

QUALIPUR 182 PART B

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PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: QUALIPUR 182 PART B**Revision Date:** 10/3/2022**Supplier Details:** Advanced Polymer Technology
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109 Conica Lane, Evans City, PA 16033**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, Skin corrosion/irritation, 1 B
 Health, Acute toxicity, 4 Oral
 Health, Acute toxicity, 4 Dermal
 Health, Respiratory or skin sensitization, 1 Skin
 Environmental, Hazards to the aquatic environment - Chronic, 3
 Health, Acute toxicity, 4 Inhalation
 Health, Serious Eye Damage/Eye Irritation, 1
 Health, Reproductive toxicity, 2
 Health, Specific target organ toxicity - Repeated exposure, 2

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: DANGER

GHS Hazard Pictograms:**GHS Hazard Statements:**

H314 - Causes severe skin burns and eye damage
 H302 - Harmful if swallowed
 H312 - Harmful in contact with skin
 H317 - May cause an allergic skin reaction
 H412 - Harmful to aquatic life with long lasting effects
 H332 - Harmful if inhaled
 H318 - Causes serious eye damage
 H361 - Suspected of damaging fertility or the unborn child (state specific effect if known)(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
 H373 - May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

GHS Precautionary Statements:

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P264 - Wash _ thoroughly after handling.
 P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
 P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 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+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

Contains 3-aminomethyl-3,5,5-trimethylcyclohexylamine, Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, reaction products with bisphenol A diglycidyl ether homopolymer. May produce an allergic reaction.

Chemical Ingredients:		
CAS#	%	Chemical Name:
1477-55-0	<50%	1,3-Benzenedimethanamine
98-54-4	<50%	Phenol, 4-(1,1-dimethylethyl)-
1761-71-3	<10%	Cyclohexanamine, 4,4'-methylenebis-
25513-64-8	<5%	1,6-Hexanediamine, 2,2,4(or 2,4,4)-trimethyl-
135108-88-2	<3%	Formaldehyde, polymer with benzenamine, hydrogenated

General information:

Immediately remove any clothing soiled by the product.

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; consult doctor in case of complaints.

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

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact:

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

Allergic reactions

Gastric or intestinal disorders

Dizziness

Coughing

Hazards

Danger of gastric perforation.

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

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.

Flash Point: > 93.3 °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

In case of fire, the following can be released:

Carbon monoxide (CO)

Nitrogen oxides (NOx)

Advice for firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information

Cool endangered receptacles with water spray.

No further relevant information available.

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:

Dilute with plenty of water.

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.

Handling Precautions:

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Storage Requirements:

Information about fire - and explosion protection: No special measures required.

Requirements to be met by storerooms and receptacles:

Provide ventilation for receptacles.

Protect from humidity and water.

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 oxidizing and acidic materials.

Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

Keep container tightly sealed.

Engineering Controls:

Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Ensure compliance yo all relevant OSHA regulations.

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 suitable respiratory protective device in case of insufficient ventilation.
Use suitable respiratory protective device when aerosol or mist is formed.

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

Fluorocarbon rubber (Viton)

Neoprene gloves

Nitrile rubber, NBR

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: Protective work clothing

Limitation and supervision of exposure into the environment

No further relevant information available.

Risk management measures

No further relevant information available.

Chemical Identity Type Exposure Limit Values Source m-Phenylenebis(methylamine) Ceiling 0.1 mg/m³ US. ACGIH Threshold Limit Values, as amended (03 2016) Ceil_Time 0.1 mg/m³ US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2016) Ceiling 0.1 mg/m³ US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989) Ceiling 0.1 mg/m³ US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (06 2008) AN ESL 0.1 µg/m³ US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (11 2016) ST ESL 1 µg/m³ US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (11 2016) Ceiling 0.1 mg/m³ US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (01 2015)
m-Phenylenebis(methylamine) US. ACGIH Threshold Limit Values, as amended Can be absorbed through the skin.

9	PHYSICAL AND CHEMICAL PROPERTIES
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Appearance:	Clear yellow Liquid	Odor:	Amine Oder
Physical State:	Liquid	Solubility:	No data available
Odor Threshold:	No data available	Freezing or Melting Point:	No data available
Specific Gravity or Density:	1 g/cm ³	Flash Point:	90 °C
Viscosity:	No data available	Vapor Density:	No data available
Boiling Point:	>200 °C	Autoignition Temperature:	No data available
Partition Coefficient:	No data available	Upper Flammability Limit and Lower Flammability Limit:	No data available
Vapor Pressure:	0,1 hPa		
Potentia Hydrogenii:	No data available		
Evaporation Rate:	No data available		
Decompression Temperature:	No data available		

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. Moisture. Keep away from heat and direct sunlight. Store away from oxidizing agents.
Materials to Avoid identification:	Reactive metals (e.g. sodium, calcium, zinc etc.). Materials reactive with hydroxyl compounds. CAUTION! N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. Nitrous acid and other nitrosating agents Organic acids (i.e. acetic acid, citric acid etc.). Mineral Acid Sodium hypochlorite. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition
Hazardous Decomposition:	Carbon monoxide and carbon dioxide Nitrogen oxides Toxic fumes may be released if heated above the decomposition point.
Hazardous Polymerization:	Exothermic polymerization.

11	TOXICOLOGICAL INFORMATION
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m-Phenylenebis(methylamine) OECD Test Guideline 404 (Rabbit): Corrosive. , > 3.01 min - < 1 h 4-tert-butylphenol OECD Test Guideline 404 (Rabbit): Skin irritation Diaminodicyclohexylmethane OECD Test Guideline 404 (Rabbit): Corrosive. , > 3.01 min - < 1 h 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine OECD Test Guideline 404 (Rabbit): Corrosive. Methyleneoxide, polymer with benzenamine, hydrogenated(Rabbit): Corrosive. , > 1.01 - < 4 h

Components:

m-Phenylenebis(methylamine) May cause sensitization by skin contact. 4-tert-butylphenol Maximisation Test, OECD Test Guideline 406 (Guinea Pig): Not a skin sensitizer. literature 4,4'-Diaminodicyclohexylmethane (Magnusson-Kligman test), OECD Test Guideline 406 (Guinea Pig): Skin sensitizer Respiratory sensitizer: No data available. Methyleneoxide, polymer with benzenamine, hydrogenated May cause sensitization by skin contact.

Carcinogenicity

Product: No data available/Not classified

Specific Target Organ Toxicity - Repeated Exposure

4,4'-Diaminodicyclohexylmethane Liver, Skeletal muscle - Category 2 Methyleneoxide, polymer with benzenamine, hydrogenated Liver, Skeletal muscle - Category 2

Acute hazards to the aquatic environment:

Fish Product: No data available.

Components:

4-tert-butylphenol LC 50 (*Oncorhynchus mykiss* (rainbow trout), 96 h): > 1 mg/l literature
4,4'-Diaminodicyclohexylmethane LC 50 (*Leuciscus idus melanotus*, 96 h): > 100 mg/l
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine LC 50 (*Leuciscus idus melanotus*, 48 h): 174 mg/l
Methyleneoxide, polymer with benzenamine, hydrogenated LC 50 (*Poecilia reticulata* (guppy), 96 h): 63 mg/l

Aquatic Invertebrates

Product: No data available.

Components:

4-tert-butylphenol EC 50 (*Daphnia magna*, 48 h): approx. 4.8 mg/l literature
4,4'-Diaminodicyclohexylmethane EC 50 (*Daphnia magna*, 48 h): 9.24 mg/l
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine EC 50 (*Daphnia magna*, 24 h): 31.5 mg/l
Methyleneoxide, polymer with benzenamine, hydrogenated EC 50 (*Daphnia magna*, 48 h): 15.4 mg/l

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Components:

4-tert-butylphenol NOEC (*Pimephales promelas* (fathead minnow), 128 d): 0.01 mg/l literature
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine NOEC (*Danio rerio* (zebra fish), 34 d): 10.9 mg/l

Aquatic Invertebrates

Product: No data available.

Components:

4-tert-butylphenol NOEC (*Pimephales promelas* (fathead minnow), 128 d): 0.01 mg/l literature
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine NOEC (*Danio rerio* (zebra fish), 34 d): 10.9 mg/l

Aquatic Invertebrates

Product: No data available.

Components:

4-tert-butylphenol NOEC (*Daphnia magna*, 21 d): 0.73 mg/l literature
4,4'-Diaminodicyclohexylmethane NOEC (*Daphnia magna*, 21 d): 4 mg/l
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine NOEC (*Daphnia magna*, 21 d): 1.02 mg/l

Toxicity to Aquatic Plants

Product: No data available.

Components:

m-Phenylenebis(methylamine) EC 50 (*Desmodesmus subspicatus* (green algae), 72 h): 12 mg/l
4-tert-butylphenol ErC50 (Algae (*Pseudokirchneriella subcapitata*), 72 h): 14 mg/l literature
4,4'-Diaminodicyclohexylmethane ErC50 (*Desmodesmus subspicatus*, 72 h): 141.2 mg/l
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine ErC50 (Algae (*Pseudokirchneriella subcapitata*), 72 h): 43.5 mg/l NOEC (Algae (*Pseudokirchneriella subcapitata*), 72 h): 16 mg/l
Methyleneoxide, polymer with benzenamine, hydrogenated ErC50 (Alga, 72 h): 43.9 mg/l

Persistence and Degradability

Biodegradation

Product: No data available.

Components:

4-tert-butylphenol Bioconcentration Factor (BCF): 48 - 88 literature

4,4'-Diaminodicyclohexylmethane In view of the relatively low octanol / water coefficients of distribution (see Chapter 9), no significant accumulation of the substance in organisms is to be expected.

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine In view of the relatively low octanol / water coefficients of distribution (see Chapter 9), no significant accumulation of the substance in organisms is to be expected.

Methyleneoxide, polymer with benzenamine, hydrogenated Cyprinus carpio (Carp), Does not bioaccumulate.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Components:

4-tert-butylphenol Log Kow: 3.23 °C literature

4,4'-Diaminodicyclohexylmethane Log Kow: 2.03 Measured

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine Log Kow: -0.3 (OECD TG 117, measured)

Mobility in soil:

No data available.

Components:

m-Phenylenebis(methylamine) No data available.

4-tert-butylphenol No data available.

4,4'-Diaminodicyclohexylmethane The substance will occur mainly in bodies of water due to its environmental distribution characteristics. The soil mobility of the substance is only minimally affected by adsorption to soil components. The effects of light decompose the substance rapidly in the atmosphere.

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine The soil mobility of the substance is only minimally affected by adsorption to soil components. The substance will occur mainly in bodies of water due to its environmental distribution characteristics. The effects of light decompose the substance rapidly in the atmosphere.

Methyleneoxide, polymer with benzenamine, hydrogenated No data available.

Other adverse effects: No data avail

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 after solidification 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.

14	TRANSPORT INFORMATION
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Domestic regulation
49 CFR

UN/ID/NA number UN 2735

Proper shipping name Amines, liquid, corrosive, n.o.s. (Benzene-1,3-dimethaneamine (MXDA), 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine)

Class 8

Packing group II

Labels 8

ERG Code 153

Marine pollutant no

International Regulations

IATA-DGR

UN/ID No. UN 2735

Proper shipping name Amines, liquid, corrosive, n.o.s. (Benzene-1,3-dimethaneamine (MXDA), 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine)

Class 8

Packing group II

Labels 8

Packing instruction (cargo aircraft) 855

Packing instruction (passenger aircraft) 851

IMDG-Code

UN number UN 2735

Proper shipping name AMINES, LIQUID, CORROSIVE, N.O.S. (Benzene-1,3-dimethaneamine (MXDA), 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine)

Class 8

Packing group II

Labels 8

EmS Code F-A, S-B

Marine pollutant no

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

 1,3-Benzenedimethanamine (1477-55-0) [<50%] MASS, OSHAWAC, PA, TSCA, TXAIR

 Phenol, 4-(1,1-dimethylethyl)- (98-54-4) [<50%] TSCA

 Cyclohexanamine, 4,4'-methylenebis- (1761-71-3) [<10%] TSCA

 1,6-Hexanediamine, 2,2,4(or 2,4,4)-trimethyl- (25513-64-8) [<5%] TSCA

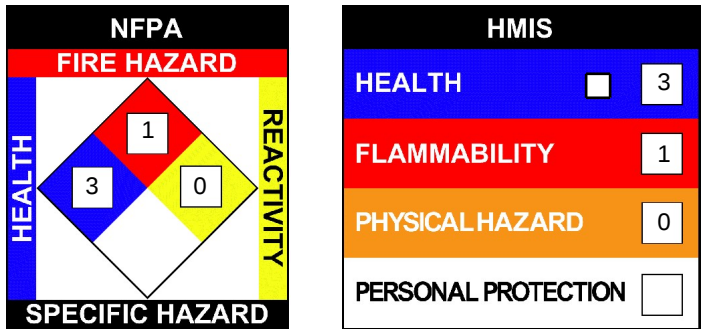
 Formaldehyde, polymer with benzenamine, hydrogenated (135108-88-2) [<3%] TSCA

Regulatory CODE Descriptions

 MASS = MA Massachusetts Hazardous Substances List
 OSHAWAC = OSHA Workplace Air Contaminants
 PA = PA Right-To-Know List of Hazardous Substances
 TSCA = Toxic Substances Control Act
 TXAIR = TX Air Contaminants with Health Effects Screening Level

16	OTHER INFORMATION
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NFPA: Health = 3, Fire = 1, Reactivity = 0, Specific Hazard = n/a
HMIS III: Health = 3, 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: 10/3/2022