

# **EXPANDING FOAM SEALANT -3 IN**

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#### **SECTION 1. IDENTIFICATION**

Product name : EXPANDING FOAM SEALANT -3 IN

Product code : 5983146300

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 and/or sealants

Construction material

#### **SECTION 2. HAZARDS IDENTIFICATION**

# GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable aerosols : Category 1

Gases under pressure : Liquefied gas

Acute toxicity (Inhalation) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2B

Respiratory sensitization : Category 1

Skin sensitization : Category 1

Carcinogenicity : Category 2

Specific target organ toxicity

- single exposure

Category 3

Specific target organ toxicity

- repeated exposure (Inhala-

tion)

Category 2 (Respiratory Tract)



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#### **GHS** label elements

Hazard pictograms









Signal Word : Danger

Hazard Statements : H222 Extremely flammable aerosol.

H280 Contains gas under pressure; may explode if heated.

H315 + H320 Causes skin and eye irritation. H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing diffi-

culties if inhaled.

H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

H351 Suspected of causing cancer.

H373 May cause damage to organs (Respiratory Tract) through

prolonged or repeated exposure if inhaled.

# Precautionary Statements

#### Prevention:

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 flame and hot surfaces. No smoking.

P211 Do not spray on an open flame or other ignition source. P251 Pressurized container: Do not pierce or burn, even after use.

P260 Do not breathe spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing must not be allowed out of the workplace.

P280 Wear protective gloves, protective clothing, eye protection and face protection.

P285 In case of inadequate ventilation wear respiratory protection.

#### Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical attention. P333 + P313 If skin irritation or rash occurs: Get medical attention.

P337 + P313 If eye irritation persists: Get medical attention. P342 + P311 If experiencing respiratory symptoms: Call a doctor.



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P362 + P364 Take off contaminated clothing and wash it before

reuse.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container

tightly closed.

P405 Store locked up.

P410 + P412 Protect from sunlight. Do not expose to tempera-

tures exceeding 50 °C (122 °F).

Disposal:

P501 Dispose of contents and container to an approved waste

disposal plant.

#### Other hazards

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

#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
Diphenylmethane diisocyanate, isomers and homologues	9016-87-9	>= 30 - < 50
Dimethyl ether	115-10-6	>= 10 - < 20
Isobutane	75-28-5	>= 5 - < 10
Propane	74-98-6	>= 5 - < 10

Actual concentration is withheld as a trade secret

#### **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

for at least 15 minutes while removing contaminated clothing

and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water

for at least 15 minutes.

If easy to do, remove contact lens, if worn.



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Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and

delayed

Causes skin and eye irritation. May cause an allergic skin reaction.

Harmful if inhaled.

May cause allergy or asthma symptoms or breathing difficul-

ties if inhaled.

May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer.

May cause damage to organs through prolonged or repeated

exposure if inhaled.

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 (see section 8).

Notes to physician : Treat symptomatically and supportively.

# **SECTION 5. FIRE-FIGHTING 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

Flash back possible over considerable distance. Vapors 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

Chlorine compounds Nitrogen oxides (NOx)

Isocyanates

Hydrogen cyanide (hydrocyanic acid)

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 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 emer-

gency procedures

Remove all sources of ignition.

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.

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/vapors/mists with a water spray

iet '

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 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 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 : If sufficient ventilation is unavailable, use with local exhaust

ventilation.

If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventila-

tion.

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

Do not breathe spray.

Do not swallow.



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Do not get in eyes.

Wash skin thoroughly after handling.

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

sessment

Keep container tightly closed.

Protect from moisture.

Already sensitized individuals, and those susceptible

to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respira-

tory irritants or sensitizers.

Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking.

Take precautionary measures against static discharges.

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

environment.

Do not spray on an open flame or other ignition source.

Do not breathe decomposition products.

Conditions for safe storage Store locked up.

Protect from moisture.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.

Do not pierce or burn, even after use. Keep cool. Protect from sunlight.

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

Self-reactive substances and mixtures

Organic peroxides Oxidizing agents Flammable solids Pyrophoric liquids Pyrophoric solids

Self-heating substances and mixtures

Substances and mixtures which in contact with water emit

flammable gases

**Explosives** Gases

Recommended storage tem- :

64 - 72 °F / 18 - 22 °C

perature

Storage period 12 Months

#### **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type	Control parame-	Basis
		(Form of	ters / Permissible	
		exposure)	concentration	
Diphenylmethane diisocyana-	9016-87-9	С	0.02 ppm	OSHA Z-1
te, isomers and homologues			0.2 mg/m <sup>3</sup>	



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		TWA	0.005 ppm 0.05 mg/m <sup>3</sup>	NIOSH REL
		С	0.02 ppm 0.2 mg/m <sup>3</sup>	NIOSH REL
Dimethyl ether	115-10-6	TWA	1,000 ppm	US WEEL
Isobutane	75-28-5	TWA	800 ppm 1,900 mg/m <sup>3</sup>	NIOSH REL
		STEL	1,000 ppm	ACGIH
Propane	74-98-6	TWA	1,000 ppm 1,800 mg/m³	NIOSH REL
		TWA	1,000 ppm 1,800 mg/m³	OSHA Z-1

# Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Formaldehyde	50-00-0	TWA	0.1 ppm	ACGIH
		STEL	0.3 ppm	ACGIH
		TWA	0.016 ppm	NIOSH REL
		С	0.1 ppm	NIOSH REL
		PEL	0.75 ppm	OSHA CARC
		STEL	2 ppm	OSHA CARC
		TWA	0.016 ppm (Formaldehyde)	NIOSH REL
		С	0.1 ppm (Formaldehyde)	NIOSH REL
Methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		ST	250 ppm 325 mg/m <sup>3</sup>	NIOSH REL
		TWA	200 ppm 260 mg/m <sup>3</sup>	NIOSH REL
		TWA	200 ppm 260 mg/m <sup>3</sup>	OSHA Z-1

**Engineering measures** 

Processing may form hazardous compounds (see section

10).

Minimize workplace exposure concentrations.

If sufficient ventilation is unavailable, use with local exhaust

ventilation.

If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust venti-

lation.

#### 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



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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 : Nitrile rubber

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. Breakthrough time is not determined for the pro-

duct. Change gloves often!

Eye protection : Wear the following personal protective equipment:

Safety goggles

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

resistance data and an assessment of the local exposure

potential.

Wear the following personal protective equipment:

If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic

protective clothing.

Skin contact must be avoided by using impervious protective

clothing (gloves, aprons, boots, etc).

Hygiene measures : If exposure to chemical is likely during typical use, provide

eye flushing systems and safety showers close to the wor-

king place.

When using do not eat, drink or smoke.

Contaminated work clothing should not be allowed out of the

workplace.

Wash contaminated clothing before re-use.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : Aerosol containing a liquefied gas

Propellant : Dimethyl ether, Isobutane, Propane

Color : light yellow

Odor : ether-like



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Odor Threshold : No data available

pH : Solvent mixture; pH value determination not possible, no

aqueous solution

Melting point/freezing point : No data available

Initial boiling point and boiling

range

Not applicable

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : Extremely flammable aerosol.

Upper explosion limit / Upper

flammability limit

9.5 %(V)

Lower explosion limit / Lower

flammability limit

1.5 %(V)

Vapor pressure : 1,064 hPa

Relative vapor density : Not applicable

Relative density : 0.99 (73 °F / 23 °C)

Reference substance: Water

Solubility(ies)

Water solubility : negligible

Partition coefficient: n-

octanol/water

: Not applicable

Autoignition temperature : 549 °F / 287 °C

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : 20000000 mm²/s (73 °F / 23 °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.



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

avoid incompatible materials and conditions.

Polymerizes at high temperatures with evolution of carbon

dioxide.

Possibility of hazardous reac-

tions

Extremely flammable aerosol.

Vapors 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 stir-

ring 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.

If the temperature rises there is danger of the vessels bursting

due to the high vapor pressure.

Hazardous decomposition products will be formed at elevated

temperatures.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents

Acids
Bases
Water
Alcohols
Amines
Ammonia
Aluminum
Zinc
Brass
Tin
Copper

Galvanized metals

Humid air

**Hazardous decomposition products** 

Thermal decomposition : Formaldehyde

Methanol

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

**Acute toxicity** 

Harmful if inhaled.



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**Product:** 

Acute inhalation toxicity : Acute toxicity estimate: 3.95 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

**Components:** 

Diphenylmethane diisocyanate, isomers and homologues:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

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): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

Dimethyl ether:

Acute inhalation toxicity : LC50 (Rat): 164000 ppm

Exposure time: 4 h
Test atmosphere: gas

Isobutane:

Acute inhalation toxicity : LC50 (Mouse): 260200 ppm

Exposure time: 4 h Test atmosphere: gas

Propane:

Acute inhalation toxicity : LC50 (Rat): > 800000 ppm

Exposure time: 15 min Test atmosphere: gas

Skin corrosion/irritation

Causes skin irritation.

**Components:** 

Diphenylmethane diisocyanate, isomers and homologues:

Species : Rabbit
Result : Skin irritation

Serious eye damage/eye irritation

Causes eye irritation.

**Components:** 

Diphenylmethane diisocyanate, isomers and homologues:

Result : Irritation to eyes, reversing within 7 days



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#### 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.

#### **Components:**

#### Diphenylmethane diisocyanate, isomers and homologues:

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

Remarks : Based on data from similar materials

Assessment : Probability or evidence of skin sensitization in humans

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

Species : Rat Result : positive

Assessment : Probability of respiratory sensitization in humans based on

animal testing

# Germ cell mutagenicity

Not classified based on available information.

# Components:

# Diphenylmethane diisocyanate, isomers and homologues:

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

Dimethyl ether:

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

Method: OECD Test Guideline 471

Result: negative

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476



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Result: negative

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

anogaster (in vivo)

Application Route: inhalation (gas)

Result: negative

Isobutane:

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

Method: OECD Test Guideline 473

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay)

Species: Rat

Application Route: inhalation (gas) Method: OECD Test Guideline 474

Result: negative

Remarks: Based on data from similar materials

Propane:

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 (gas) Method: OECD Test Guideline 474

Result: negative

Carcinogenicity

Suspected of causing cancer.

**Components:** 

Diphenylmethane diisocyanate, isomers and homologues:

Species : Rat

Application Route : inhalation (dust/mist/fume)

Exposure time : 2 Years Result : positive

Carcinogenicity - Assess-

ment

Limited evidence of carcinogenicity in animal studies

Dimethyl ether:

Species : Rat

Application Route : inhalation (vapor)

Exposure time : 2 Years
Result : negative



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IARC No ingredient of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA**No component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

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.

**Components:** 

Diphenylmethane diisocyanate, isomers and homologues:

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rat

Application Route: inhalation (dust/mist/fume)

Result: negative

Dimethyl ether:

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

reproduction/developmental toxicity screening test

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

Isobutane:

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

reproduction/developmental toxicity screening test

Species: Rat

Application Route: Inhalation Method: OECD Test Guideline 422

Result: negative

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

reproduction/developmental toxicity screening test

Species: Rat

Application Route: inhalation (gas) Method: OECD Test Guideline 422

Result: negative

Propane:

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

reproduction/developmental toxicity screening test

Species: Rat

Application Route: inhalation (gas)



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Method: OECD Test Guideline 422

Result: negative

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

reproduction/developmental toxicity screening test

Species: Rat

Application Route: inhalation (gas) Method: OECD Test Guideline 422

Result: negative

# STOT-single exposure

May cause respiratory irritation. May cause drowsiness or dizziness.

#### **Components:**

#### Diphenylmethane diisocyanate, isomers and homologues:

Assessment : May cause respiratory irritation.

Dimethyl ether:

Assessment : May cause drowsiness or dizziness.

Isobutane:

Assessment : May cause drowsiness or dizziness.

Propane:

Assessment : May cause drowsiness or dizziness.

#### STOT-repeated exposure

May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

#### Components:

# Diphenylmethane diisocyanate, isomers and homologues:

Routes of exposure : 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:**

# Diphenylmethane diisocyanate, isomers and homologues:

Species : Rat

NOAEL : 1.4 mg/m3 LOAEL : 4.1 mg/m3

Application Route : inhalation (dust/mist/fume)

Exposure time : 13 Weeks



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Dimethyl ether:

Species : Rat

NOAEL : 47.11 mg/l Application Route : inhalation (vapor)

Exposure time : 2 y

Isobutane:

Species : Rat
NOAEL : 9000 ppm
Application Route : inhalation (gas)

Exposure time : 6 Weeks

Method : OECD Test Guideline 422

Propane:

Species : Rat
NOAEL : 7.214 mg/l
Application Route : inhalation (gas)

Exposure time : 6 Weeks

Method : OECD Test Guideline 422

**Aspiration toxicity** 

Not classified based on available information.

# **SECTION 12. ECOLOGICAL INFORMATION**

#### **Ecotoxicity**

#### **Components:**

Diphenylmethane diisocyanate, isomers and homologues:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 1,000 mg/l

Exposure time: 96 h

Toxicity to algae/aquatic

plants

ErC50 (Desmodesmus subspicatus (green algae)): > 1,640

mg/l

Exposure time: 72 h

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): > 10 mg/l

Exposure time: 21 d

Dimethyl ether:

Toxicity to fish : LC50 (Poecilia reticulata (guppy)): > 4,100 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 4,400 mg/l

Exposure time: 48 h

Toxicity to microorganisms : EC10 (Pseudomonas putida): > 1,600 mg/l



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#### Persistence and degradability

#### **Components:**

# Diphenylmethane diisocyanate, isomers and homologues:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 0 % Exposure time: 28 d

Dimethyl ether:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 5 % Exposure time: 28 d

Method: OECD Test Guideline 301D

Isobutane:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 100 % Exposure time: 385.5 h

Remarks: Based on data from similar materials

Propane:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 100 % Exposure time: 385.5 h

Remarks: Based on data from similar materials

# **Bioaccumulative potential**

#### Components:

Dimethyl ether:

Partition coefficient: n-

log Pow: 0.2

octanol/water

Isobutane:

Partition coefficient: n-

octanol/water

log Pow: 2.8

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



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handling 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. Please ensure aerosol cans are sprayed completely empty

(including propellant)

#### **SECTION 14. TRANSPORT INFORMATION**

# **International Regulations**

**UNRTDG** 

UN number : UN 1950
Proper shipping name : AEROSOLS

Class : 2.1

Packing group : Not assigned by regulation

Labels : 2.1

IATA-DGR

UN/ID No. : UN 1950

Proper shipping name : Aerosols, flammable

Class : 2.1

Packing group : Not assigned by regulation

203

Labels : Flammable Gas

Packing instruction (cargo

aircraft)

Packing instruction (passen- : 203

ger aircraft)

**IMDG-Code** 

UN number : UN 1950 Proper shipping name : AEROSOLS

Class : 2.1

Packing group : Not assigned by regulation

Labels : 2.1 EmS Code : F-D, S-U Marine pollutant : no

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 1950 Proper shipping name : Aerosols

Class : 2.1

Packing group : Not assigned by regulation

Labels : FLAMMABLE GAS

ERG Code : 126 Marine pollutant : no



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#### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

#### **SECTION 15. REGULATORY INFORMATION**

#### **CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

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

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)

Gases under pressure

Acute toxicity (any route of exposure) Respiratory or skin sensitization

Carcinogenicity

Specific target organ toxicity (single or repeated exposure)

Skin corrosion or irritation

Serious eye damage or eye irritation

SARA 313 : The following components are subject to reporting levels es-

tablished by SARA Title III, Section 313:

Diphenylmethane 9016-87-9 >= 30 - < 50 %

diisocyanate, isomers and homologues

Volatile organic compounds

(VOC) content

40 CFR Part 59 National VOC Emission Standard For Con-

sumer Products, Subpart C

VOC content: 5.63 % / 140.75 g/l

#### **US State Regulations**

#### Pennsylvania Right To Know

Paraffin waxes and Hydrocarbon waxes, chloro 63449-39-8
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9
Propylene oxide polymer with ethylene oxide 9003-11-6
Dimethyl ether 115-10-6
Isobutane 75-28-5
Propane 74-98-6

#### California Permissible Exposure Limits for Chemical Contaminants

Diphenylmethane diisocyanate, isomers and homologues 9016-87-9 Propane 9016-87-9



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#### **SECTION 16. OTHER INFORMATION**

#### **Further information**

#### NFPA 704:

# Health 3 0 Instability

Special hazard

#### HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

# Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA CARC : OSHA Specifically Regulated Chemicals/Carcinogens
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

US WEEL : USA. Workplace Environmental Exposure Levels (WEEL)

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 CARC / PEL : Permissible exposure limit (PEL)

OSHA CARC / STEL : Excursion limit

OSHA Z-1 / TWA : 8-hour time weighted average

OSHA Z-1 / C : Ceiling US WEEL / TWA : 8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; 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



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- 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; 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; TECI - Thailand Existing Chemicals 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 Agen-

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

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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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