

Bond + Seal Black

Version 6.0 Revision Date: 11/20/2015 SDS Number: 372216-00001 Date of last issue: 04/23/2015
Date of first issue: 09/06/2010

SECTION 1. IDENTIFICATION

Product name : Bond + Seal Black

Product code : 08901003

Manufacturer or supplier's details

Company name of supplier : Wurth USA Inc.

Address : 93 Grant St.
Ramsey, NJ 07446

Telephone : (201) 825-2710

Telefax : (201) 825-1643

Emergency telephone : +1 800 255 3924

E-mail address : prodsafe@wuerth.com

Recommended use of the chemical and restrictions on use

Recommended use : Adhesives
Sealant

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Respiratory sensitization : Category 1

Skin sensitization : Category 1

Specific target organ systemic toxicity - repeated exposure : Category 1 (Central nervous system)

Specific target organ systemic toxicity - repeated exposure : Category 2 (Liver, Kidney)

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Bond + Seal Black

Version 6.0 Revision Date: 11/20/2015 SDS Number: 372216-00001 Date of last issue: 04/23/2015
 Date of first issue: 09/06/2010

H372 Causes damage to organs (Central nervous system) through prolonged or repeated exposure.
 H373 May cause damage to organs (Liver, Kidney) through prolonged or repeated exposure.

Precautionary Statements

: **Prevention:**

P260 Do not breathe mist or vapors.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves.
 P285 In case of inadequate ventilation wear respiratory protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P304 + P341 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
 P363 Wash contaminated clothing before reuse.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Limestone	1317-65-3	>= 20 - < 30
Polyvinyl chloride	9002-86-2	>= 5 - < 10
Carbon black	1333-86-4	>= 1 - < 5
Xylene	1330-20-7	>= 1 - < 5
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	Not Assigned	>= 1 - < 5
Ethylbenzene	100-41-4	>= 0.1 - < 1
4,4'-Diphenylmethane diisocyanate	101-68-8	>= 0.1 - < 1

SECTION 4. FIRST AID MEASURES

General advice

: In the case of accident or if you feel unwell, seek medical advice immediately.
 When symptoms persist or in all cases of doubt seek medical advice.

Bond + Seal Black

Version	Revision Date:	SDS Number:	Date of last issue: 04/23/2015
6.0	11/20/2015	372216-00001	Date of first issue: 09/06/2010

- | | | |
|---|---|--|
| If inhaled | : | If inhaled, remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get medical attention. |
| In case of skin contact | : | In case of contact, immediately flush skin with plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse. |
| In case of eye contact | : | Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists. |
| If swallowed | : | If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water. |
| Most important symptoms and effects, both acute and delayed | : | May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Causes damage to organs through prolonged or repeated exposure. |
| Protection of first-aiders | : | First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists. |
| Notes to physician | : | Treat symptomatically and supportively. |
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SECTION 5. FIRE-FIGHTING MEASURES

- | | | |
|---------------------------------------|---|---|
| Suitable extinguishing media | : | Water spray
Alcohol-resistant foam
Carbon dioxide (CO ₂)
Dry chemical |
| Unsuitable extinguishing media | : | None known. |
| Specific hazards during fire fighting | : | Exposure to combustion products may be a hazard to health. |
| Hazardous combustion products | : | Carbon oxides
Nitrogen oxides (NO _x)
Metal oxides |
| Specific extinguishing methods | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area. |

Bond + Seal Black

Version	Revision Date:	SDS Number:	Date of last issue: 04/23/2015
6.0	11/20/2015	372216-00001	Date of first issue: 09/06/2010

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions : Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not get on skin or clothing. Do not breathe vapors or spray mist. Do not swallow. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice. Keep container tightly closed. Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labeled containers. Keep tightly closed. Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:
Strong oxidizing agents

Bond + Seal BlackVersion
6.0Revision Date:
11/20/2015SDS Number:
372216-00001Date of last issue: 04/23/2015
Date of first issue: 09/06/2010Organic peroxides
Explosives
Gases**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Limestone	1317-65-3	TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
		TWA (Respirable)	5 mg/m ³	NIOSH REL
		TWA (total)	10 mg/m ³	NIOSH REL
Polyvinyl chloride	9002-86-2	TWA (Respirable fraction)	1 mg/m ³	ACGIH
Carbon black	1333-86-4	TWA	3.5 mg/m ³	NIOSH REL
		TWA	3.5 mg/m ³	OSHA Z-1
		TWA (Inhalable fraction)	3 mg/m ³	ACGIH
Xylene	1330-20-7	TWA	100 ppm 435 mg/m ³	OSHA Z-1
		TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	64742-82-1	TWA	500 ppm 2,000 mg/m ³	OSHA Z-1
Ethylbenzene	100-41-4	TWA	20 ppm	ACGIH
		TWA	100 ppm 435 mg/m ³	OSHA Z-1
		TWA	100 ppm 435 mg/m ³	NIOSH REL
		ST	125 ppm 545 mg/m ³	NIOSH REL
4,4'-Diphenylmethane diisocyanate	101-68-8	TWA	0.005 ppm	ACGIH
		TWA	0.005 ppm 0.05 mg/m ³	NIOSH REL
		C	0.02 ppm 0.2 mg/m ³	NIOSH REL
		C	0.02 ppm 0.2 mg/m ³	OSHA Z-1

Biological occupational exposure limits

Ingredients	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Xylene	1330-20-7	Methyl-	Urine	End of	1.5 g/g cre-	ACGIH

Bond + Seal Black

Version 6.0 Revision Date: 11/20/2015 SDS Number: 372216-00001 Date of last issue: 04/23/2015
 Date of first issue: 09/06/2010

		hippuric acids		shift (As soon as possible after exposure ceases)	atinine	BEI
Ethylbenzene	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.15 g/g creatinine	ACGIH BEI

Engineering measures : Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material : Fluorinated rubber
Break through time : > 30 min
Glove thickness : 0.4 mm
Directive : DIN EN 374

Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:
 Safety goggles

Skin and body protection : Skin should be washed after contact.

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.
 When using do not eat, drink or smoke.
 Wash contaminated clothing before re-use.

Bond + Seal Black

Version 6.0 Revision Date: 11/20/2015 SDS Number: 372216-00001 Date of last issue: 04/23/2015
Date of first issue: 09/06/2010

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : paste

Color : black

Odor : characteristic

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

Flash point : > 101 °C
Method: closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Density : ca. 1.26 g/cm³ (20 °C)

Solubility(ies)
Water solubility : insoluble

Partition coefficient: n-octanol/water : Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity
Viscosity, kinematic : > 7 mm²/s (40 °C)

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Bond + Seal Black

Version	Revision Date:	SDS Number:	Date of last issue: 04/23/2015
6.0	11/20/2015	372216-00001	Date of first issue: 09/06/2010

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Evolution of CO ₂ in closed containers causes overpressure and produces a risk of bursting. Can react with strong oxidizing agents.
Conditions to avoid	: None known.
Incompatible materials	: Oxidizing agents
Hazardous decomposition products	: No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	: Acute toxicity estimate: > 200 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method
Acute dermal toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Ingredients:**Limestone:**

Acute oral toxicity	: LD ₅₀ (Rat): > 2,000 mg/kg Assessment: The substance or mixture has no acute oral toxicity
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Carbon black:

Acute oral toxicity	: LD ₅₀ (Rat): > 5,000 mg/kg
Acute inhalation toxicity	: LC ₅₀ (Rat): > 0.0046 mg/l Exposure time: 4 h Test atmosphere: dust/mist

Xylene:

Acute oral toxicity	: LD ₅₀ (Rat): 4,300 mg/kg Method: Directive 67/548/EEC, Annex V, B.1.
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Bond + Seal Black

Version 6.0 Revision Date: 11/20/2015 SDS Number: 372216-00001 Date of last issue: 04/23/2015
Date of first issue: 09/06/2010

Acute inhalation toxicity : LC50 (Rat): 27.5 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute toxicity estimate: 11 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Expert judgment
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Acute dermal toxicity : Acute toxicity estimate: 1,100 mg/kg
Method: Expert judgment
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Acute oral toxicity : LD50 (Rat): > 15,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 13.1 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rat): > 3,400 mg/kg

Ethylbenzene:

Acute oral toxicity : LD50 (Rat): 3,500 mg/kg

Acute inhalation toxicity : LC50 (Rat): 17.2 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

4,4'-Diphenylmethane diisocyanate:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 2.24 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: Based on data from similar materials

Skin corrosion/irritation

Not classified based on available information.

Ingredients:**Carbon black:**

Species: Rabbit

Result: No skin irritation

Bond + Seal Black

Version	Revision Date:	SDS Number:	Date of last issue: 04/23/2015
6.0	11/20/2015	372216-00001	Date of first issue: 09/06/2010

Xylene:

Species: Rabbit
Result: Skin irritation

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Assessment: Repeated exposure may cause skin dryness or cracking.

4,4'-Diphenylmethane diisocyanate:

Species: Rabbit
Method: OECD Test Guideline 404
Result: Skin irritation
Remarks: Based on data from similar materials

Serious eye damage/eye irritation

Not classified based on available information.

Ingredients:**Carbon black:**

Species: Rabbit
Result: No eye irritation

Xylene:

Species: Rabbit
Result: Irritation to eyes, reversing within 7 days

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Ethylbenzene:

Species: Rabbit
Result: No eye irritation

4,4'-Diphenylmethane diisocyanate:

Result: Irritation to eyes, reversing within 7 days
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Respiratory or skin sensitization

Skin sensitization: May cause an allergic skin reaction.
Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Ingredients:**Carbon black:**

Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406

Bond + Seal Black

Version 6.0 Revision Date: 11/20/2015 SDS Number: 372216-00001 Date of last issue: 04/23/2015
Date of first issue: 09/06/2010

Result: negative

Xylene:

Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: negative

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Test Type: Maximization Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

Ethylbenzene:

Test Type: Human repeat insult patch test (HRIPT)
Routes of exposure: Skin contact
Result: negative

4,4'-Diphenylmethane diisocyanate:

Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: positive

Assessment: Probability or evidence of skin sensitization in humans

Routes of exposure: Inhalation
Species: Rat
Result: positive
Remarks: Based on data from similar materials

Assessment: Probability of respiratory sensitization in humans based on animal testing

Germ cell mutagenicity

Not classified based on available information.

Ingredients:**Carbon black:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Xylene:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Result: negative

: Test Type: In vitro sister chromatid exchange assay in mammalian cells
Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)
Species: Mouse
Application Route: Skin contact

Bond + Seal Black

Version 6.0 Revision Date: 11/20/2015 SDS Number: 372216-00001 Date of last issue: 04/23/2015
Date of first issue: 09/06/2010

Result: negative

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Result: negative

: Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Ethylbenzene:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Result: negative

: Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo
Species: Mouse
Application Route: Inhalation
Method: OECD Test Guideline 486
Result: negative

4,4'-Diphenylmethane diisocyanate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (dust/mist/fume)
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

Not classified based on available information.

Ingredients:**Xylene:**

Species: Rat
Application Route: Ingestion
Exposure time: 103 weeks
Result: negative

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Species: Rat
Application Route: inhalation (vapor)

Bond + Seal Black

Version	Revision Date:	SDS Number:	Date of last issue: 04/23/2015
6.0	11/20/2015	372216-00001	Date of first issue: 09/06/2010

Exposure time: 105 weeks
 Result: negative
 Remarks: Based on data from similar materials

Ethylbenzene:

Species: Rat
 Application Route: Inhalation
 Exposure time: 104 weeks
 Result: positive
 Remarks: The mechanism or mode of action may not be relevant in humans.

4,4'-Diphenylmethane diisocyanate:

Species: Rat
 Application Route: inhalation (dust/mist/fume)
 Exposure time: 2 Years
 Result: positive
 Remarks: Based on data from similar materials

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

IARC

Group 2B: Possibly carcinogenic to humans

Ethylbenzene 100-41-4

Carbon black 1333-86-4

OSHA

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

NTP

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

Reproductive toxicity

Not classified based on available information.

Ingredients:

Xylene:

Effects on fertility : Test Type: One-generation reproduction toxicity study
 Species: Rat
 Application Route: inhalation (vapor)
 Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
 Species: Rat
 Application Route: inhalation (vapor)
 Result: negative

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Effects on fertility : Test Type: One-generation reproduction toxicity study
 Species: Rat
 Application Route: inhalation (vapor)
 Result: negative

Bond + Seal Black

Version	Revision Date:	SDS Number:	Date of last issue: 04/23/2015
6.0	11/20/2015	372216-00001	Date of first issue: 09/06/2010

Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Ethylbenzene:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Method: OECD Test Guideline 415
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Inhalation
Method: OECD Test Guideline 414
Result: negative

4,4'-Diphenylmethane diisocyanate:

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (dust/mist/fume)
Result: negative
Remarks: Based on data from similar materials

STOT-single exposure

Not classified based on available information.

Ingredients:**Xylene:**

Assessment: May cause respiratory irritation.

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Assessment: May cause drowsiness or dizziness.

4,4'-Diphenylmethane diisocyanate:

Assessment: May cause respiratory irritation.

STOT-repeated exposure

Causes damage to organs (Central nervous system) through prolonged or repeated exposure.
May cause damage to organs (Liver, Kidney) through prolonged or repeated exposure.

Ingredients:**Carbon black:**

Routes of exposure: inhalation (dust/mist/fume)

Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

Xylene:

Routes of exposure: inhalation (vapor)

Target Organs: Central nervous system, Liver, Kidney

Assessment: Shown to produce significant health effects in animals at concentrations of >0.2 to

Bond + Seal Black

Version Revision Date: SDS Number: Date of last issue: 04/23/2015
6.0 11/20/2015 372216-00001 Date of first issue: 09/06/2010

1 mg/l/6h/d.

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Routes of exposure: Inhalation

Target Organs: Central nervous system

Assessment: Causes damage to organs through prolonged or repeated exposure.

Ethylbenzene:

Routes of exposure: inhalation (vapor)

Target Organs: Auditory system

Assessment: Shown to produce significant health effects in animals at concentrations of >0.2 to 1 mg/l/6h/d.

4,4'-Diphenylmethane diisocyanate:

Routes of exposure: inhalation (dust/mist/fume)

Target Organs: Respiratory system

Assessment: Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d.

Repeated dose toxicity**Ingredients:****Carbon black:**

Species: Rat

NOAEL: 1 mg/kg

LOAEL: 7 mg/kg

Application Route: inhalation (dust/mist/fume)

Exposure time: 90 Days

Xylene:

Species: Rat

NOAEL: 4.35 mg/l

Application Route: inhalation (vapor)

Exposure time: 90 Days

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Species: Rat

NOAEL: 1,056 mg/kg

Application Route: Ingestion

Exposure time: 90 days

Species: Rat

NOAEL: 3.950 mg/l

LOAEL: 7.400 mg/l

Application Route: Inhalation

Exposure time: 90 days

Ethylbenzene:

Species: Rat, female

LOAEL: 75 ppm

Application Route: inhalation (vapor)

Exposure time: 104 Weeks

4,4'-Diphenylmethane diisocyanate:

Species: Rat

Bond + Seal Black

Version	Revision Date:	SDS Number:	Date of last issue: 04/23/2015
6.0	11/20/2015	372216-00001	Date of first issue: 09/06/2010

NOAEL: 0,2 mg/m³
 LOAEL: 1 mg/m³
 Application Route: inhalation (dust/mist/fume)
 Exposure time: 2 yr
 Remarks: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Ingredients:

Xylene:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Ethylbenzene:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Experience with human exposure

Ingredients:

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Inhalation : Symptoms: central nervous system effects

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Limestone:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 10,000 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
 Exposure time: 48 h

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 200 mg/l
 Exposure time: 72 h

Carbon black:

Toxicity to fish : LC0 (Danio rerio (zebra fish)): 1,000 mg/l
 Exposure time: 96 h
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 5,600 mg/l
 Exposure time: 24 h
 Method: OECD Test Guideline 202

Bond + Seal Black

Version	Revision Date:	SDS Number:	Date of last issue: 04/23/2015
6.0	11/20/2015	372216-00001	Date of first issue: 09/06/2010

Toxicity to algae : NOEC (Desmodesmus subspicatus (green algae)): 10,000 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201

Xylene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2.6 mg/l
 Exposure time: 96 h
 Method: OECD Test Guideline 203
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : IC50 (Daphnia magna (Water flea)): 1 mg/l
 Exposure time: 24 h
 Method: OECD Test Guideline 202
 Remarks: Based on data from similar materials

Toxicity to algae : EC10 (Pseudokirchneriella subcapitata (green algae)): 1.9 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on data from similar materials

ErC50 (Pseudokirchneriella subcapitata (green algae)): 4.36 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): > 1.3 mg/l
 Exposure time: 56 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (Daphnia magna (Water flea)): 1.91 mg/l
 Exposure time: 21 d
 Method: OECD Test Guideline 211
 Remarks: Based on data from similar materials

Toxicity to bacteria : EC50: > 157 mg/l
 Exposure time: 3 h
 Method: OECD Test Guideline 209
 Remarks: Based on data from similar materials

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 10 - 30 mg/l
 Exposure time: 96 h
 Test substance: Water Accommodated Fraction
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10 - 22 mg/l
 Exposure time: 48 h
 Test substance: Water Accommodated Fraction
 Method: OECD Test Guideline 202

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): 4.1 mg/l
 Exposure time: 72 h

Bond + Seal Black

Version	Revision Date:	SDS Number:	Date of last issue: 04/23/2015
6.0	11/20/2015	372216-00001	Date of first issue: 09/06/2010

Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

NOELR (Pseudokirchneriella subcapitata (green algae)): 0.76 mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.097 mg/l
Exposure time: 21 d
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Ethylbenzene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4.2 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.8 - 2.4 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 5.4 mg/l
Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (water flea)): 0.96 mg/l
Exposure time: 7 d

Toxicity to bacteria : EC50 (Nitrosomonas sp.): 96 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 209

4,4'-Diphenylmethane diisocyanate:

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 3,000 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 129.7 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 1,640 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOEC (Desmodesmus subspicatus (green algae)): 1,640 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Bond + Seal Black

Version 6.0 Revision Date: 11/20/2015 SDS Number: 372216-00001 Date of last issue: 04/23/2015
Date of first issue: 09/06/2010

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Toxicity to bacteria : EC50: > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

Persistence and degradability**Ingredients:****Polyvinyl chloride:**

Biodegradability : Result: Not readily biodegradable.

Xylene:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 87.8 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Biodegradability : Result: Readily biodegradable.
Biodegradation: 75.9 %
Exposure time: 31 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Ethylbenzene:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 70 - 80 %
Exposure time: 28 d

4,4'-Diphenylmethane diisocyanate:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302
Remarks: Based on data from similar materials

Bioaccumulative potential**Ingredients:****Xylene:**

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 5.4 - 25.9

Partition coefficient: n-octanol/water : log Pow: 3.12 - 3.2

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Partition coefficient: n- : Pow: > 4

Bond + Seal Black

Version 6.0 Revision Date: 11/20/2015 SDS Number: 372216-00001 Date of last issue: 04/23/2015
Date of first issue: 09/06/2010

octanol/water

Ethylbenzene:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): < 100
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 3.6

4,4'-Diphenylmethane diisocyanate:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 200

Partition coefficient: n-octanol/water : log Pow: 4.51

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION**International Regulation****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation**49 CFR**

UN/ID/NA number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Bond + Seal Black

Version 6.0 Revision Date: 11/20/2015 SDS Number: 372216-00001 Date of last issue: 04/23/2015
 Date of first issue: 09/06/2010

(Xylene)
 Class : 9
 Packing group : III
 Labels : CLASS 9
 ERG Code : 171
 Marine pollutant : no
 Remarks : THE ABOVE INFORMATION ONLY APPLIES TO PACKAGE SIZES WHERE THE HAZARDOUS SUBSTANCE MEETS THE REPORTABLE QUANTITY.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Xylene	1330-20-7	100	6667
Ethylbenzene	100-41-4	1000	200000
4,4'-Diphenylmethane diisocyanate	101-68-8	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard
 Chronic Health Hazard

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

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Xylene	1330-20-7	1.5 %
Ethylbenzene	100-41-4	0.5 %

Volatile organic compounds (VOC) content 40 CFR Part 59 National VOC Emission Standard For Consumer Products, Subpart C:
 VOC content: 3.83 % / 48.3 g/l

US State Regulations

Pennsylvania Right To Know

Polyisocyanate Prepolymer	Not Assigned	30 - 50 %
Limestone	1317-65-3	20 - 30 %
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	68515-49-1	20 - 30 %

Bond + Seal Black

Version	Revision Date:	SDS Number:	Date of last issue: 04/23/2015
6.0	11/20/2015	372216-00001	Date of first issue: 09/06/2010

Polyvinyl chloride	9002-86-2	5 - 10 %
Carbon black	1333-86-4	1 - 5 %
Xylene	1330-20-7	1 - 5 %
Hydrocarbons, C9-C12, n-alkanes, isoal- kanes, cyclics, aromatics (2-25%)	64742-82-1	1 - 5 %
Ethylbenzene	100-41-4	0.1 - 1 %
4,4'-Diphenylmethane diisocyanate	101-68-8	0.1 - 1 %

New Jersey Right To Know

Polyisocyanate Prepolymer	Not Assigned	30 - 50 %
Limestone	1317-65-3	20 - 30 %
1,2-Benzenedicarboxylic acid, di-C9-11- branched alkyl esters, C10-rich	68515-49-1	20 - 30 %
Polyvinyl chloride	9002-86-2	5 - 10 %
Carbon black	1333-86-4	1 - 5 %
Xylene	1330-20-7	1 - 5 %
Ethylbenzene	100-41-4	0.1 - 1 %

California Prop. 65

WARNING! This product contains a chemical known in the State of California to cause cancer.

Ethylbenzene	100-41-4
Carbon black	1333-86-4

WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

1,2-Benzenedicarboxylic acid, di-C9-11- branched alkyl esters, C10-rich	68515-49-1
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The ingredients of this product are reported in the following inventories:

TSCA : All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

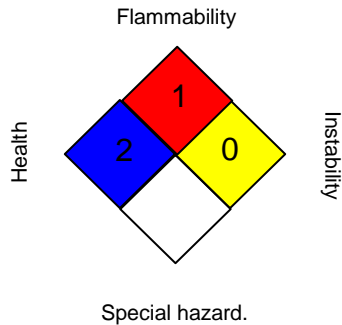
Bond + Seal Black

Version 6.0 Revision Date: 11/20/2015 SDS Number: 372216-00001 Date of last issue: 04/23/2015
 Date of first issue: 09/06/2010

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
 2 = Moderate, 3 = High
 4 = Extreme, * = Chronic

Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	: ACGIH - Biological Exposure Indices (BEI)
NIOSH REL	: USA. NIOSH Recommended Exposure Limits
OSHA Z-1	: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	: 8-hour, time-weighted average
ACGIH / STEL	: Short-term exposure limit
NIOSH REL / TWA	: Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	: STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
NIOSH REL / C	: Ceiling value not be exceeded at any time.
OSHA Z-1 / TWA	: 8-hour time weighted average
OSHA Z-1 / C	: Ceiling

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Conven-

Bond + Seal Black

Version	Revision Date:	SDS Number:	Date of last issue: 04/23/2015
6.0	11/20/2015	372216-00001	Date of first issue: 09/06/2010

tion for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

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Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8