Duo Fill

Revision Date 03/14/2024 Print Date 03/16/2024

SECTION 1. IDENTIFICATION

Company name	:	Todol Products 25 Washington Ave USA Natick, MA 01760 PO BOX 398
Telephone	:	1-800-252-3818
Telefax	:	508-651-0729
E-mail address	:	info@todol.com
Emergency telephone	:	24/7 USA: 800-535-5053 24/7 Global: 352-323-3500
Recommended use of the chemical and restrictions on use	:	For further information, refer to product data sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable aerosols	:	Category 1
Gases under pressure	:	Compressed gas
Skin irritation	:	Category 2
Eye irritation	:	Category 2B
Respiratory sensitization	:	Category 1
Skin sensitization	:	Category 1
Specific target organ toxicity - repeated exposure (Inhalation)	:	Category 2

GHS label elements

Hazard pictograms :

Signal Word	:	Danger
Hazard Statements	:	H222 Extremely flammable aerosol. H280 Contains gas under pressure; may explode if heated.

H315 + H320 Causes skin and eye irritation.
H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

Precautionary Statements : P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.

Prevention:

P260 Do not breathe dusts or mists.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves.
P284 Wear respiratory protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:

P410 + P403 Protect from sunlight. Store in a well-ventilated place.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labeling

There are no ingredients with unknown acute toxicity used in a mixture at a concentration >= 1%.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Components

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Aromatic prepolymer, polyether based	57029-46-6	Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT RE 2; H373	>= 30 - < 50
Tris(2-chloro-1-methylethyl) phosphate	13674-84-5	Acute Tox. 4; H302	>= 10 - < 20
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2B; H320 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 2; H373	>= 10 - < 20
Aromatic prepolymer	916652-23-8	Acute Tox. 4; H332 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT RE 2; H373	>= 5 - < 10
Methanaminium. N,N,N-trimethyl-, salt with 2,2-dimethylpropanoic acid (1:1)	53803-13-7	Flam. Sol. 1; H228 Acute Tox. 3; H301 Acute Tox. 3; H331	>= 0.1 - < 1

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact : Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.

Obtain medical attention.

Most important symptoms and effects, both acute and delayed	:	irritant effects sensitizing effects Asthmatic appearance Allergic reactions Causes skin and eye irritation. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause damage to organs through prolonged or repeated exposure if inhaled.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray jet Dry powder Foam Carbon dioxide (CO2)
Unsuitable extinguishing media	:	Water High volume water jet
Hazardous combustion products	:	Carbon dioxide (CO2) Carbon monoxide Nitrogen oxides (NOx) Hydrogen cyanide (hydrocyanic acid) Chlorine compounds Bromine compounds
Further information	:	Use water spray to cool unopened containers. 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 fire-fighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Deny access to unprotected persons.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up	:	Allow to solidify, use mechanical handling equipment. Ventilate the area.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. Do not spray on a naked flame or any incandescent material. Take precautionary measures against electrostatic discharges.
Advice on safe handling	:	Avoid exceeding the given occupational exposure limits (see section 8). Do not get in eyes, on skin, or on clothing. For personal protection see section 8. Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharge. Open drum carefully as content may be under pressure. Follow standard hygiene measures when handling chemical products.
Conditions for safe storage	:	BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 122 °F. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. Store in original container. Keep in a well-ventilated place. Observe label precautions. Store in accordance with local regulations.
Materials to avoid	:	Explosives Poisonous gases Poisonous liquids Radioactive Substances

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	C	0.02 ppm 0.2 mg/m3	OSHA Z-1

		C	0.02 ppm 0.2 mg/m3	OSHA P0
		TWA	0.005 ppm	ACGIH

The above constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
Remove respiratory and skin/eye protection only after vapors have been cleared from the area.
Remove contaminated clothing and protective equipment before entering eating areas.
Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Chemicals under pressure
Color	:	various
Odor	:	musty
Odor Threshold	:	No data available
pH	:	Not applicable substance/mixture reacts with water
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Extremely flammable aerosol.
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	0.01 hpa
Relative vapor density	:	No data available
Density	:	ca. 0.90 g/cm3 (73 °F / 23 °C)
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	Not applicable
Explosive properties	:	No data available
Oxidizing properties	:	No data available

Volatile organic compounds (VOC) content	:	with exempt solvent

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified due to lack of data.

Components:

Aromatic prepolymer, polyether based:

Acute inhalation toxicity	:	Acute toxicity estimate: 50 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method

Diphenylmethanediisocyanate, isomeres and homologues:

Acute oral toxicity	:	LD50 Oral (Rat): > 10,000 mg/kg
Acute inhalation toxicity	:	LC50: 1.5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Expert judgment Assessment: The component/mixture is moderately toxic after short term inhalation.
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 9,400 mg/kg

Aromatic prepolymer:

Acute oral toxicity	:	LD50 Oral (Rat): > 2,000 mg/kg Method: OECD Test Guideline 423 Remarks: Based on data from similar materials

Acute inhalation toxicity	:	LC50 (Rat): 1.5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Expert judgment Remarks: Based on data from similar materials

Methanaminium. N,N,N-trimethyl-, salt with 2,2-dimethylpropanoic acid (1:1):

Acute oral toxicity	:	LD50 Oral (Rat): 165 mg/kg
Acute dermal toxicity	:	LD50 Dermal (Rabbit): 800 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Components:

Aromatic prepolymer:

Species	:	reconstructed human epidermis (RhE)
Exposure time	:	< 1 h
Method	:	OECD Test Guideline 439
Result	:	No skin irritation
Remarks	:	Based on data from similar materials

Serious eye damage/eye irritation

Causes eye irritation.

Components:

Aromatic prepolymer:

Species	:	Not tested on animals
Result	:	No eye irritation
Method	:	OECD Test Guideline 438

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components:

Aromatic prepolymer:

Test Type	:	Local lymph node assay (LLNA)
Routes of exposure	:	Dermal
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	May cause sensitization by skin contact.

Germ cell mutagenicity

Not classified due to lack of data.

Components:

Aromatic prepolymer:

Genotoxicity in vitro	:	Test Type: Microbial mutagenesis assay (Ames test) Metabolic activation: with and without metabolic activation Method: Mutagenicity (Escherichia coli - reverse mutation assay) Result: negative Remarks: Based on data from similar materials

Carcinogenicity

Not classified due to lack of data.

IARC	Not applicable
OSHA	Not applicable
NTP	Not applicable

Reproductive toxicity

Not classified due to lack of data.

STOT-single exposure

Not classified due to lack of data.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure if inhaled.
Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity

Not classified due to lack of data.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Diphenylmethanediisocyanate, isomeres and homologues:

Toxicity to fish	:	LC50 (Brachydanio rerio (zebrafish)): > 1,000 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): > 1,640 mg/l

Aromatic prepolymer:

Toxicity to fish	:	LL50 (Fish): > 100 mg/l

Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	EC50 (algae): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials

Persistence and degradability

Components:

Aromatic prepolymer:

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 1.29 % Testing period: 28 d Exposure time: 28 d Kinetic: 28 d: 1.29 % Method: OECD Test Guideline 301C

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information	:	Do not empty into drains; dispose of this material and its container in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Global warming potential

Global Warming Potentials - 40CFR Part 98 -Table A-1 to SubPart A.

Components:

1,1-difluoroethane:

100-year global warming potential: 124

Further information: Saturated Hydrofluorocarbons (HFCs) With Three or More Carbon-Hydrogen Bonds, The GWP for this compound was updated in the final rule published on November 29, 2013 [78 FR 71904] and effective on January 1, 2014.

Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) of the United Nations Framework Convention on Climate Change (UNFCCC)

Components:

1,1-difluoroethane:

20-year global warming potential: 591
100-year global warming potential: 164
500-year global warming potential: 46.8
Atmospheric lifetime: 1.6 yr
Radiative efficiency: 0.102 Wm2ppb
Further information: Hydrofluorocarbons

UNEP - Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer

Components:

1,1-difluoroethane:

100-year global warming potential: 124
Further information: Annex F - Group I: HFCs

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 1950
Proper shipping name	:	Aerosols, flammable
Class	:	2.1
Packing group	:	Not assigned by regulation
Labels	:	Flammable Gas
Packing instruction (cargo aircraft)	:	203

Packing instruction (passenger aircraft)	:	203

IMDG-Code

UN number	:	UN 1950
Proper shipping name	:	AEROSOLS
Class	:	2.1
Packing group	:	Not assigned by regulation
Labels	:	2.1
EmS Code	:	F-D, S-U
Marine pollutant	:	no

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 1950
Proper shipping name	:	Aerosols
Class	:	2.1
Packing group	:	Not assigned by regulation
Labels	:	FLAMMABLE GAS
ERG Code	:	126
Marine pollutant	:	no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

TSCA list : Product contains substance(s) not listed on TSCA inventory.

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Gases under pressure
Respiratory or skin sensitization
Specific target organ toxicity (single or repeated exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313	:	The following components are subject to reporting levels established by SARA Title III, Section 313:	
		Diphenylmethanediisocyanate, isomeres and homologues	9016-87-9	>= 10 - < 20 %

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

California Prop. 65

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

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
OSHA P0 / C	:	Ceiling limit
OSHA Z-1 / C	:	Ceiling

Notes to Reader

The data contained herein are furnished for information only and are believed to be reliable. However, Todol Products (hereafter Todol) does not assume responsibility for any results obtained by persons over whose methods Todol has no control. It is the user's responsibility to determine the suitability of Todol's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Todol specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Todol's products. Todol further disclaims any liability for consequential or incidental damages of any kind, including lost profits. This Safety Data Sheet has been generated based on OSHA Hazard Communication Standard (29 CFR 1910.1200) and provides information in accordance with U.S. federal law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Todol for additional assistance.

Revision Date 03/14/2024

Duo Fill

100000030936
US / Z8