

KD Bond & Seal Black 300ml

Version **Revision Date:** SDS Number: Date of last issue: 17.10.2018 27.02.2019 380365-00002 Date of first issue: 29.09.2010 6.7

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : KD Bond & Seal Black 300ml

Product code 0890 100 3

Manufacturer or supplier's details

Company : Wurth Australia Pty Ltd

Address 2/1 Healey Road

Dandenong South, Victoria, 3175

Telephone +61 3 8788 1111

Emergency telephone number : 1300 657 765. Advisory office in case of poisoning - National

Poisons Centre: 131 126

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

Flammable liquids Category 4

Respiratory sensitisation Category 1

repeated exposure

Specific target organ toxicity - : Category 2 (Central nervous system)

GHS label elements

Hazard pictograms

Signal word Danger

H227 Combustible liquid. Hazard statements

H334 May cause allergy or asthma symptoms or breathing

difficulties if inhaled.

H373 May cause damage to organs (Central nervous system)

through prolonged or repeated exposure.

Precautionary statements Prevention:



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P210 Keep away from heat/sparks/open flames/hot surfaces.

No smoking.

P260 Do not breathe mist or vapours.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.

P284 Wear respiratory protection.

Response:

P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for

P342 + P311 If experiencing respiratory symptoms: Call a

POISON CENTER or doctor/ physician.

Storage:

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

Disposal:

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

Other hazards which do not result in classification

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

Vapours may form explosive mixture with air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Limestone	1317-65-3	>= 10 -< 30
polyvinyl chloride	9002-86-2	< 10
Carbon black	1333-86-4	< 10
Xylene	1330-20-7	< 10
Hydrocarbons, C9-C12, n-alkanes, isoalkanes,	64742-82-1	>= 1 -< 10
cyclics, aromatics (2-25%)		
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 ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

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.



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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, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and

delayed

May cause allergy or asthma symptoms or breathing difficul-

ties if inhaled.

May cause damage to organs through prolonged or repeated

exposure.

Respiratory symptoms, including pulmonary edema, may be

delayed.

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reac-

tive airways dysfunction syndrome).

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.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Alcohol-resistant foam

Carbon dioxide (CO2)

Dry chemical

Water spray in large fire situations

Unsuitable extinguishing

media

High volume water jet

Specific hazards during fire-

fighting

Do not use a solid water stream as it may scatter and spread

fire.

Flash back possible over considerable distance. Vapours may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health. If the temperature rises there is danger of the vessels bursting

due to the high vapor pressure.

Hazardous combustion prod: :

ucts

Carbon oxides Metal oxides

Nitrogen oxides (NOx)

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do



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SO.

Evacuate area.

Special protective equipment :

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec: : tive equipment and emer-

gency procedures

Remove all sources of ignition.
Use personal protective equipment.

Follow safe handling advice and personal protective equip-

ment 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

Non-sparking tools should be used. Soak up with inert absorbent material.

Suppress (knock down) gases/vapours/mists with a water

spray jet.

For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absor-

bent.

After approximately one hour, transfer to waste container and

do not seal, due to evolution of carbon dioxide.

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 deter-

mine 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 with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.

Avoid inhalation of vapour or mist.

Do not swallow.

Avoid contact with eyes.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment



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Keep container tightly closed. Keep away from water. Protect from moisture.

Already sensitised individuals should consult their physician regarding working with respiratory irritants or sensitisers.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges.

Take care to prevent spills, waste and minimize release to the

environment.

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.

Conditions for safe storage : Keep in properly labelled containers.

Protect from moisture.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.

Keep away from heat and sources of ignition.

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

Strong oxidizing agents

Storage period : 12 Months

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Limestone	1317-65-3	TWA	10 mg/m3 (Calcium car- bonate)	AU OEL
	Further information: This value is for inhalable dust containing no asbestos and < 1% crystalline silica			
polyvinyl chloride	9002-86-2	TWA (Respirable fraction)	1 mg/m3	ACGIH
Carbon black	1333-86-4	TWA	3 mg/m3	AU OEL
		TWA (Inhal- able fraction)	3 mg/m3	ACGIH
Xylene	1330-20-7	TWA	80 ppm 350 mg/m3	AU OEL
		STEL	150 ppm 655 mg/m3	AU OEL
		TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	64742-82-1	TWA	900 mg/m3	AU OEL
4,4'-Diphenylmethane diisocy-	101-68-8	TWA	0.02 mg/m3	AU OEL



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anate			(NCO)		
	Further information: Category 2 (Carc. 2) Suspected human carcinogen, Sensitiser				
		STEL	0.07 mg/m3 (NCO)	AU OEL	
	Further information: Category 2 (Carc. 2) Suspected human carcinogen, Sensitiser				
		TWA	0.005 ppm	ACGIH	

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sam- pling	Permissible concentra-	Basis
				time	tion	
Xylene	1330-20-7	Methylhip- puric acids	Urine	End of shift (As soon as possible after exposure ceases)	1.5 g/g creatinine	ACGIH BEI

Engineering measures : Processing may form hazardous compounds (see section

10).

Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust

ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Combined particulates and organic vapour type

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 and quantity of the hazardous substance and 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 glasses

Skin and body protection : Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.



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Wear the following personal protective equipment: Flame retardant antistatic protective clothing, unless assessment demonstrates that the risk of explosive atmos-

pheres or flash fires is low.

Skin contact must be avoided by using impervious protective

clothing (gloves, aprons, boots, etc).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : paste

Colour : black

Odour : characteristic

Odour 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 : 76 °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : Ignitable (see flash point)

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : ca. 1.26 g/cm3 (20 °C)

Solubility(ies)

Water solubility : insoluble

Partition coefficient: n-

octanol/water

Not applicable

Auto-ignition temperature : No data available



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Decomposition temperature No data available

Viscosity

Viscosity, kinematic > 20.5 mm2/s (40 °C)

Explosive properties Not explosive

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

Particle size Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity Not classified as a reactivity hazard.

Chemical stability Stable if used as directed. Follow precautionary advice and

avoid incompatible materials and conditions.

Polymerises at high temperatures with evolution of carbon

dioxide.

Possibility of hazardous reac-

tions

Combustible liquid.

Vapours may form explosive mixture with air.

Isocyanates react with many materials and the rate of reaction increases with temperature as well as increased contact; these reactions can become violent. Contact is increased by stirring or if the other material mixes with the isocyanate. Exothermic reaction with acids, amines and alcohols Reacts with water to form carbon dioxide and heat

Isocyanates are not soluble in water and sink to the bottom, but react slowly at the interface. The reaction forms carbon

dioxide gas and a layer of solid polyurea.

Hazardous decomposition products will be formed upon con-

tact with water or humid air.

Conditions to avoid Exposure to moisture

Heat, flames and sparks.

Incompatible materials Oxidizing agents

> Acids Bases Water Alcohols Amines Ammonia Aluminium Zinc **Brass**

Tin Copper

Galvanised metals

Humid air

Hazardous decomposition No hazardous decomposition products are known.



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products

SECTION 11. TOXICOLOGICAL INFORMATION

Exposure routes : Inhalation

Skin contact Ingestion Eye contact

Acute toxicity

Not classified based on available information.

Components:

Limestone:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 420

Assessment: The substance or mixture has no acute oral tox-

icity

Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 3 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

Remarks: Based on data from similar materials

Carbon black:

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg

Xylene:

Acute oral toxicity : LD50 (Rat): 3,523 mg/kg

Method: Directive 67/548/EEC, Annex V, B.1.

Acute inhalation toxicity : LC50 (Rat): 27.571 mg/l

Exposure time: 4 h
Test atmosphere: vapour

root atmoophore. vapour

Acute dermal toxicity : LD50 (Rabbit): > 4,200 mg/kg

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



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Test atmosphere: vapour

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

4,4'-Diphenylmethane diisocyanate:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Assessment: The substance or mixture has no acute oral tox-

icity

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.

Components:

Limestone:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

Remarks : Based on data from similar materials

Carbon black:

Species : Rabbit

Result : No skin irritation

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



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Serious eye damage/eye irritation

Not classified based on available information.

Components:

Limestone:

Species : Rabbit

Result : No eye irritation

Method : OECD Test Guideline 405

Remarks : Based on data from similar materials

Carbon black:

Species : Rabbit

Result : No eye irritation

Method : OECD Test Guideline 405

Xylene:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

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

Species : Rabbit

Result : No eye irritation

Method : OECD Test Guideline 405

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 sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components:

Limestone:

Test Type : Local lymph node assay (LLNA)

Exposure routes : Skin contact

Species : Mouse

Method : OECD Test Guideline 429

Result : negative

Remarks : Based on data from similar materials

Carbon black:

Test Type : Buehler Test Exposure routes : Skin contact Species : Guinea pig



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Method : OECD Test Guideline 406

Result : negative

Xylene:

Test Type : Local lymph node assay (LLNA)

Exposure routes : Skin contact Species : Mouse Result : negative

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

Test Type : Maximisation Test Exposure routes : Skin contact Species : Guinea pig

Method : OECD Test Guideline 406

Result : negative

4,4'-Diphenylmethane diisocyanate:

Test Type : Buehler Test
Exposure routes : Skin contact
Species : Guinea pig
Result : positive

Assessment : Probability or evidence of skin sensitisation in humans

: Inhalation: Rat: positive

Remarks : Based on data from similar materials

: Probability of respiratory sensitisation in humans based on

animal testing

Chronic toxicity

Germ cell mutagenicity

Not classified based on available information.

Components:

Limestone:

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

Method: OECD Test Guideline 471

Result: negative

Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative



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Remarks: Based on data from similar materials

Carbon black:

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

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Test Type: In vitro sister chromatid exchange assay in mam-

malian cells

Method: OECD Test Guideline 479

Result: negative

Test Type: in vitro micronucleus test Method: OECD Test Guideline 487

Result: negative

Genotoxicity in vivo : Test Type: Sex-linked recessive lethal test in Drosophila mel-

anogaster (in vivo)

Species: Drosophila melanogaster (vinegar fly)

Application Route: Ingestion Method: OECD Test Guideline 477

Result: negative

Xylene:

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

Result: negative

Test Type: Chromosome aberration test in vitro

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Test Type: In vitro sister chromatid exchange assay in mam-

malian cells Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)

Species: Mouse

Application Route: Skin contact

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



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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

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.

Components:

Carbon black:

Species : Rat
Application Route : Inhalation
Exposure time : 24 Months
Result : positive

Species : Rat
Application Route : Ingestion
Exposure time : 2 Years
Result : negative

Carcinogenicity - Assess-

- Assess- : Weight of evidence does not support classification as a car-

cinogen

Xylene:

ment

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 (vapour)

Exposure time : 105 weeks Result : negative

Remarks : Based on data from similar materials

4,4'-Diphenylmethane diisocyanate:

Species : Rat



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Application Route : inhalation (dust/mist/fume)

Exposure time : 2 Years Result : positive

Remarks : Based on data from similar materials

Carcinogenicity - Assess-

ment

Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Not classified based on available information.

Components:

Limestone:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the

reproduction/developmental toxicity screening test

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 422

Result: negative

Remarks: Based on data from similar materials

Effects on foetal develop-

ment

Test Type: Combined repeated dose toxicity study with the

reproduction/developmental toxicity screening test

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 422

Result: negative

Remarks: Based on data from similar materials

Carbon black:

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 414

Result: negative

Test Type: Embryo-foetal development

Species: Mouse

Application Route: inhalation (dust/mist/fume)

Result: negative

Xylene:

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: inhalation (vapour)

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: inhalation (vapour)

Result: negative



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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 (vapour)

Result: negative

Remarks: Based on data from similar materials

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: inhalation (vapour)

Result: negative

4,4'-Diphenylmethane diisocyanate:

Effects on foetal develop-

ment

Test Type: Embryo-foetal 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.

Components:

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

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

Components:

Xylene:

Exposure routes : inhalation (vapour)
Target Organs : Auditory system

Assessment : Shown to produce significant health effects in animals at con-

centrations of >0.2 to 1 mg/l/6h/d.

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

Exposure routes : Inhalation

Target Organs : Central nervous system

Assessment : Causes damage to organs through prolonged or repeated

exposure.



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4,4'-Diphenylmethane diisocyanate:

Exposure routes : inhalation (dust/mist/fume)

Target Organs : Respiratory Tract

Assessment : Shown to produce significant health effects in animals at con-

centrations of >0.02 to 0.2 mg/l/6h/d.

Repeated dose toxicity

Components:

Limestone:

Species : Rat

NOAEL : > 300 mg/kg
Application Route : Ingestion
Exposure time : 28 Days

Method : OECD Test Guideline 422

Remarks : Based on data from similar materials

Xylene:

Species : Rat

LOAEL : > 0.2 - 1 mg/l
Application Route : inhalation (vapour)

Exposure time : 13 Weeks

Remarks : Based on data from similar materials

Species : Rat
LOAEL : 150 mg/kg
Application Route : Ingestion
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: RatNOAEL: 3.950 mg/lLOAEL: 7.400 mg/lApplication Route: InhalationExposure time: 90 Days

4,4'-Diphenylmethane diisocyanate:

Species : Rat

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



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Aspiration toxicity

Not classified based on available information.

Components:

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.

Experience with human exposure

Components:

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

Inhalation : Symptoms: central nervous system effects

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Limestone:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 203

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

LL50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

EL50 (Desmodesmus subspicatus (green algae)): > 14 mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility Based on data from similar materials

EL10 (Desmodesmus subspicatus (green algae)): > 14 mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility

Based on data from similar materials



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Toxicity to microorganisms : EC50: > 100 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Based on data from similar materials

Carbon black:

Toxicity to fish : LL50 (Danio rerio (zebra fish)): > 1,000 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EL50 (Daphnia magna (Water flea)): > 5,600 mg/l

Exposure time: 24 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

EL10 (Desmodesmus subspicatus (green algae)): > 10,000

mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 201

EL50 (Desmodesmus subspicatus (green algae)): > 10,000

mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 201

Xylene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 13.5 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l

Exposure time: 24 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

EC50 (Skeletonema costatum (marine diatom)): 10 mg/l

Exposure time: 72 h

Toxicity to fish (Chronic tox-

icity)

NOEC (Danio rerio (zebra fish)): > 0.1 - < 1 mg/l

Exposure time: 35 d

Method: OECD Test Guideline 210

Remarks: Based on data from similar materials

Toxicity to daphnia and other

aquatic invertebrates (Chron-

ic toxicity)

EL10 (Daphnia magna (Water flea)): > 1 - 10 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 100 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Based on data from similar materials



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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/aquatic

plants

EL50 (Pseudokirchneriella subcapitata (green algae)): 4.1

mg/l

Exposure time: 72 h

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 (Chron-

ic 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

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/aquatic

plants

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

Toxicity to daphnia and other

aquatic invertebrates (Chron-

ic 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



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Toxicity to microorganisms : EC50: > 100 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Based on data from similar materials

Persistence and degradability

Components:

polyvinyl chloride:

Biodegradability : Result: Not readily biodegradable.

Xylene:

Biodegradability : Result: Readily biodegradable.

Biodegradation: > 70 % 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

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

Components:

Xylene:

Partition coefficient: n- : log Pow: 3.16

octanol/water Remarks: Calculation

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

Partition coefficient: n-

octanol/water

: Pow: > 4

4,4'-Diphenylmethane diisocyanate:

Bioaccumulation : Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 200

Partition coefficient: n-

octanol/water

: log Pow: 4.51



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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 han-

dling site for recycling or disposal.

Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

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.

National Regulations

ADG

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform

Scheduling of Medicines and

Poisons

No poison schedule number allocated

Prohibition/Licensing Requirements : There is no applicable prohibition or

notification/licensing requirements, including for carcinogens under



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Commonwealth, State or Territory legislation.

The components of this product are reported in the following inventories:

AICS : All ingredients listed or exempt.

SECTION 16. OTHER INFORMATION

Further information

Revision Date : 27.02.2019

Sources of key data used to

compile the Safety Data

Sheet

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

cy, http://echa.europa.eu/

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)

AU OEL : Australia. Workplace Exposure Standards for Airborne Con-

taminants.

ACGIH / TWA : 8-hour, time-weighted average ACGIH / STEL : Short-term exposure limit

AU OEL / TWA : Exposure standard - time weighted average AU OEL / STEL : Exposure standard - short term exposure limit

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN -Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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 Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC -No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concern-



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ing the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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.

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