

DOC ID: SWD-SDS-**PMG-040** REV. 00 EFF. DATE: 08/15/19 APPROVAL: MGMT. REP. <u>ON FILE</u>

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: QS A

Product Name: Quik-Shield A
Company Name: SWD URETHANE
539 S. Drew St.

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





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. P337+313 - If eye irritation persists, get medical advice/attention.



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P342+311 - If experiencing respiratory symptoms call a POISON CENTER or

doctor/physician.

P362 - Take off contaminated clothing and wash before re-use.

GHS Storage and Disposal

Phrases:

P405 - Store locked up.

Inhalation: Causes respiratory tract irritation.

Skin Contact: May be harmful if absorbed through the skin. Causes skin irritation.

Eve Contact: Causes eye irritation.

Ingestion: May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS # Ingredients/Components Concentration

9016-87-9 Polymeric diphenylmethane diisocyanate

{Isocyanic acid, Poly

0.0 -100.0 %

4. FIRST AID MEASURES

Emergency and First Aid

Procedures:

In Case of Inhalation: If breathed in, move person into fresh air. If not breathing give artificial respiration.

In Case of Skin Contact: Wash off with soap and plenty of water. Consult a physician.

In Case of Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

In Case of Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water.

Consult a physician.

Signs and Symptoms Of

Exposure:

 $Cough,\,Shortness\ of\ breath,\,Headache.\,\,Nausea.\,\,Vomiting,\,Pulmonary\ edema.\,\,Effects$

may be delayed.

Note to Physician: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of

dangerous area.

5. FIRE FIGHTING MEASURES

Flash Pt: > 150.00 C Method Used: Closed Cup Explosive Limits: LEL: UEL:

Autoignition Pt: NA

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.

Flammable Properties and

Hazards:

Hazardous Combustion

Products:

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.

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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

Keep container tightly closed in a dry and well-ventilated place.

Storing:

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

9016-87-9 Polymeric diphenylmethane

diisocyanate (Isocyanic acid, Poly

Respiratory Equipment

(Specify Type):

When the product is sprayed or heated without adequate ventilation, an approved MSHA/NIOSH positive-pressure, supplied air respirator may be required. Air purifying

respirators equipped with organic vapor cartridges and HEPA (P100) particulate filter may be used under certain conditions when the cartridge change-out schedule has been

developed in accordance with the OSHA respiratory protection standard (29 CFR

1910.134).

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.):

Work/Hygienic/Maintenance Handle in accordance with good industrial hygiene and safety practice. Wash hands

Practices: before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

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

Appearance and Odor: Slightly. Musty.

pH:

Melting Point: 42.00 C - 45.00 C

Boiling Point: 200.00 C

Flash Pt: > 150.00 C Method Used: Closed Cup

Evaporation Rate:

Flammability (solid, gas):

Explosive Limits: LEL: UEL:

1

Vapor Pressure (vs. Air or

mm Hg):

Vapor Density (vs. Air = 1): Specific Gravity (Water = 1):

Density: 1.18 G/CM3

Solubility in Water:



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Octanol/Water Partition

Coefficient:

Autoignition Pt: NA **Decomposition Temperature:**

Viscosity:

10. STABILITY AND REACTIVITY

Stability: Unstable [] Stable [X]

Conditions To Avoid -Contact with moisture, other materials that react with isocyanates, or temperatures above

350 °F (177 °C), may cause polymerization. Instability:

Incompatibility - Materials To Water. Amines, Strong bases, Alcohols.

Avoid:

Hazardous Decomposition or formed under fire conditions. Carbon oxides,

nitrogen oxides (NOx). **Byproducts:**

Possibility of Hazardous

Will occur [] Will not occur [X]

Reactions:

Conditions To Avoid -Hazardous Reactions:

11. TOXICOLOGICAL INFORMATION

CAS# 9016-87-9: Toxicological Information:

Not reported., LC50, Not reported., Rat, 490.0 MG/M3.

Results:

Behavioral: Somnolence (general depressed activity). Behavioral: Convulsions or effect on seizure threshold.

- National Technical Information Service, Vol/p/yr: OTS05, 6728

Not reported., LD50, Dermal, Rat, 490.0 MG/L.

Results:

Behavioral: Somnolence (general depressed activity). Behavioral: Convulsions or effect on seizure threshold.

Not reported., LC50, Not reported., Rat, 490.0 MG/M3.

Results:

Kidney, Ureter, Bladder: Renal function tests depressed.

Blood:Other changes.

Irritation or Corrosion: Serious eye damage/eye irritation:

Eyes - rabbit - Moderate eye irritation.

Carcinogenicity/Other

Carcinogenicity.

Information: 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 # Ingredients/Components NTP IARC ACGIH OSHA

9016-87-9 Polymeric diphenylmethane diisocyanate (Isocyanic acid,

Poly

12. ECOLOGICAL INFORMATION

Persistence and

No data available.

Degradability:

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

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. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an

3

afterburner and scrubber.

Contaminated packaging.

Dispose of as unused product.

14. TRANSPORT INFORMATION

Additional Transport

Information:

Not regulated except when shipped in bulk. Bulk containers (>9 000 lbs) must be transported as: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S.

(Methylene Diphenyl Diisocyanate), Class 9, UN3082, PG III, RQ.

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.

UN Number: 3082 Packing Group: III

Hazard Class: 9 - CLASS 9 TDG Classification:

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Not Regulated.

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not Regulated.





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15. REGULATORY INFORMATION

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

CAS # Ingredients/Components S. 302 (EHS) S. 304 RQ S. 313 (TRI)
9016-87-9 Polymeric diphenylmethane diisocyanate No No Yes-Cat. N120

{Isocyanic acid, Poly

CAS # Ingredients/Components Other US EPA or State Lists

9016-87-9 Polymeric diphenylmethane diisocyanate CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes -

{Isocyanic acid, Poly

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 - Cat.; NY Part 597: No; PA HSL: No; SC TAP:

No; WI Air: No

CAS # Ingredients/Components International Regulatory Lists

9016-87-9 Polymeric diphenylmethane diisocyanate Canadian DSL: Yes; Canadian NDSL: No

{Isocyanic acid, Poly

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.

Incipient fire responders should wear eye protection. Firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other

environmentally sensitve areas.

Incipient fire responders should wear eye protection. Firefighters must wear

Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other

environmentally sensitve areas.

16. OTHER INFORMATION

Revision Date: 12/12/2018

Additional Information About

This Product:

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 SHALL PROVIDE, OR MAKE AVAILABLE, DATA SHEETS FOR SWD PRODUCTS.

DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION

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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 DIRECTRED TO SWD AT 800-828-1394.



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according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE

1.1 Product Code: QS 252 B

Product Name: Quik-Shield 252 B

- 1.2 Relevant identified uses of the substance or mixture and uses advised against:
- 1.3 Details of the Supplier of the Safety Data Sheet:

Company Name: SWD URETHANE

539 S. Drew St. Mesa, AZ 85210,

Web site address: www.swdurethane.com

1.4 Emergency telephone number:

Emergency Contact: CHEMTREC

(800) 424-9300

SECTION 2. HAZARDS IDENTIFICATION

- 2.1 Classification of the Substance or Mixture:
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:

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

2.1.2 Classification according to Directive 1999/45/EC:

Xn: Harmful

F: Highly Flammable

Risk Phrases: R11, R20, R52/53

For full text of R- phrases: see SECTION 15.

- 2.2 Label Elements:
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:



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.

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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.

2.2.2 Labeling according to Directive 1999/45/EC:





Xn

F

2.3 Adverse Human Health

Effects and Symptoms:

2.3.1 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.

2.3.2 Skin Contact: May be harmful if absorbed through the skin. Causes skin irritation. Causes moderate

skin irritation. May cause dermatitis.

2.3.3 Eye Contact: Causes eye irritation. Causes moderate eye irritation.

2.3.4 Ingestion: Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and

diarrhea. May cause central nervous system depression.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS#	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	Risk Phrases/ GHS Classification
NA	Halogenated Phosphate	5.0 -10.0 %	NA NA	No phrases apply. Acute Tox.(O) 4: H302
460-73-1	1,1,1,3,3-Pentafluoropropane {HFC-245fa}	5.0 -10.0 %	NA NA	No phrases apply. Eye Damage 2A: H319
NA	Amine catalyst	2.0 -5.0 %	NA NA	N; R43-51/53 Acute Tox.(D) 4: H312 Skin Corr. 1C: H314 Eye Damage 1: H318
NA	Halogenated polyester	< 5.0 %	NA NA	No phrases apply. Aquatic (C) 3: H412
156-60-5	Trans-1,2-Dichloroethylene {1,2-trans-Dichloroethylene; Ethene, 1,2-dichloro-, (E)-}	< 3.0 %	205-860-2 602-026-00-3	F;Xn; R11-20-52/53 Flam. Liq. 2: H225 Acute Tox.(I) 4: H332 Aquatic (C) 3: H412

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SECTION 4. FIRST AID MEASURES

4.1 Description of First Aid

Measures:

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 Wash off with soap and plenty of water. Consult a physician. In case of contact, flush

Contact: 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 Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. In

Contact: 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.

4.2 Important Symptoms To the best of our knowledge, the chemical, physical, and toxicological properties have

and Effects, Both not been thoroughly investigated.

Note for the Doctor: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of

dangerous area. Treat symptomatically and supportively.

SECTION 5. FIRE FIGHTING MEASURES

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

Media:

5.2 Flammable Properties No data available.

and Hazards:

Acute and Delayed:

Flash Pt: No data.

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

Autoignition Pt: No data.

5.3 Fire Fighting Wear self contained breathing apparatus for fire fighting if necessary. As in any fire, wear

Instructions: 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.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Protective Precautions, No data available.

Protective Equipment and Emergency

Procedures:

6.2 Environmental No data available.

Precautions:

6.3 Methods and Material Personal precautions.

wethous and waterial Fersonal precautions.

For Containment and Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure

Cleaning Up: adequate ventilation.

Environmental precautions.

Do not let product enter drains.

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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.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions To Be

Avoid inhalation of vapor or mist.

Taken in Handling:

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.

7.2 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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure Parameters:

oxpot				
CAS#	Partial Chemical Name	Britain EH40	France VL	Europe
NA	Halogenated Phosphate	No data.	No data.	No data.
460-73-1	1,1,1,3,3-Pentafluoropropane {HFC-245fa}	No data.	No data.	No data.
NA	Amine catalyst	No data.	No data.	No data.
NA	Halogenated polyester	No data.	No data.	No data.
156-60-5	Trans-1,2-Dichloroethylene {1,2-trans-Dichloroethylene; Ethene, 1,2-dichloro-, (E)-}	No data.	No data.	No data.
CAS#	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
NA	Halogenated Phosphate	No data.	No data.	No data.
460-73-1	1,1,1,3,3-Pentafluoropropane {HFC-245fa}	No data.	No data.	No data.
NA	Amine catalyst	No data.	No data.	No data.
NA	Halogenated polyester	No data.	No data.	No data.
156-60-5	Trans-1,2-Dichloroethylene	No data.	TLV: 200 ppm	No data.



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Exposure Controls:

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

airborne levels below recommended exposure limits. Facilities storing or utilizing this (Ventilation etc.):

material should be equipped with an eyewash facility and a safety shower.

8.2.2 Personal protection equipment:

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

Protective Gloves: Handle with gloves. Wear appropriate protective gloves to prevent skin exposure. **Other Protective** Choose body protection according to the amount and concentration of the dangerous

substance at the work place. Wear appropriate protective clothing to prevent skin Clothing:

exposure.

Respiratory Equipment 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 (Specify Type):

> 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.

Work/Hygienic/Mainten Handle in accordance with good industrial hygiene and safety practice. Wash hands

before breaks and at the end of workday. ance Practices:

No data available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties 9.1

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

Appearance and Odor: Viscous.

Musty.

No data.

Melting Point: No data. **Boiling Point:** No data. Flash Pt: No data. **Evaporation Rate:** No data.

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

Vapor Pressure (vs. Air or No data.

mm Hg):

Vapor Density (vs. Air = 1): No data. Specific Gravity (Water = 1): No data.

Solubility in Water:

Autoignition Pt: No data.



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9.2 Other Information

Percent Volatile: No data.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity: No data available.

10.2 Stability: Unstable [] Stable [X]

10.3 Conditions To Avoid - No data available.

Hazardous Reactions:

Possibility of Will occur [] Will not occur [X]

Hazardous Reactions:

10.4 Conditions To Avoid - No data available.

Instability: Light, ignition sources, Exposure to air.

10.5 Incompatibility - Strong oxidizing agents, Strong bases, Copper.

Materials To Avoid:

10.6 Hazardous formed under fire conditions. Carbon oxides,

Decomposition or Phosphorous oxides, Hydrogen chloride gas,

Byproducts: Thermal decomposition 244 °C Hydrogen chloride, phosgene, Carbon monoxide.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Epidemiology: No data available.

Toxicological Effects: 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

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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

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

 ${\it Mutagenicity:}, {\it Mutation test: DNA damage.}, {\it 22.00 MMOL/L}, {\it Saccharomyces cerevisiae.}$

Results:

Behavioral: Coma.

Vascular: BP lowering not charactertized 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.

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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.

- 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



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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:

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 Carcinogenicity.

Information: 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.

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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
NA	Halogenated Phosphate	n.a.	n.a.	n.a.	n.a.
460-73-1	1,1,1,3,3-Pentafluoropropane {HFC-245fa}	n.a.	n.a.	n.a.	n.a.
NA	Amine catalyst	n.a.	n.a.	n.a.	n.a.
NA	Halogenated polyester	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.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity: No data available.

12.2 Persistence and No data available.

Degradability:

12.3 Bioaccumulative No data available.

Potential:

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and No data available.

vPvB assessment:

12.6 Other adverse effects: No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste Disposal

Product.

Method:

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.

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SECTION 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): 14.1

DOT Proper Shipping Name: Not Regulated.

DOT Hazard Class: UN/NA Number:

14.1 LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Not Regulated.

UN Number:

Hazard Class: TDG Classification:

LAND TRANSPORT (European ADR/RID): 14.1

ADR/RID Shipping Name:

UN Number: Hazard Class:

14.2 MARINE TRANSPORT (IMDG/IMO):

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

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

ICAO/IATA Shipping Name: Not Regulated.

SECTION 15. REGULATORY INFORMATION

EPA SARA (Superfund Amer	idments and Reauth	orization Act of 1986) Lists	

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

1,2-dichloro-, (E)-}

CAS#	Hazardous Components (Chemical Name)	Canadian NPRI	Canadian IDL	Canadian DSL
NA	Halogenated Phosphate	No	No	Yes
460-73-1	1,1,1,3,3-Pentafluoropropane {HFC-245fa}	No	No	Yes
NA	Amine catalyst	No	No	Yes
NA	Halogenated polyester	No	No	Yes
156-60-5	Trans-1,2-Dichloroethylene	No	No	Yes
	{1,2-trans-Dichloroethylene; Ethene,			

1,2-dichloro-, (E)-}

CAS# **Hazardous Components (Chemical Name)** Other US EPA or State Lists

Halogenated Phosphate CAA HAP, ODC: No; CWA NPDES: No; TSCA: Yes -NA

> 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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CAA HAP, ODC: No; CWA NPDES: No; TSCA: Yes -1,1,1,3,3-Pentafluoropropane {HFC-245fa} 460-73-1 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 Amine catalyst 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 polyester 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 156-60-5 Trans-1,2-Dichloroethylene CAA HAP, ODC: No; CWA NPDES: Yes; TSCA: Yes -{1,2-trans-Dichloroethylene; Ethene, Inventory; CA PROP.65: No; CA TAC, Title 8: Title 8; MA 1,2-dichloro-, (E)-} 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

CAS # Hazardous Components (Chemical Name)

NA Halogenated Phosphate

460-73-1 1,1,1,3,3-Pentafluoropropane {HFC-245fa}

NA Amine catalyst

NA Halogenated polyester 156-60-5 Trans-1,2-Dichloroethylene

{1,2-trans-Dichloroethylene; Ethene,

1,2-dichloro-, (E)-}

Canadian WHMIS Classification:





CLASS B, DIVISION 2: Flammable Liquids

CLASS D, DIVISION 2, SUBDIVISION B: Toxic Materials (Mutagenicity, skin sensitization, irritation, etc.)

International Regulatory Lists

European Community Hazard Symbol codes:





Xr

European Community Risk and Safety Phrases:

R11 Highly flammable.
R20 Harmful by inhalation.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

S16 Keep away from sources of ignition.

S29 Do not empty into drains.S7 Keep container tightly closed.

S61 Avoid release to the environment. Refer to special instructions / safety data sheets.

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.

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SECTION 16. OTHER INFORMATION

Revision Date: 04/30/2015

Additional Information About No data available.

This Product:

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.

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