGIH
		STEL	0.02 ppm	ACGIH
		C	0.02 ppm 0.14 mg/m3	OSHA Z-1
		TWA	0.005 ppm 0.04 mg/m3	OSHA P0
		STEL	0.02 ppm 0.15 mg/m3	OSHA P0
2-Methyl-m-phenylene diisocyanate	91-08-7	TWA	0.005 ppm	ACGIH
		STEL	0.02 ppm	ACGIH
		C	0.02 ppm 0.14 mg/m3	OSHA Z-1
		TWA	0.005 ppm 0.04 mg/m3	OSHA P0
		STEL	0.02 ppm 0.15 mg/m3	OSHA P0

Engineering measures Use with adequate ventilation. All application areas should be ventilated in accordance with applicable OSHA regulations. (29 CFR 1910.94) Isocyanates may be released during the curing process. Repeated overexposure to isocyanates can cause respiratory tract sensitization.

Personal protective equipment

Respiratory protection In the case of vapour formation use a respirator with an approved filter.

Hand protection The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Remarks

Eye protection Eye wash bottle with pure water. Tightly fitting safety goggles. Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures Avoid contact with skin, eyes and clothing. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance:	Black liquid	Odor	Slight
Boiling Point:	Not determined	Freezing Point:	Not determined
Flash Point:	>94°C (201°F)	pH:	Not determined

Auto-ignition Temperature: Not determined
Vapor Pressure: Not determined
Density: 0.97 g/cm³ (77 °F (25 °C))
Evaporation Rate: <1 (butyl acetate =1)
Viscosity, kinematic: > 22 mm²/s (104 °F (40 °C))

Flammable Limits: Not determined
Water Solubility: Reacts with water
Vapor Density: Not determined
VOC: Not determined

10. Stability and Reactivity

Reactivity No decomposition if stored and applied as directed.
Chemical stability No decomposition if stored and applied as directed.
Possibility of hazardous reactions No decomposition if stored and applied as directed.
Conditions to avoid No data available
Hazardous decomposition products Carbon monoxide in a fire. Nitrogen oxides in a fire. Isocyanates

11. Toxicological Information

Information on likely routes of exposure

Acute Toxicity

Product:

Acute inhalation toxicity Acute toxicity estimate : 2.84 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Components:

584-84-9 Toluene diisocyanate:

Acute oral toxicity LD50 (Rat): 5,800 mg/kg
LD50 (Rat, male): 5,110 mg/kg
Method: OECD Test Guideline 401
Acute inhalation toxicity LC50 (Rat): 14 ppm
Acute dermal toxicity LD50 (Rabbit): > 9,400 mg/kg
LD50 (Rabbit, male and female): > 9,400 mg/kg
Method: OECD Test Guideline 402

91-08-7 2-Methyl-m-phenylene diisocyanate:

Acute oral toxicity LD50 (Rat): 5,800 mg/kg
Acute inhalation toxicity LC50 : Remarks: No data available
Acute dermal toxicity LD50 : Remarks: No data available

Skin corrosion/irritation

Product:

Remarks: May cause skin irritation and/or dermatitis.

Components:

584-84-9 Toluene diisocyanate:

Species: Rabbit
Result: Moderate skin irritation

119-47-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol:

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

91-08-7 2-Methyl-m-phenylene diisocyanate:

Species: Rabbit
Result: Moderate skin irritation

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

Components:

584-84-9 Toluene diisocyanate:

Species: Rabbit
Result: Eye irritation

119-47-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol:

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

GLP: yes

91-08-7 2-Methyl-m-phenylene diisocyanate:

Species: Rabbit

Result: Eye irritation

Respiratory or skin sensitisation

Product:

Remarks: Causes sensitisation.

Components:

119-47-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol:

Test Type: Mouse Local Lymph Node assay (LLNA)

Exposure routes: Dermal

Species: Mouse

Method: OECD Test Guideline 429

Result: Does not cause skin sensitisation.

GLP: yes

Carcinogenicity

IARC

Group 2B: Possibly carcinogenic to humans

Toluene diisocyanate 584-84-9

2-Methyl-m-phenylene diisocyanate 91-08-7

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

Reasonably anticipated to be a human carcinogen

Toluene diisocyanate 584-84-9

2-Methyl-m-phenylene diisocyanate 91-08-7

Further information

Product:

Remarks: No data available

12. Ecological Information

Ecotoxicity

Components:

584-84-9 Toluene diisocyanate:

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): 133 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and EC50 (Daphnia magna (Water flea)): 12.5 mg/l

other aquatic

Exposure time: 48 h

invertebrates

Method: OECD Test Guideline 202

Toxicity to algae

ErC50 (Chlorella vulgaris (Fresh water algae)): 4,300 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 201

Toxicity to daphnia and NOEC (Daphnia magna (Water flea)): 1.1 mg/l

other

Exposure time: 21 d

aquatic invertebrates

End point: Reproduction

(Chronic toxicity)

Method: OECD Test Guideline 211

GLP: yes

119-47-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol:

Toxicity to fish LC50 (Oryzias latipes (Orange-red killifish)): > 5 mg/l

Exposure time: 96 h

Test Type: semi-static test

Method: OECD Test Guideline 203

GLP: yes

Toxicity to daphnia and EC50 (Daphnia magna (Water flea)): > 4.8 mg/l

other aquatic

Exposure time: 48 h

invertebrates

Test Type: static test

Method: OECD Test Guideline 202

GLP: yes

Toxicity to algae	ErC50 (Selenastrum capricornutum (green algae)): > 5 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes NOEC (Selenastrum capricornutum (green algae)): 1.3 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	NOEC (Daphnia magna (Water flea)): 0.34 mg/l Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211 GLP: yes

Persistence and degradability

Components:

584-84-9 Toluene diisocyanate:

Biodegradability	Result: Not biodegradable
119-47-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol:	
Biodegradability	aerobic Result: Not readily biodegradable. Method: OECD Test Guideline 301C GLP: yes
Bioaccumulative potential	No data available
Mobility in soil	No data available
Other adverse effects	No data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	No data available

13. Disposal Consideration

Disposal methods	
EPA Hazardous Waste Code(s)	none
Waste from residues	Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

14. Transport Information

International Regulations

IATA-DGR

UN/ID No.	UN 2206
Proper shipping name	Isocyanates, toxic, n.o.s. (Toluene diisocyanate)
Class	6.2
Packing group	II
Labels	Toxic
Packing instruction (cargo aircraft)	662
Packing instruction (passenger aircraft)	654

IMDG-Code

UN number	UN 2206
Proper shipping name	ISOCYANATES, TOXIC, N.O.S. (TOLUENE DIISOCYANATE)
Class	6.1
Packing Group	II
Labels	6.1
EmS Code	F-A, S-A
Marine pollutant	no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

49 CFR

UN/ID/NA number	UN 2206
Proper shipping name	Isocyanates, toxic, n.o.s. (Toluene diisocyanate)
Class	6.1
Packing Group	II
Labels	Toxic
Marine pollutant	no

15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Components	CAS #	Component RQ (lbs)	Calculated Product RQ (lbs)
Toluene Diisocyanate	584-84-9	100	567

SARA 304 - Emergency Release Notification

Components	CAS #	Component RQ (lbs)	Calculated Product RQ (lbs)
Toluene Diisocyanate	584-84-9	100	567

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III

Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

Components	CAS #	Component RQ (lbs)	Calculated Product RQ (lbs)
Toluene Diisocyanate	584-84-9	100	567

SARA Title III: Section 311/312 - Hazard Communication Standard (HCS): Per the June 13, 2016 Federal Register notice, EPA harmonized the EPCRA 311/312 hazard categories with the 2012 OSHA hazard communication standard for classifying and labeling of chemicals (i.e. GHS). Please refer to Section 2 of the SDS to identify the appropriate hazard categories for reporting purposes.

SARA Title III: Section 302: The following components are subject to reporting levels established by SARA Title III, Section 302:

Toluene diisocyanate	584-84-9	17.6 %
2-Methyl-m-phenylene diisocyanate	91-08-7	0.7 %

SARA Title III: Section 313 Toxic Chemical List (TCL): This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Toluene diisocyanate	584-84-9	17.6 %
2-Methyl-m-phenylene diisocyanate	91-08-7	0.7 %

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Toluene diisocyanate	584-84-9	17.6 %
----------------------	----------	--------

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

Toluene diisocyanate	584-84-9	17.6 %
----------------------	----------	--------

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

Toluene diisocyanate	584-84-9	17.6 %
----------------------	----------	--------

Non-volatile (Wt) : Refer to the product technical data sheet for VOC information.

US State Regulations

Massachusetts Right To Know

Toluene diisocyanate	584-84-9
2-Methyl-m-phenylene diisocyanate	91-08-7

Pennsylvania Right To Know

TDI/PBD Polymer	68951-56-4
-----------------	------------

Toluene diisocyanate	584-84-9
2-Methyl-m-phenylene diisocyanate	91-08-7
Benzoyl Chloride	98-88-4

New Jersey Right To Know

TDI/PBD Polymer	68951-56-4
Toluene diisocyanate	584-84-9
2-Methyl-m-phenylene diisocyanate	91-08-7

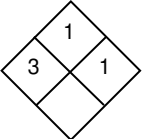
New Jersey Trade Secret Registry Number for the product (NJ TSRN): Not Applicable

California Prop 65: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA We certify that all of the components of this product are either listed on the TSCA Inventory or are not subject to the notification requirements per 40 CFR 720 30(h).
 Section 4 / 12(b) Not applicable
 Section 5 Not applicable
 DSL We certify that all of the components of this product are listed on the DSL.

16. OTHER INFORMATION

Hazardous Material Information System (HMIS) - USA		National Fire Protection Association (USA):	
Health	3		
Flammability	1		
Physical Hazards	1		
Personal Protection	X*		

*suggested minimum personal protection equipment. End user must determine appropriateness of these suggestions for their applications and usage conditions.

Reason Issued: update
Prepared By: Preston White
Approved By: Chris Meyer Title: Vice President

NOTICE TO READER: While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF PRODUCTS FOR THE USER'S PARTICULAR PURPOSE(S).

THIS PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.