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QUALIPUR 3480

1	PRODUCT AND COMPANY IDENTIFICATION
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Product Identifier: QUALIPUR 3480
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 of 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 and exposed area thoroughly after handling.
 P251 - Pressurized container: Do not pierce or burn, even after use.
 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 Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'-methylenebis[4-isocyanatocyclohexane], 4,4'-methylene(di(cyclohexyl isocyanate)). May produce an allergic reaction.

Chemical Ingredients		
CAS#	%	Chemical Name
9042-82-4	50-100%	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'-methylenebis[4-isocyanatocyclohexane]
5124-30-1	<10%	Cyclohexane, 1,1'-methylenebis[4-isocyanato-
6425-39-4	<10%	Morpholine, 4,4'-(oxydi-2,1-ethanediyl)bis-
77-58-7	<5%	Stannane, dibutylbis[(1-oxododecyl)oxy]-

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.
In case of unconsciousness place patient stably in side position for transportation.

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.
A person vomiting while laying on their back should be turned onto their side.

Most important symptoms and effects, both acute and delayed

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

Hazards

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

Indication of any immediate medical attention and special treatment needed

If swallowed, gastric irrigation with added, activated carbon.
Contains isocyanates.
If swallowed or in case of vomiting, danger of entering the lungs.
Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.
Treat skin and mucous membrane with antihistamine and corticoid preparations.
In cases of irritation to the lungs, initial treatment with cortical steroid 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.

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.
Isolate area and prevent access.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

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).
Dispose contaminated material as waste.

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% n-propanol.
 - (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.
- Do not flush with water or aqueous cleansing agents

Handling Precautions:

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

Storage Requirements:

Information about fire - and explosion protection: Keep respiratory protective device available.

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.

Store away from oxidizing agents.

Do not store together with alkalis (caustic solutions).

Do not store together with acids.

Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

Keep container tightly sealed.

Store receptacle in a well ventilated area.

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:

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

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.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

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. 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

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

Organizational measures should be in place for all activities involving this product.

Ingredients with limit values that require monitoring at the workplace:**5124-30-1 4,4'-methylenedi(cyclohexyl isocyanate)**REL (USA) Short-term value: C 0,11 mg/m³, C 0,01 ppmTLV (USA) 0,054 mg/m³, 0,005 ppm

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

EV (Canada) 0,005 ppm

77-58-7 dibutyltin dilauratePEL (USA) 0,1 mg/m³ as SnREL (USA) 0,1 mg/m³ as Sn, SkinTLV (USA) Short-term value: 0,2 mg/m³ / Long-term value: 0,1 mg/m³ as Sn; SkinEL (Canada) Short-term value: 0,2 mg/m³ / Long-term value: 0,1 mg/m³ as Sn; Skin**DNELs** No further relevant information available.**PNECs** No further relevant information available.

9	PHYSICAL AND CHEMICAL PROPERTIES
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Appearance: Clear yellow Liquid**Physical State:** Liquid**Volatile organic compound:** 0 g/L**Specific Gravity or Density:** 1 g/cm³

10	STABILITY AND REACTIVITY
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Chemical Stability: No decomposition if used and stored according to specifications.**Conditions to** Keep ignition sources away - Do not smoke.**Avoldentification:** Store away from oxidizing agents.**Materials to Avoldentification:** Reacts with water.
Reacts with oxidizing agents.
Reacts with alkali, amines and strong acids.
Contact with acids releases toxic gases.
Reacts with peroxides and other radical forming substances.
Reacts with certain metals.**Hazardous Decomposition:** Isocyanate
Nitrogen oxides
Carbon monoxide and carbon dioxide
Hydrogen cyanide (prussic acid)**Hazardous Polymerization:** Reacts with water.

Acute toxicity:**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.

Additional toxicological information:

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:

Toxic

Harmful

Irritant

Danger through skin adsorption.

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

Sensitisation: 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.

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:**

Harmful to fish

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.

Additional ecological information:**General notes:**

This statement was deduced from products with a similar structure or composition.

The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary

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.

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

UN-Number:

DOT, ADR, ADN, IMDG Not Regulated
IATA UN3334

UN proper shipping name:

DOT, ADR, ADN, IMDG Not Regulated
IATA Aviation regulated liquid, n.o.s. (Hydrogenated MDI Polypropylene glycol copolymer)

Transport hazard class(es):

DOT, ADR, ADN, IMDG
Class Not Regulated

IATA
Class 9 Miscellaneous dangerous substances and articles.
Label 9

Packing group:

DOT, ADR, IMDG Not Regulated
IATA III

Environmental hazards:

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.

Transport/Additional information:

IMDG
Limited quantities (LQ) -
Excepted quantities (EQ) Code: -
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[4-isocyanatocyclohexane] (9042-82-4) [50-100%] TSCA

Cyclohexane, 1,1'-methylenebis[4-isocyanato- (5124-30-1) [<10%] MASS, OSHAWAC, PA, SARA313, TSCA, TXAIR

Morpholine, 4,4'-(oxydi-2,1-ethanediyl)bis- (6425-39-4) [<10%] TSCA

Stannane, dibutylbis[(1-oxododecyl)oxy]- (77-58-7) [<5%] GADSL, TSCA

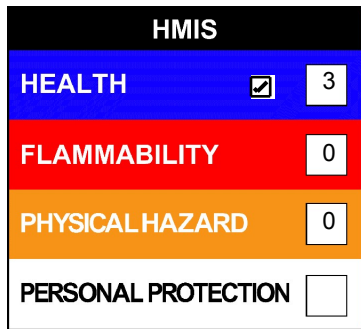
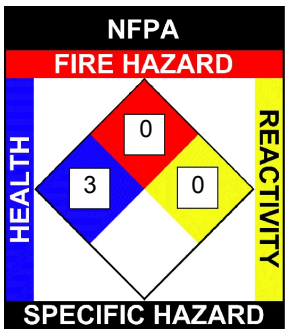
Regulatory CODE Descriptions

 TSCA = Toxic Substances Control Act
 MASS = MA Massachusetts Hazardous Substances List
 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
 GADSL = Global Automotive Declarable Substance List (GADSL)

16	OTHER INFORMATION
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NFPA: Health = 3, Fire = 0, Reactivity = 0, Specific Hazard = n/a

HMIS III: Health = 3(Chronic), Fire = 0, 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.

Revision Date: 6/12/2018