



QUALIPUR 3443

1	PRODUCT AND COMPANY IDENTIFICATION
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Product Identifier: QUALIPUR 3443
Revision Date: 6/12/2018

Supplier Details: Advanced Polymer Technology
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Classification of Substance**GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):**

Health, Respiratory or skin sensitization, 1 Respiratory
Health, Skin corrosion/irritation, 2
Health, Serious Eye Damage/Eye Irritation, 2 A
Health, Respiratory or skin sensitization, 1 Skin
Health, Specific target organ toxicity - Single exposure, 3

GHS Label Elements, Including Precautionary Statements**GHS Signal Word: DANGER****GHS Hazard Pictograms:****GHS Hazard Statements:**

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H317 - May cause an allergic skin reaction
H335 - May cause respiratory irritation

GHS Precautionary Statements:

P285 - In case of inadequate ventilation wear respiratory protection.
P264 - Wash hands thoroughly after handling.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P342+311 - Call a POISON CENTER or doctor/physician.
P302+352 - IF ON SKIN: Wash with soap and water.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Contains isocyanates. May produce an allergic reaction.

Contains 4,4'-methylenediphenyl diisocyanate, o-(p-isocyanatobenzyl)phenyl isocyanate, polymethylene polyphenylene isocyanate, Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'-methylenebis isocyanatobenzene]. May produce an allergic reaction.

Chemical Ingredients		
CAS#	%	Chemical Name
39420-98-9	50-100%	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'- methylenebis[isocyanatobenzene]
101-68-8	<10%	4,4'-Methylenediphenyl diisocyanate
5873-54-1	<10%	Benzene, 1-isocyanato-2-[(4- isocyanatophenyl)methyl]-
9016-87-9	<10%	Isocyanic acid, polymethylenepolyphenylene ester
64742-53-6	<20%	Distillates, petroleum, hydrotreated light naphthenic
1408295-67-9	<10%	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-[[[(3- isocyanatomethylphenyl)amino]ca rbonyl]-.omega.-[[[(3- isocyanatomethylphenyl)amino]ca rbonyl]oxy]-
8001-22-7	<2%	Soybean oil
1359944-75-4	<10%	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-[[[(3- isocyanatomethylphenyl)amino]ca rbonyl]-.omega.-[[[(3- isocyanatomethylphenyl)amino]ca rbonyl]oxy]-
66072-10-4	<2%	Benzene, 1,1'-methylenebis[4- isocyanato-, polymers with hydroxy-terminated polybutadiene

General information:

Immediately remove any clothing soiled by the product.
Remove breathing equipment only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
Take affected persons out into the fresh air.

After inhalation:

Supply fresh air.
In case of irregular breathing or respiratory arrest provide artificial respiration.
Seek immediate medical advice.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

After eye contact:

Immediately remove contact lenses if possible.
Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.

Most important symptoms and effects, both acute and delayed

Asthma attacks
Nausea
Cramp
Dizziness
Headache
Profuse sweating
Disorientation
Cyanosis
Breathing difficulty
Allergic reactions

Hazards

Danger of pneumonia.
Danger of convulsion.
Danger of disturbed cardiac rhythm.
Danger of impaired breathing.

Indication of any immediate medical attention and special treatment needed

If swallowed, gastric irrigation with added, activated carbon.
Contains isocyanates.
In cases of irritation to the lungs, initial treatment with corticosteroid inhalants.
If necessary oxygen respiration treatment.
Later observation for pneumonia and pulmonary oedema.
Medical supervision for at least 48 hours.
If blue colouring appears (lips, ear-lobes, finger-nails), give oxygen treatment as quickly as possible.
Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.
Treat skin and mucous membrane with antihistamine and corticoid preparations.

Suitable extinguishing agents:
Alcohol resistant foam
Fire-extinguishing powder
Carbon dioxide
Gaseous extinguishing agents
Water haze or fog

For safety reasons unsuitable extinguishing agents: Water with full jet

Special hazards arising from the substance or mixture
During heating or in case of fire poisonous gases are produced.

Advice for firefighters
Protective equipment:
Wear self-contained respiratory protective device.
Wear fully protective suit.
Additional information
Eliminate all ignition sources if safe to do so.
Cool endangered receptacles with water fog or haze.

Personal precautions, protective equipment and emergency procedures

Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Isolate area and prevent access.
Keep away from ignition sources.

Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Additional Spill Procedures/Neutralization: Neutralization solutions:
(1) Colorimetric Laboratories Inc. (CLI) decontamination solution.
(2) A mixture of 75% water, 20% non-ionic surfactant (e.g. Plurafac SL-62, Tergitol TMN-10) and 5% npropanol.
(3) A mixture of 80% water, 20% non-ionic surfactant (e.g. Plurafac SL-62, Tergitol TMN-10).
(4) A mixture of 90% water, 3-8% ammonium hydroxide or concentrated ammonia, and 2% liquid detergent.
Dispose contaminated material as waste according to item 13.
Do not flush with water or aqueous cleansing agents

Handling Precautions:

Take note of emission threshold.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Open and handle receptacle with care.

Information about fire - and explosion protection:
Keep respiratory protective device available.
Protect from heat.
Keep ignition sources away - Do not smoke.

Storage Requirements:

Requirements to be met by storerooms and receptacles:
Provide ventilation for receptacles.
Store in a cool location.
Avoid storage near extreme heat, ignition sources or open flame.

Information about storage in one common storage facility:
Store away from foodstuffs.
Do not store together with acids.
Store away from oxidizing agents.
Do not store together with alkalis (caustic solutions).

Further information about storage conditions:
Store in cool, dry conditions in well sealed receptacles.
Store receptacle in a well ventil

Engineering Controls:

Educate and train employees in safe use of this product. Follow all label instruction. Local exhaust should be used to maintain levels below the TLV whenever this product is processed, heated or spray applied. For spray applications, an air-supplied respirator must be worn. All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94).

Personal Protective Equipment:

General protective and hygienic measures:

Personal protective equipment must be selected to prevent inhalation of vapors and contact with skin and eyes. At a bare minimum, safety glasses, gloves, apron, and combination particle/vapor respirator should be worn. In some cases, supplied air, full body suits and boots will be needed.

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Respiratory protection:

Combined Organic Vapor and Particulate Respirator is recommended for use during all processing activities.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the permanent contact gloves made of the following materials are suitable:

Nitrile rubber, NBR

Butyl rubber, BR

Neoprene gloves

Eye protection:

Contact lenses should not be worn.

Safety glasses

Body protection:

Boots

Apron

Full head, face and neck protection

Impervious protective clothing

Limitation and supervision of exposure into the environment

No further relevant information available.

Risk management measures

See Section 7 for additional information.

No further relevant information available.

Ingredients with limit values that require monitoring at the workplace:**101-68-8 4,4'-methylenediphenyl diisocyanate**

PEL (USA) Short-term value: C 0,2 mg/m³, C 0,02 ppm

REL (USA) Short-term value: C 0,2* mg/m³, C 0,02* ppm / Long-term value: 0,05 mg/m³, 0,005 ppm / *10-min

TLV (USA) 0,051 mg/m³, 0,005 ppm

EL (Canada) Short-term value: C 0,01 ppm / Long-term value: 0,005 ppm / Skin; S

EV (Canada) 0,005 ppm

DNELs No further relevant information available.

PNECs No further relevant information available.

Additional information: The lists valid during the making were used as basis.

9	PHYSICAL AND CHEMICAL PROPERTIES		
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Appearance: Clear Brown Liquid

Physical State: Liquid

Volatile organic compound: < 10 g/L

Specific Gravity or Density: 1,08 g/cm³

10	STABILITY AND REACTIVITY		
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Chemical Stability: No decomposition if used and stored according to specifications.

Conditions to Avoid Identification: Keep ignition sources away - Do not smoke.

Store away from oxidizing agents.

Materials to Avoid Identification: Reacts with alcohols, amines, aqueous acids and alkalis.
Reacts with oxidizing agents.

Hazardous Decomposition: Toxic fumes may be released if heated above the decomposition point.

Poisonous gases/vapours

Isocyanate

Nitrogen oxides

Carbon monoxide and carbon dioxide

Hydrogen cyanide (prussic acid)

Hazardous Polymerization: Reacts with water.

Acute toxicity:**LD/LC50 values relevant for classification:****101-68-8 4,4'-methylenediphenyl diisocyanate**

Oral LD50 2200 mg/kg (mouse)

Primary irritant effect:**on the skin:** Irritant to skin and mucous membranes.**on the eye:** Irritating effect.**Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

Subacute to chronic toxicity:

Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.

Additional toxicological information:

Toxic and/or corrosive effects may be delayed up to 24 hours.

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

Danger through skin adsorption.

Sensitisation:

Sensitization possible by skin contact.

Sensitization possible by inhalation and/or dermal contact.

Repeated dose toxicity:

May cause damage to organs through prolonged or repeated exposure .

Repeated exposures may result in skin and/or respiratory sensitivity.

12	ECOLOGICAL INFORMATION
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Aquatic toxicity: The product contains materials that are harmful to the environment.

Persistence and degradability Not easily biodegradable

Bioaccumulative potential May be accumulated in organism

Mobility in soil No further relevant information available.

Ecotoxicological effects:

Remark:

Due to mechanical actions of the product (e.g. agglutinations) damages may occur.
 The product is oxygen-consuming. The declared action may be partly caused by lack of oxygen.
 Harmful to fish

Additional ecological information:

General notes:

This statement was deduced from products with a similar structure or composition.
 Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Harmful to aquatic organisms

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

Other adverse effects No further relevant information available.

13	DISPOSAL CONSIDERATIONS
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Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.
 Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
 Can be disposed of with household garbage with prior chemical-physical or biological treatment following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.
 Recommended cleansing agents: Solvent naphtha

14	TRANSPORT INFORMATION
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UN-Number DOT, ADR, ADN, IMDG, IATA	N/A
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	N/A
Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class	N/A
Packing group DOT, ADR, IMDG, IATA	N/A
Marine pollutant	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation"	---

15	REGULATORY INFORMATION
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Component (CAS#) [%] - CODES

 Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'-methylenebis[isocyanatobenzene] (39420-98-9) [50-100%] TSCA

4,4'-Methylenediphenyl diisocyanate (101-68-8) [<10%] CERCLA, HAP, MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- (5873-54-1) [<10%] TSCA

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9) [<10%] SARA313, TSCA

Distillates, petroleum, hydrotreated light naphthenic (64742-53-6) [<20%] MASS, NJHS, TSCA

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-[[[(3-isocyanatomethylphenyl)amino]carbonyl]-.omega.-[[[(3-isocyanatomethylphenyl)amino]carbonyl]oxy]- (1408295-67-9) [<10%]

Soybean oil (8001-22-7) [<2%] PA, TSCA

Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-[[[(3-isocyanatomethylphenyl)amino]carbonyl]-.omega.-[[[(3-isocyanatomethylphenyl)amino]carbonyl]oxy]- (1359944-75-4) [<10%]

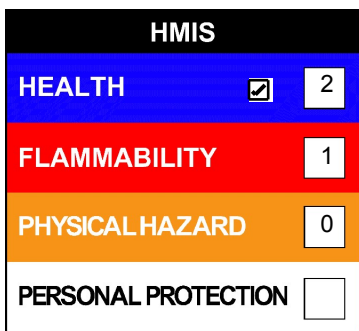
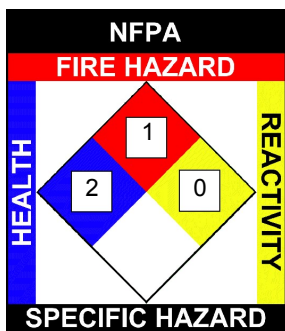
Benzene, 1,1'-methylenebis[4-isocyanato-, polymers with hydroxy-terminated polybutadiene (66072-10-4) [<2%] TSCA

Regulatory CODE Descriptions

 TSCA = Toxic Substances Control Act
 CERCLA = Superfund Cleanup Substances
 HAP = Hazardous Air Pollutants
 MASS = MA Massachusetts Hazardous Substances List
 NJHS = NJ Right-to-Know Hazardous Substances
 OSHAWAC = OSHA Workplace Air Contaminants
 PA = PA Right-To-Know List of Hazardous Substances
 SARA313 = SARA 313 Title III Toxic Chemicals
 TXAIR = TX Air Contaminants with Health Effects Screening Level

16	OTHER INFORMATION
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NFPA: Health = 2, Fire = 1, Reactivity = 0, Specific Hazard = n/a
HMIS III: Health = 2(Chronic), Fire = 1, Physical Hazard = 0



This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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