

SAFETY DATA SHEET

Version 7.0

Issue Date: 9-13-2013

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SECTION 1: Product and Company Identification

PRODUCT NAME: Black CP1™ Polyimide Resin

MANUFACTURER/ SUPPLIER:

NeXolve Holding Company, LLC

290 Dunlop Blvd, Suite 200

Huntsville, AL 35824

256-836-7780

EMERGENCY HEALTH/EMERGENCY SPILL INFORMATION:

For Hazardous Materials [or Dangerous Goods] Incident

Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300 CCN702632 or

+1 703-527-3887 (collect calls accepted)

For R&D use only. Not for drug, household or other uses.

SECTION 2: Hazards Identification

GHS Classification

Flammable liquids (Category 3), H226

Reproductive toxicity (Category 1B), H360

GHS Label elements, including precautionary statements

Pictograms:



Signal word: Danger

Hazard statement(s):

H226: Flammable liquid and vapor

H360: May damage fertility or the unborn child.

Precautionary statement(s):

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P280: Wear protective gloves/protective clothing/ eye protection/face protection.

P303 + P361 + P353: IF On Skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P308 + P313: IF exposed or concerned: Get medical advice/ attention.

P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P403 + P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

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

Hazards not otherwise classified (HNOC)

May form explosive peroxides.

HMIS Classification

Health hazard: 0

Chronic Health Hazard: *

Flammability: 2
Physical hazards: 0

NFPA Rating
Health hazard: 0
Fire: 2
Reactivity Hazard: 0

SECTION 3: Composition/information on ingredients

COMPONENT	CAS#	Range % by WT
Bis (2-methoxyethyl) ether	111-96-6	70-90%
CP1™ Polyimide	87182-96-5	10-30%
Proprietary Pigment	NA	5-30%

Hazardous components:

Components	Classification
Bis(2-methoxyethyl)ether	Flam. Liq. 3; Repr. 1B; H226, H360

SECTION 4: First Aid Measures

General advice

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

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: Firefighting Measures

Conditions of flammability

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

Suitable extinguishing media

Dry powder, Dry Sand

Unsuitable extinguishing media

Do Not use water jet.

Special protective equipment for firefighters

Wear self contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7: Handling and Storage

Precautions for safe handling

Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8: Exposure controls/personal protection

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Bis(2-methoxyethyl)ether	111-96-6	PEL	1 ppm 5.5 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
	Remarks	Skin		
		STEL	5 ppm 27 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		

Derived No Effect Level (DNEL) – Diglyme

Application Area	Exposure routes	Health effect	Value
Workers	Inhalation	Long-term systemic effects	26.8 mg/m ³
Workers	Skin contact	Long-term systemic effects	2.08 mg/Kg BW/d
Consumers	Inhalation	Long-term systemic effects	6.67 mg/m ³
Consumers	Skin contact	Long-term systemic effects	1.04 mg/Kg BW/d
Consumers	Ingestion	Long-term systemic effects	1.04 mg/Kg BW/d

Predicted No Effect Concentration (PNEC) – Diglyme

Compartment	Value
Water	9.43 mg/L
Soil	1.72 mg/Kg
Marine Water	0.64 mg/L
Fresh Water	6.4 mg/L
Marine Sediment	2.74 mg/Kg
Fresh Water Sediment	27.4 mg/Kg
Onsite Sewage Treatment Plant	50 mg/L

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the work day.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye/ face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Impervious clothing, flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

Appearance

Form Black viscous liquid

Color Black

Safety data

pH no data available

Melting point/freezing Point no data available
-64°C (-83°F) – lit. for Bis (2-methoxyethyl) ether

Boiling point no data available
162°C (324°F) – lit. for Bis (2-methoxyethyl) ether

Flash point no data available
51°C (124°F) – Closed cup for Bis (2-methoxyethyl) ether

Ignition temperature no data available

Auto-ignition temp no data available

Lower explosion limit no data available
1.4% (V) for Bis (2-methoxyethyl) ether

Upper explosion limit	no data available 17.4% (V) for Bis (2-methoxyethyl) ether
Vapour pressure	no data available
Density	1 g/cm ³ at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapor Density	no data available
Odor	no data available
Odor Threshold	no data available
Evaporation rate	no data available

SECTION 10: Stability and Reactivity

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition product

Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - no data available

SECTION 11: Toxicological Information

Acute toxicity

Oral LD50

No data available

For Bis (2-methoxyethyl) ether only

Rat – female: 4,760 mg/Kg (OECD Test Guideline 401)

Inhalation LC50

no data available

For Bis (2-methoxyethyl) ether only

Rat – male and female: 7 - >11 mg/l (OECD Test Guideline 403)

Dermal LD50

no data available

Other information on acute toxicity

no data available

Skin corrosion/irritation

no data available

For Bis (2-methoxyethyl) ether only

Skin – Rabbit – Result: No skin irritation – 24h (OECD Test Guideline 404)

Serious eye damage/eye irritation

no data available

For Bis (2-methoxyethyl) ether only

Eyes – Rabbit – Result: No eye irritation – 24h (OECD Test Guideline 405)

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

For Bis (2-methoxyethyl) ether only

Ames test: Salmonella typhimurium; Result: negative

unscheduled DNA synthesis assay; Result: negative

OECD Test Guideline 475 Rat-male and female-Bone marrow; Result: negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

For Bis (2-methoxyethyl) ether only
May damage the unborn child.
May damage fertility.

Teratogenicity

Laboratory experiments have shown teratogenic effects.

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

To the best of our knowledge, the chemical, physical, and taxological properties have not been thoroughly investigated.

Stomach – Irregularities – Based on Human Evidence.

Synergistic effects

no data available

SECTION 12: Ecological Information

Toxicity

no data available

For Bis (2-methoxyethyl) ether only

Toxicity to fish: LC50-Pimephales promelas (fathead minnow)-8,569 mg/l-96 h
Remarks: (IUCLID)

Toxicity to daphnia and other aquatic invertebrates: semi-static test EC50-Daphnia magna (Water flea)-943 mg/l-48 h (OECD Test Guideline 202)

Toxicity to algae: semi-static testErC50-Pseudokirchneriella subcapitata (green algae)-> 10,000 mg/l-72 h (OECD Test Guideline 201)

Toxicity to bacteria: static testEC20-activated sludge-1,067 mg/l-3 h (OECD Test Guideline 209)

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

SECTION 13: Disposal considerations

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transportation information

DOT (US)

UN number: 1866 Class: 3 Packing group: III

Proper shipping name: Resin Solution

IMDG

UN number: 1866 Class: 3 Packing group: III

Proper shipping name: Resin Solution

IATA

UN number: 1866 Class: 3 Packing group: III

Proper shipping name: Resin Solution

SECTION 15: Regulatory information

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

Component	Cas – No.	Revision Date
Bis(2-methoxyethyl)ether	111-96-6	1989-08-11

SARA 311/312 Hazards

Fire Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Component	Cas – No.	Revision Date
Bis(2-methoxyethyl)ether	111-96-6	1989-08-11

New Jersey Right To Know Components

Component	Cas – No.	Revision Date
Bis(2-methoxyethyl)ether	111-96-6	1989-08-11

California Prop. 65 Components

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

SECTION 16: Other information

The information contained herein is believed to be correct, but there is no guarantee such information is accurate or complete, and this Safety Data Sheet does not make any warranty, express or implied, regarding the product. NeXolve does not assume liability for any loss or damage, direct or indirect, arising out of the use of this information. The user is solely responsible for (1) the safe handling and use of this product, (2) legal compliance, and (3) all losses, damages, or liability from use of this product.



NeXolve Holding Company
290 Dunlop Boulevard
Building 200
Huntsville, AL 35824