



# SAFETY DATA SHEET

## Quik-Shield A

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Printed: 04/29/2015  
Revision: 04/28/2015  
Supersedes Revision: 02/03/2014

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Code:** QS A  
**Product Name:** Quik-Shield A  
**Company Name:** SWD URETHANE  
539 S. Drew St.  
Mesa, AZ 85210,  
**Web site address:** www.swdurethane.com  
**Emergency Contact:** CHEMTREC  
(800) 424-9300

### 2. HAZARDS IDENTIFICATION

**Acute Toxicity: Oral, Category 5**  
**Skin Corrosion/Irritation, Category 2**  
**Skin Sensitization, Category 1**  
**Serious Eye Damage/Eye Irritation, Category 2B**  
**Acute Toxicity: Inhalation, Category 4**  
**Respiratory Sensitization, Category 1**  
**Carcinogenicity, Category 2**  
**Aquatic Toxicity (Acute), Category 2**



**GHS Signal Word:** Danger

**GHS Hazard Phrases:** H303 - May be harmful if swallowed.  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H320 - Causes eye irritation.  
H332 - Harmful if inhaled.  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H351 - Suspected of causing cancer .  
H401 - Toxic to aquatic life.

**GHS Precaution Phrases:** P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
P264 - Wash hands 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.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P284 - Wear respiratory protection .  
P285 - In case of inadequate ventilation wear respiratory protection.

**GHS Response Phrases:** P302+352 - IF ON SKIN: Wash with plenty of soap and water.  
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P341 - If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.  
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+313 - IF exposed or concerned: Get medical attention/advice.  
P332+313 - If skin irritation occurs, get medical advice/attention.





## 6. ACCIDENTAL RELEASE MEASURES

**Steps To Be Taken In Case Material Is Released Or Spilled:**

Personal precautions.  
Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.  
Environmental precautions.  
Do not let product enter drains.

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

**Precautions To Be Taken in Handling:** Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

**Precautions To Be Taken in Storing:** Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: 15 - 38 deg.C. Store under inert gas. Moisture sensitive.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
101-68-8	Methylenebis(phenylisocyanate) {MBI; Methylene diphenyl diisocyanate; MDI; Diphenylmethane-4,4'-diisocyanate}	CEIL: 0.02 ppm	TLV: 0.005 ppm	No data.
NA	MDI, mixed isomers	No data.	No data.	No data.

**Respiratory Equipment (Specify Type):** Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Eye Protection:** Face shield and safety glasses.

**Protective Gloves:** Handle with gloves.

**Other Protective Clothing:** Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Engineering Controls (Ventilation etc.):** No data available.

**Work/Hygienic/Maintenance Practices:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical States:</b>	[ ] Gas [ X ] Liquid [ ] Solid
<b>Appearance and Odor:</b>	Slightly. Musty.
<b>Melting Point:</b>	42.00 C - 45.00 C
<b>Boiling Point:</b>	200.00 C
<b>Autoignition Pt:</b>	NA
<b>Flash Pt:</b>	> 150.00 C Method Used: Closed Cup
<b>Explosive Limits:</b>	LEL: No data. UEL: No data.
<b>Specific Gravity (Water = 1):</b>	No data.
<b>Density:</b>	1.18 G/CM3
<b>Vapor Pressure (vs. Air or mm Hg):</b>	No data.
<b>Vapor Density (vs. Air = 1):</b>	No data.
<b>Evaporation Rate:</b>	No data.
<b>Solubility in Water:</b>	No data.
<b>Percent Volatile:</b>	No data.

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Unstable [ ] Stable [ X ]
<b>Conditions To Avoid - Instability:</b>	Contact with moisture, other materials that react with isocyanates, or temperatures above 350 °F (177 °C), may cause polymerization.
<b>Incompatibility - Materials To Avoid:</b>	Water. Amines, Strong bases, Alcohols.
<b>Hazardous Decomposition or Byproducts:</b>	formed under fire conditions. Carbon oxides, nitrogen oxides (NOx).
<b>Possibility of Hazardous Reactions:</b>	Will occur [ ] Will not occur [ X ]
<b>Conditions To Avoid - Hazardous Reactions:</b>	No data available.

## 11. TOXICOLOGICAL INFORMATION

<b>Toxicological Information:</b>	No data available.
<b>Irritation or Corrosion:</b>	Serious eye damage/eye irritation: Eyes - rabbit - Moderate eye irritation.
<b>Carcinogenicity/Other Information:</b>	Carcinogenicity. This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.  Limited evidence of carcinogenicity in animal studies. IARC: Group 3: Not classifiable as to its carcinogenicity to humans 3. 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. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. 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.



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CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
101-68-8	Methylenebis(phenylisocyanate) {MBI; Methylene diphenyl diisocyanate; MDI; Diphenylmethane-4,4'-diisocyanate}	n.a.	3	n.a.	n.a.
NA	MDI, mixed isomers	n.a.	3	n.a.	n.a.

### 12. ECOLOGICAL INFORMATION

<b>Persistence and Degradability:</b>	No data available.
<b>Bioaccumulative Potential:</b>	No data available.
<b>Mobility in Soil:</b>	No data available.

### 13. DISPOSAL CONSIDERATIONS

<b>Waste Disposal Method:</b>	<p>Product.</p> <p>Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.</p> <p>Contaminated packaging. Dispose of as unused product.</p>
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### 14. TRANSPORT INFORMATION

<b>GHS Classification:</b>	<p>Acute Toxicity: Oral, Category 5 - Warning! May be harmful if swallowed</p> <p>Skin Corrosion/Irritation, Category 2 - Warning! Causes skin irritation</p> <p>Skin Sensitization, Category 1 - Warning! May cause an allergic skin reaction</p> <p>Serious Eye Damage/Eye Irritation, Category 2B - Warning! Causes eye irritation</p> <p>Acute Toxicity: Inhalation, Category 4 - Warning! Harmful if inhaled</p> <p>Respiratory Sensitization, Category 1 - Danger! May cause allergy or asthma symptoms or breathing difficulties if inhaled</p> <p>Carcinogenicity, Category 2 - Warning! Suspected of causing cancer</p> <p>Aquatic Toxicity (Acute), Category 2 - Toxic to aquatic life</p>
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**LAND TRANSPORT (US DOT):**

**DOT Proper Shipping Name:** Other regulated substances, Liquid, N.O.S. (Methylene Diphenyl Diisocyanate)  
**DOT Hazard Class:** 9 CLASS 9  
**UN/NA Number:** NA3082 **Packing Group:** III



**LAND TRANSPORT (Canadian TDG):**

**TDG Shipping Name:** Not Regulated. **Packing Group:** III  
**UN Number:** 3082 **TDG Classification:** III  
**Hazard Class:** 9 - CLASS 9

**MARINE TRANSPORT (IMDG/IMO):**

**IMDG/IMO Shipping Name:** Not Regulated.



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**AIR TRANSPORT (ICAO/IATA):**

**ICAO/IATA Shipping Name:** Not Regulated.

### 15. REGULATORY INFORMATION

**EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists**

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
101-68-8	Methylenebis(phenylisocyanate) {MBI; Methylene diphenyl diisocyanate; MDI; Diphenylmethane-4,4'-diisocyanate}	No	Yes 5000 LB	Yes-Cat. N120
NA	MDI, mixed isomers	No	No	Yes-Cat. N120

**CAS # Hazardous Components (Chemical Name)**

**Other US EPA or State Lists**

101-68-8	Methylenebis(phenylisocyanate) {MBI; Methylene diphenyl diisocyanate; MDI; Diphenylmethane-4,4'-diisocyanate}	CAA HAP,ODC: HAP; CWA NPDES: No; TSCA: Yes - Inventory, 8C; CA PROP.65: No; CA TAC, Title 8: TAC, Title 8; MA Oil/HazMat: No; MI CMR, Part 5: Part 5; NC TAP: Yes; NJ EHS: Yes - 1253; NY Part 597: Yes; PA HSL: Yes - E; SC TAP: Yes; WI Air: Yes
NA	MDI, mixed isomers	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory, 8C, 8D TERM; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No

**CAS # Hazardous Components (Chemical Name)**

**International Regulatory Lists**

101-68-8	Methylenebis(phenylisocyanate) {MBI; Methylene diphenyl diisocyanate; MDI; Diphenylmethane-4,4'-diisocyanate}	Canadian DSL: Yes; Canadian NDSL: No
NA	MDI, mixed isomers	Canadian DSL: Yes; Canadian NDSL: No

**Regulatory Information:** This product contains chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR part 372.

CAS# 101-68-8, Methylene diphenyl diisocyanate, MDI: 30 - 60%  
 CAS# n/a, MDI, mixed isomers: 30 - 60%

### 16. OTHER INFORMATION

**Revision Date:** 04/28/2015

**Additional Information About This Product:** No data available.

**Company Policy or Disclaimer:** While the information and recommendations in this publication are given to the best of our knowledge, and information at the date of publication, nothing herein is to be construed as a warranty, expressed or otherwise. In all cases, it is the responsibility of the user to determine the applicability of such information, and recommendations or the suitability of any product for its own particular purpose.

The product may present hazards and should be used with caution. While certain hazards are described in this Safety Data Sheet, no guarantee is made that these are the only hazards that exist. Hazards, toxicity and behavior of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behavior should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED SWD EMPLOYEE



# SAFETY DATA SHEET

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SHALL PROVIDE, OR MAKE AVAILABLE, DATA SHEETS FOR SWD PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF SWD. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET OR QUESTIONS REGARDING THIS DATA SHEET SHOULD BE DIRECTED TO SWD AT 800-828-1394.



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### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Code:** QS 112 B  
**Product Name:** Quik-Shield 112 B  
**Company Name:** SWD URETHANE  
539 S. Drew St.  
Mesa, AZ 85210,  
**Web site address:** www.swdurethane.com  
**Emergency Contact:** CHEMTREC  
(800) 424-9300

### 2. HAZARDS IDENTIFICATION

**Acute Toxicity: Oral, Category 4**  
**Acute Toxicity: Skin, Category 5**  
**Skin Corrosion/Irritation, Category 3**  
**Serious Eye Damage/Eye Irritation, Category 2B**  
**Aquatic Toxicity (Acute), Category 3**



**GHS Signal Word:** **Warning**

**GHS Hazard Phrases:** H302 - Harmful if swallowed.  
H313 - May be harmful in contact with skin.  
H316 - Causes mild skin irritation.  
H320 - Causes eye irritation.  
H402 - Harmful to aquatic life.

**GHS Precaution Phrases:** P264 - Wash hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P273 - Avoid release to the environment.

**GHS Response Phrases:** No phrases apply.

**GHS Storage and Disposal Phrases:** No phrases apply.

**Potential Health Effects (Acute and Chronic):**

**Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation. May cause narcotic effects in high concentration. Eye irritation, vertigo, and nausea were reported in humans exposed at 2200 ppm.

**Skin Contact:** May be harmful if absorbed through the skin. Causes skin irritation. Causes moderate skin irritation. May cause dermatitis.

**Eye Contact:** Causes eye irritation.

**Ingestion:** Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression.





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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
460-73-1	1,1,1,3,3-Pentafluoropropane {HFC-245fa}	7.0 -13.0 %
NA	Halogenated Phosphate	7.0 -13.0 %
156-60-5	Trans-1,2-Dichloroethylene {1,2-trans-Dichloroethylene; Ethene, 1,2-dichloro-, (E)-}	1.0 -3.0 %

### 4. FIRST AID MEASURES

**Emergency and First Aid**

**Procedures:**

**In Case of Inhalation:** If breathed in, move person into fresh air. If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical aid.

**In Case of Skin Contact:** Wash off with soap and plenty of water. Consult a physician. In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

**In Case of Eye Contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

**In Case of Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. Get medical aid.

**Signs and Symptoms Of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Note to Physician:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. Treat symptomatically and supportively.

### 5. FIRE FIGHTING MEASURES

**Flash Pt:** No data.

**Explosive Limits:** LEL: No data. UEL: No data.

**Autoignition Pt:** No data.

**Suitable Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.

**Fire Fighting Instructions:** Wear self contained breathing apparatus for fire fighting if necessary. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form explosive mixtures with air. Use water spray to keep fire-exposed containers cool. Flammable liquid and vapor. Fire or excessive heat may result in violent rupture of the container due to bulk polymerization. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

**Flammable Properties and Hazards:** No data available.



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### 6. ACCIDENTAL RELEASE MEASURES

**Steps To Be Taken In Case Material Is Released Or Spilled:**

Personal precautions.  
 Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.  
 Environmental precautions.  
 Do not let product enter drains.

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool.

### 7. HANDLING AND STORAGE

**Precautions To Be Taken in Handling:** Avoid inhalation of vapor or mist.  
 Normal measures for preventive fire protection. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Pure vapor will be uninhibited and may polymerize in vents or other confined spaces.

**Precautions To Be Taken in Storing:** Keep container tightly closed in a dry and well-ventilated place. Keep away from sources of ignition. Store in a tightly closed container. Flammables-area. Store protected from light and air.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
460-73-1	1,1,1,3,3-Pentafluoropropane {HFC-245fa}	No data.	No data.	No data.
NA	Halogenated Phosphate	No data.	No data.	No data.
156-60-5	Trans-1,2-Dichloroethylene {1,2-trans-Dichloroethylene; Ethene, 1,2-dichloro-, (E)-}	No data.	TLV: 200 ppm	No data.

**Respiratory Equipment (Specify Type):** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Eye Protection:** Face shield and safety glasses. Wear chemical splash goggles.

**Protective Gloves:** Handle with gloves. Wear appropriate protective gloves to prevent skin exposure.

**Other Protective Clothing:** Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear appropriate protective clothing to prevent skin exposure.

**Engineering Controls** Use process enclosure, local exhaust ventilation, or other engineering controls to control



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**(Ventilation etc.):** airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**Work/Hygienic/Maintenance Practices:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical States:** [ ] Gas [ X ] Liquid [ ] Solid

**Appearance and Odor:** Viscous.  
Light. Brown.

**Melting Point:** No data.

**Boiling Point:** No data.

**Autoignition Pt:** No data.

**Flash Pt:** No data.

**Explosive Limits:** LEL: No data. UEL: No data.

**Specific Gravity (Water = 1):** No data.

**Vapor Pressure (vs. Air or mm Hg):** No data.

**Vapor Density (vs. Air = 1):** No data.

**Evaporation Rate:** No data.

**Solubility in Water:** No data.

**Percent Volatile:** No data.

### 10. STABILITY AND REACTIVITY

**Stability:** Unstable [ ] Stable [ X ]

**Conditions To Avoid - Instability:** No data available.  
Light, ignition sources, Exposure to air.

**Incompatibility - Materials To Avoid:** Strong oxidizing agents, Strong bases, Copper.

**Hazardous Decomposition or Byproducts:** formed under fire conditions. Carbon oxides, Phosphorous oxides, Hydrogen chloride gas, Thermal decomposition 244 °C Hydrogen chloride, phosgene, Carbon monoxide.

**Possibility of Hazardous Reactions:** Will occur [ ] Will not occur [ X ]

**Conditions To Avoid - Hazardous Reactions:** No data available.



## 11. TOXICOLOGICAL INFORMATION

### Toxicological Information:

Epidemiology: No data available.  
Teratogenicity: No data available.  
Reproductive Effects: Mutagenicity: Neurotoxicity: Other Studies:  
CAS# NA:  
Acute toxicity, LD50, Oral, Rat, 3600. MG/KG.  
Results:  
Behavioral: Somnolence (general depressed activity).  
Behavioral: Tremor.  
Lungs, Thorax, or Respiration: Other changes.  
- National Technical Information Service, Vol/p/yr: OTS05, 7713

Acute toxicity, LD50, Intravenous, Mouse, 56.00 MG/KG.  
Results:  
Behavioral: Food intake (animal).  
Nutritional and Gross Metabolic: Weight loss or decreased weight gain.  
- U.S. Army Armament Research & Development Command, Chemical Systems Laboratory, NIOSH Exchange Chemicals., Aberdeen Proving Ground., Aberdeen Proving Ground, MD 21010, Vol/p/yr: NX#, 5768

Skin corrosion/irritation, Skin sensitization, Skin, Rabbit, 0.000 , Mild.  
Results:  
Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Lacrimation.  
Behavioral: Tremor.  
Lungs, Thorax, or Respiration: Cyanosis.

CAS# 156-60-5:  
Reproductive Effects:, TClO, Inhalation, Rat, 6000. PPM, 6 H, female 7-16 day(s) after conception.  
Results:  
Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).  
- Fundamental and Applied Toxicology., Academic Press, Inc., 1 E. First St., Duluth, MN 55802, Vol/p/yr: 20,225, 1993

Reproductive Effects:, TClO, Inhalation, Rat, 12000. PPM, 6 H, female 7-16 day(s) after conception.  
Results:  
Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).  
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).  
- Fundamental and Applied Toxicology., Academic Press, Inc., 1 E. First St., Duluth, MN 55802, Vol/p/yr: 20,225, 1993

Mutagenicity:, Mutation test: Mutation in microorganisms., 50.00 UG/PLAT, Bacteria - Salmonella typhimurium.,  
Results:  
Behavioral: Sleep.  
Behavioral: Hallucinations, distorted perceptions.  
- Toxicological and Environmental Chemistry., Gordon & Breach Science Pub. Inc., New York, NY, Vol/p/yr: 15,101, 1987



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Mutagenicity:, Gene conversion and mitotic recombination., 80.00 MMOL/L,  
Saccharomyces cerevisiae.

Results:

Behavioral: Coma.

Lungs, Thorax, or Respiration:Dyspnea.

Nutritional and Gross Metabolic:Changes in:Metabolic acidosis.

- Teratogenesis, Carcinogenesis, and Mutagenesis., Alan R. Liss, Inc., 41 E. 11th St.,  
New York, NY 10003, Vol/p/yr: 4,365, 1984

Mutagenicity:, Mutation test: DNA damage., 22.00 MMOL/L, Saccharomyces cerevisiae.

Results:

Behavioral: Coma.

Vascular: BP lowering not characterized in autonomic section.

Nutritional and Gross Metabolic:Changes in:Metabolic acidosis.

- Mutation Research., Elsevier Science Pub. B.V., POB 211, 1000 AE, Amsterdam  
Netherlands, Vol/p/yr: 206,209, 1988

Mutagenicity:, Sex chromosome loss and nondisjunction, 51500. UMOL/L,  
Saccharomyces cerevisiae.

Results:

Gastrointestinal:Nausea or vomiting.

- Mutation Research., Elsevier Science Pub. B.V., POB 211, 1000 AE, Amsterdam  
Netherlands, Vol/p/yr: 206,209, 1988

Mutagenicity:, Sex chromosome loss and nondisjunction, Species: Hamster, 6500.  
UMOL/L, Cell Type: lung..

Results:

Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Other  
changes.

Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Other.

Lungs, Thorax, or Respiration:Other changes.

- Mutation Research., Elsevier Science Pub. B.V., POB 211, 1000 AE, Amsterdam  
Netherlands, Vol/p/yr: 182,135, 1987

Other Studies:, TDLo, Oral, Rat, 113.0 GM/KG, 90 D.

Results:

Kidney, Ureter, Bladder: Changes in bladder weight.

- Journal of the American College of Toxicology., Mary Ann Liebert, Inc., New York, NY,  
Vol/p/yr: 6(4),471, 1987

Other Studies:, TCLo, Inhalation, Rat, 200.0 PPM, 8 W.

Results:

Lungs, Thorax, or Respiration:Other changes.

Liver: Other changes.

Endocrine: Changes in endocrine weight (unspecified).

- Toxicology., Elsevier Scientific Pub. Ireland, Ltd., POB 85, Limerick Ireland, Vol/p/yr:  
7(2),141, 1977

Acute toxicity, TCLo, Inhalation, Human, 4800. MG/M3, 10 M.

Results:

Behavioral: Sleep.

Behavioral: Hallucinations, distorted perceptions.



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- Archiv fuer Hygiene und Bakteriologie., For publisher information, see ZHPMAT,  
Munich Fed. Rep. Ger., Vol/p/yr: 116,131, 1936

Acute toxicity, LD50, Oral, Rat, 1235. MG/KG.

Results:

Cardiac:Other changes.

Lungs, Thorax, or Respiration:Other changes.

Liver: Fatty liver degeneration.

- Toxicology., Elsevier Scientific Pub. Ireland, Ltd., POB 85, Limerick Ireland, Vol/p/yr:  
7,141, 1977

Acute toxicity, LD50, Intraperitoneal, Rat, 7411. MG/KG.

Results:

Cardiac:Other changes.

Lungs, Thorax, or Respiration:Other changes.

Liver: Fatty liver degeneration.

- Toxicology., Elsevier Scientific Pub. Ireland, Ltd., POB 85, Limerick Ireland, Vol/p/yr:  
7,141, 1977

Acute toxicity, LD50, Oral, Mouse, 2122. MG/KG.

Results:

Behavioral: Altered sleep time (including change in righting reflex).

Behavioral: Somnolence (general depressed activity).

Behavioral: Ataxia.

- Drug and Chemical Toxicology., Marcel Dekker, 270 Madison Ave., New York, NY  
10016, Vol/p/yr: 8,373, 1985

Acute toxicity, LCLO, Inhalation, Mouse, 75.00 GM/M3, 2 H.

Results:

Behavioral: General anesthetic.

Behavioral: Convulsions or effect on seizure threshold.

Lungs, Thorax, or Respiration:Dyspnea.

- Archiv fuer Hygiene und Bakteriologie., For publisher information, see ZHPMAT,  
Munich Fed. Rep. Ger., Vol/p/yr: 116,131, 1936

Acute toxicity, LD50, Intraperitoneal, Mouse, 3952. MG/KG.

Results:

Behavioral: General anesthetic.

Behavioral: Convulsions or effect on seizure threshold.

Gastrointestinal:Nausea or vomiting.

- Toxicology., Elsevier Scientific Pub. Ireland, Ltd., POB 85, Limerick Ireland, Vol/p/yr:  
7,141, 1977

Acute toxicity, LCLO, Inhalation, Species: Cat, 43.00 GM/M3, 6 H.

Results:

Behavioral: General anesthetic.

Behavioral: Convulsions or effect on seizure threshold.

Gastrointestinal:Nausea or vomiting.

- Archiv fuer Hygiene und Bakteriologie., For publisher information, see ZHPMAT,  
Munich Fed. Rep. Ger., Vol/p/yr: 116,131, 1936

Acute toxicity, LD50, Skin, Species: Rabbit, > 5.000 GM/KG.

Results:



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Skin and Appendages: Skin: After systemic exposure: Dermatitis, irritative.  
Nutritional and Gross Metabolic: Weight loss or decreased weight gain.  
- Acute Toxicity Data. Journal of the American College of Toxicology, Part B., Mary Ann Liebert, Inc., 1651 Third Ave., New York, NY 10128, Vol/p/yr: 1,10, 1990

Standard Draize Test, Skin, Species: Rabbit, 500.0 MG, 24 H.  
Results:  
Effects on Newborn: Growth statistics (e.g., reduced weight gain).  
- Acute Toxicity Data. Journal of the American College of Toxicology, Part B., Mary Ann Liebert, Inc., 1651 Third Ave., New York, NY 10128, Vol/p/yr: 1,11, 1990

Standard Draize Test, Eyes, Species: Rabbit, 10.00 MG.  
Results:  
Behavioral: Sleep.  
Behavioral: Hallucinations, distorted perceptions.  
- Acute Toxicity Data. Journal of the American College of Toxicology, Part B., Mary Ann Liebert, Inc., 1651 Third Ave., New York, NY 10128, Vol/p/yr: 1,11, 1990

### Irritation or Corrosion:

Skin - rabbit - Mild skin irritation - 24 h.  
Serious eye damage/eye irritation:  
Eyes - rabbit - Mild eye irritation.

### Carcinogenicity/Other Information:

Carcinogenicity.  
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
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.  
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
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. CAS# 156-60-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
460-73-1	1,1,1,3,3-Pentafluoropropane {HFC-245fa}	n.a.	n.a.	n.a.	n.a.
NA	Halogenated Phosphate	n.a.	n.a.	n.a.	n.a.
156-60-5	Trans-1,2-Dichloroethylene {1,2-trans-Dichloroethylene; Ethene, 1,2-dichloro-, (E)-}	n.a.	n.a.	n.a.	n.a.

## 12. ECOLOGICAL INFORMATION

No data available.  
**Persistence and Degradability:** No data available.  
**Bioaccumulative Potential:** No data available.  
**Mobility in Soil:** No data available.



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## Quik-Shield 112 B

### 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Product.  
 Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging.  
 Dispose of as unused product. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. RCRA P-Series: None listed.  
 RCRA U-Series:  
 CAS# 156-60-5: waste number U079.

### 14. TRANSPORT INFORMATION

**GHS Classification:** Acute Toxicity: Oral, Category 4 - Warning! Harmful if swallowed  
 Acute Toxicity: Skin, Category 5 - Warning! May be harmful in contact with skin  
 Skin Corrosion/Irritation, Category 3 - Warning! Causes mild skin irritation  
 Serious Eye Damage/Eye Irritation, Category 2B - Warning! Causes eye irritation  
 Aquatic Toxicity (Acute), Category 3 - Harmful to aquatic life

**LAND TRANSPORT (US DOT):**

**DOT Proper Shipping Name:** Not Regulated.  
**DOT Hazard Class:**  
**UN/NA Number:**

**LAND TRANSPORT (Canadian TDG):**

**TDG Shipping Name:** Not Regulated.  
**UN Number:**  
**Hazard Class:** **TDG Classification:**

**MARINE TRANSPORT (IMDG/IMO):**

**IMDG/IMO Shipping Name:** Not Regulated.

**AIR TRANSPORT (ICAO/IATA):**

**ICAO/IATA Shipping Name:** Not Regulated.

### 15. REGULATORY INFORMATION

**EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists**

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
460-73-1	1,1,1,3,3-Pentafluoropropane {HFC-245fa}	No	No	No
NA	Halogenated Phosphate	No	No	No
156-60-5	Trans-1,2-Dichloroethylene {1,2-trans-Dichloroethylene; Ethene, 1,2-dichloro-, (E)-}	No	Yes 1000 LB	No

<b>CAS #</b>	<b>Hazardous Components (Chemical Name)</b>	<b>Other US EPA or State Lists</b>
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460-73-1	1,1,1,3,3-Pentafluoropropane {HFC-245fa}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No
NA	Halogenated Phosphate	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory, 8D TERM; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No





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## Quik-Shield 112 B

156-60-5	Trans-1,2-Dichloroethylene {1,2-trans-Dichloroethylene; Ethene, 1,2-dichloro-, (E)-}	CAA HAP,ODC: No; CWA NPDES: Yes; TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: Title 8; MA Oil/HazMat: Yes; MI CMR, Part 5: Part 5; NC TAP: No; NJ EHS: No; NY Part 597: Yes; PA HSL: Yes - E; SC TAP: No; WI Air: No
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CAS #	Hazardous Components (Chemical Name)	International Regulatory Lists
460-73-1	1,1,1,3,3-Pentafluoropropane {HFC-245fa}	Canadian DSL: Yes; Canadian NDSL: No
NA	Halogenated Phosphate	Canadian DSL: Yes; Canadian NDSL: No
156-60-5	Trans-1,2-Dichloroethylene {1,2-trans-Dichloroethylene; Ethene, 1,2-dichloro-, (E)-}	Canadian DSL: Yes; Canadian NDSL: No

**Regulatory Information:** This product contains no chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 40 CFR part 372.

**Regulatory Information Statement:**

### 16. OTHER INFORMATION

**Revision Date:** 04/30/2015

**Additional Information About This Product:** No data available.

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The product may present hazards and should be used with caution. While certain hazards are described in this Safety Data Sheet, no guarantee is made that these are the only hazards that exist. Hazards, toxicity and behavior of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behavior should be determined by the user and made known to handlers, processors and end users.

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