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**SDS**  
**Advanced Polymer Technology**

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**QUALIPUR 5050 Part B**

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<b>1</b>	<b>PRODUCT AND COMPANY IDENTIFICATION</b>
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**Product Identifier:** QUALIPUR 5050 Part B  
**Revision Date:** 3/8/2019  
**Version:** 100

**Supplier Details:** Advanced Polymer Technology  
P.O. Box 160, 109 Conica Lane  
Harmony, PA 16037

**Contact:** Senior Chemist  
**Phone:** 724-452-1330  
**Fax:** 724-452-1703  
**Email:** info@advpolytech.com  
**Internet:** www.advpolytech.com

**Transportation emergency phone number:** ChemTel Inc. (800)255-3924, +1 (813)248-0585

**Classification of Substance****GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):**

Health, Respiratory or skin sensitization, 1 Respiratory  
 Health, Specific target organ toxicity - Repeated exposure, 2  
 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  
 Health, Acute toxicity, 4 Oral  
 Health, Acute toxicity, 4 Inhalation

**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  
 H373 - May cause damage to organs through prolonged or repeated exposure  
 H315 - Causes skin irritation  
 H319 - Causes serious eye irritation  
 H317 - May cause an allergic skin reaction  
 H335 - May cause respiratory irritation  
 H302 - Harmful if swallowed  
 H332 - Harmful if inhaled

**GHS Precautionary Statements:**

P285 - In case of inadequate ventilation wear respiratory protection.  
 P260 - Do not breathe 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.  
 P304+341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P337+313 - Get medical advice/attention.  
 P314 - Get Medical advice/attention if you feel unwell.  
 P302+352 - IF ON SKIN: Wash with soap and water.  
 P403+233 - Store in a well ventilated place. Keep container tightly closed.

Chemical Ingredients		
CAS#	%	Chemical Name
1408295-67-9	>50%	Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-[[[(3-isocyanatomethylphenyl)amino]carbonyl]-omega.-[[[(3-isocyanatomethylphenyl)amino]carbonyl]oxy]-
101-68-8	10-25%	4,4'-Methylenediphenyl diisocyanate
26447-40-5	<10%	Benzene, 1,1'-methylenebis[isocyanato-
9016-87-9	<10%	Isocyanic acid, polymethylenepolyphenylene ester

Take affected persons out into the fresh air.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Provide oxygen treatment if affected person has difficulty breathing.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**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:**

Protect unharmed eye.

Rinse opened eye for several minutes under running water.

Remove contact lenses if worn, 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**

Breathing difficulty

Dizziness

Coughing

Asthma attacks

Allergic reactions

Nausea

**Hazards**

Danger of impaired breathing.

Danger of pulmonary oedema.

Danger of convulsion.

**Indication of any immediate medical attention and special treatment needed**

If swallowed, gastric irrigation with added, activated carbon.

Contains isocyanates. Consult literature for specific antidotes.

Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible.

Monitor circulation, possible shock treatment.

If necessary oxygen respiration treatment.

Later observation for pneumonia and pulmonary oedema.

Treat skin and mucous membrane with antihistamine and corticoid preparations.

**Flash Point:** 388 ° F / 198 ° C

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

For safety reasons unsuitable extinguishing agents: None.

Special hazards arising from the substance or mixture  
Formation of toxic gases is possible during heating or in case of fire.

Advice for firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information 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

**Environmental precautions:** 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).

Send for recovery or disposal in suitable receptacles.

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.

Ensure adequate ventilation.

**Handling Precautions:**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Take note of emission threshold.

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

**Storage Requirements:**

Requirements to be met by storerooms and receptacles:

Store in a cool location.

Avoid storage near extreme heat, ignition sources or open flame.

Provide ventilation for receptacles.

Information about storage in one common storage facility:

Store away from foodstuffs.

Do not store together with oxidizing and acidic materials.

Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

Store receptacle in a well ventilated area.

Protect from humidity and water.

Keep container tightly sealed.

**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:

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:

Use Organic Vapor Respirator in areas where the TLV of organic vapors may be exceeded due to poor ventilation.

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.

Eye protection:

Contact lenses should not be worn.

Safety glasses

Body protection: Impervious protective clothing

Limitation and supervision of exposure into the environment

No further relevant information available.

Risk management measures

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/m<sup>3</sup>, C 0,02 ppm

REL (USA) Short-term value: C 0,2\* mg/m<sup>3</sup>, C 0,02\* ppm / Long-term value: 0,05 mg/m<sup>3</sup>, 0,005 ppm / \*10-min

TLV (USA) 0,051 mg/m<sup>3</sup>, 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.

**Appearance:**

Clear Brown Liquid

**Specific Gravity or Density:**

1,1 g/cm<sup>3</sup>

**Flash Point:**

388 ° F / 198 ° C

**Autoignition Temperature:**

752 ° F / 400 ° C

<b>Chemical Stability:</b>	No decomposition if used and stored according to specifications.
<b>Conditions to Avoid:</b>	Keep ignition sources away - Do not smoke.
<b>Identification:</b>	Moisture. Keep away from heat and direct sunlight. Store away from oxidizing agents.
<b>Materials to Avoid:</b>	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.
<b>Hazardous Decomposition:</b>	Carbon monoxide and carbon dioxide Nitrogen oxides (NO <sub>x</sub> ) Hydrogen cyanide (prussic acid) Poisonous gases/vapours
<b>Hazardous Polymerization:</b>	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.

**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:

Harmful

Irritant

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.

12	<b>ECOLOGICAL INFORMATION</b>
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**Aquatic toxicity:** The material is harmful to the environment.

**Persistence and degradability** The product is partly biodegradable. Significant residuals remain.

**Bioaccumulative potential** Does not accumulate in organisms

**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.

Avoid transfer into the environment.

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

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

<b>15</b>	<b>REGULATORY INFORMATION</b>
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Component (CAS#) [%] - CODES

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 Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-[[ (3-isocyanatomethylphenyl) amino] carbonyl]-.omega.-[[ (3-isocyanatomethylphenyl) amino] carbonyl]oxy]- (1408295-67-9) [>50%]

4,4'-Methylenediphenyl diisocyanate (101-68-8) [10-25%] CERCLA, HAP, MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

Benzene, 1,1'-methylenebis[isocyanato- (26447-40-5) [<10%] TSCA

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

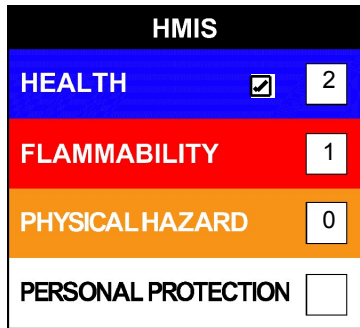
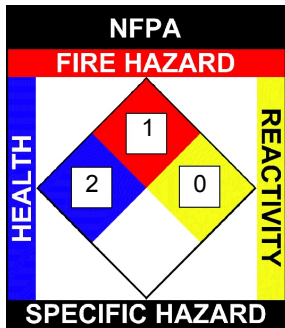
Regulatory CODE Descriptions

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 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  
 TSCA = Toxic Substances Control Act  
 TXAIR = TX Air Contaminants with Health Effects Screening Level

<b>16</b>	<b>OTHER INFORMATION</b>
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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.

Revision Date: 3/8/2019