CONATHANE® EN-2521 Part A Urethane Prepolymer

SECTION 1. IDENTIFICATION

Product name : CONATHANE® EN-2521 Part A Urethane Prepolymer

Manufacturer or supplier's details

Company : ELANTAS PDG, INC.
5200 North 2nd Street
St. Louis MO 63147

Telephone : (314) 621-5700

Visit our web site : www.elantas.com

E-mail address : Todd.Thomas@altana.com

Emergency telephone number : INFOTRAC - 1-800-535-5053

Recommended use of the chemical and restrictions on use

Recommended use : Electrical Insulation

Restrictions on use : This product is for industrial use only. It is not intended for consumer use or retail sale.
Refer to Section 15 for any restrictions that may apply

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Acute toxicity (Inhalation) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Respiratory sensitisation : Category 1

Skin sensitisation : Category 1

Carcinogenicity : Category 2

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

Specific target organ toxicity - repeated exposure : Category 2

GHS label elements

Hazard pictograms :

Signal word	:	Danger
Hazard statements	:	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	:	**Prevention:** P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P264 Wash skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves/ protective clothing/ eye protection/ 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 POISON CENTER/ 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 advice/ attention. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. P362 Take off contaminated clothing and wash before reuse. **Storage:** P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. **Disposal:** P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Polyisocyanate

Hazardous components

Component	CAS-No.	Concentration (%)
Polymeric MDI	9016-87-9	>= 45 - < 46
Isocyanates	101-68-8	>= 35 - < 36
Methylenediphenyl diisocyanate	26447-40-5	>= 20 - < 21

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Call a physician or poison control centre immediately.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Induce vomiting immediately and call a physician.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

Unsuitable extinguishing media : High volume water jet

Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Ensure adequate ventilation.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Conditions for safe storage	:	Store under conditions specified on the product Technical Data Sheet to maintain product quality. Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type	Control	Basis

		(Form of exposure)	parameters / Permissible concentration	
Polymeric MDI	9016-87-9	C	0.02 ppm 0.2 mg/m3	OSHA Z-1
Polymeric MDI		C	0.02 ppm 0.2 mg/m3	OSHA P0
Polymeric MDI		TWA	0.005 ppm 0.05 mg/m3	NIOSH REL
Polymeric MDI		C	0.02 ppm 0.2 mg/m3	NIOSH REL
Isocyanates	101-68-8	TWA	0.005 ppm	ACGIH
Isocyanates		C	0.02 ppm 0.2 mg/m3	OSHA Z-1
Methylenediphenyl diisocyanate	26447-40-5	C	0.02 ppm 0.2 mg/m3	OSHA Z-1
Methylenediphenyl diisocyanate		C	0.02 ppm 0.2 mg/m3	OSHA P0

Engineering measures : Use with adequate ventilation.
All application areas should be ventilated in accordance with applicable OSHA regulations. (e.g. 29 CFR 1910.94)
Isocyanates may be released during the curing process.
Repeated overexposure to isocyanates can cause respiratory tract sensitization.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
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
Vapour pressure	:	No data available
Flash point	:	> 201 °F (> 94 °C) Method: No information available. Information taken from reference works and the literature.
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Relative vapour density	:	No data available
Relative Density/Specific Gravity	:	No data available
Density	:	1.2392 g/cm3 (77 °F (25 °C))
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Ignition temperature	:	No data available
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 21 mm2/s (104 °F (40 °C))

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	No data available
Hazardous decomposition products	:	Carbon monoxide in a fire. Nitrogen oxides in a fire. Isocyanates may be a product of decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate : 1.5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method

Components:

9016-87-9 Polymeric MDI:

Acute oral toxicity	:	LD50 (Rat, male and female): > 10.000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat, male and female): 0.31 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: Harmful by inhalation.
Acute dermal toxicity	:	LD50 (Rabbit, male and female): > 9,400 mg/kg Method: OECD Test Guideline 402

101-68-8 Isocyanates:

Acute oral toxicity	:	LD50 (Rat): 2,200 mg/kg LD50 (Rat, male and female): > 2,000 mg/kg Method: Tested according to Annex V of Directive 67/548/EEC.

GLP: yes

Acute inhalation toxicity : LC50 (Rat): 178 mg/l

LC50 (Rat, male): 1.5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes

Acute dermal toxicity : (Rabbit): > 10,000 mg/kg

26447-40-5 Methylenediphenyl diisocyanate:
Acute oral toxicity : LD50 (Rat): 15,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 490 ppm

Acute dermal toxicity : LD50 : Remarks: No data available

Skin corrosion/irritation

Product:

Remarks: May cause skin irritation and/or dermatitis.

Components:

9016-87-9 Polymeric MDI:
Species: Rabbit
Method: OECD Test Guideline 404
Result: slight irritation

101-68-8 Isocyanates:
Species: Rabbit
Result: Mild skin irritation

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

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

Components:

9016-87-9 Polymeric MDI:
Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

101-68-8 Isocyanates:
Species: Rabbit
Result: Moderate eye irritation
Method: Draize Test

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

Respiratory or skin sensitisation

Product:

Remarks: Causes sensitisation.

Components:

9016-87-9 Polymeric MDI:
Test Type: Maximisation Test
Exposure routes: Skin contact
Species: Guinea pig
Assessment: Does not cause skin sensitisation.
Method: OECD Test Guideline 406
Result: negative

Test Type: Mouse Local Lymph Node assay (LLNA)
Exposure routes: Skin contact
Species: Mouse
Assessment: May cause sensitisation by skin contact.
Method: OECD Test Guideline 429
Result: positive

Exposure routes: intratracheal
Species: Rat
Assessment: May cause sensitisation by inhalation.
Result: positive

101-68-8 Isocyanates:
Species: Guinea pig
Method: Draize Test
Result: Causes sensitisation.

Test Type: Buehler Test
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
GLP: yes

Germ cell mutagenicity

Components:

9016-87-9 Polymeric MDI:

Genotoxicity in vitro : Test Type: Ames test
Test species: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Test species: Rat (male)
Application Route: Inhalation
Exposure time: 3x1h/day over 3 weeks)
Method: OECD Test Guideline 474
Result: negative

Germ cell mutagenicity-Assessment : In vitro tests did not show mutagenic effects, In vivo tests did not show mutagenic effects

101-68-8 Isocyanates:

Genotoxicity in vitro : Test Type: Ames test
Test species: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Test species: Rat (male)
Application Route: Inhalation
Exposure time: 3x1 h/ day over 3 weeks
Method: OECD Test Guideline 474
Result: negative

Germ cell mutagenicity-Assessment : In vitro tests did not show mutagenic effects, In vivo tests did not show mutagenic effects

Carcinogenicity

Components:

9016-87-9 Polymeric MDI:
Species: Rat, (male and female)
Application Route: Inhalation
Exposure time: 2 h
Dose: 0 - 0,2 - 1 - 6 mg/m3
Frequency of Treatment: 6 hours/day, 5 days/week
Method: OECD Test Guideline 453
Test substance: see user defined free text

Carcinogenicity - Assessment : Suspected of causing cancer if inhaled.

101-68-8 Isocyanates:
Species: Rat, (male and female)
Exposure time: 2 hrs

Dose: 0 - 0,2 - 1 - 6 mg/m3
Frequency of Treatment: 6 hours/ day, 5 days/ week
Method: OECD Test Guideline 453

Carcinogenicity - Assessment : Suspected of causing cancer if inhaled.

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

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 component 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

Components:

9016-87-9 Polymeric MDI:

Effects on foetal development : Species: Rat, female
Application Route: Inhalation
Exposure time: 20 days
Dose: 0 - 1 - 4 - 12 mg/m3
12 mg/m3
4 mg/m3
Number of exposures: 6 hours/day (Exposure duration
Method: OECD Test Guideline 414

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met.
Did not show teratogenic effects in animal experiments.

101-68-8 Isocyanates:

Effects on foetal development : Species: Rat, female
Application Route: Inhalation
Dose: 0 - 1 - 4 - 12 mg/m3
12 mg/m3
4 mg/m3
Number of exposures: 6 hours/day
Method: OECD Test Guideline 414

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met.
Did not show teratogenic effects in animal experiments.

STOT - single exposure

Components:

9016-87-9 Polymeric MDI:
Exposure routes: Inhalation
Target Organs: Respiratory organs

Assessment: May cause respiratory irritation.

101-68-8 Isocyanates:
Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause respiratory irritation.

STOT - repeated exposure

Components:

9016-87-9 Polymeric MDI:
Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause damage to organs through prolonged or repeated exposure.

101-68-8 Isocyanates:
Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

9016-87-9 Polymeric MDI:
Species: Rat, male and female
NOAEL: 0,2 mg/m3
Application Route: Inhalation
Exposure time: 2 h
Number of exposures: 6 hours a day, 5 days a week
Dose: 0 - 0,2 - 1 - 6 mg/m3
Method: OECD Test Guideline 453

Repeated dose toxicity - Assessment : Harmful if inhaled., The product causes irritation of eyes, skin and mucous membranes.

101-68-8 Isocyanates:
Species: Rat, male and female
NOAEL: 0,2 mg/m3
Application Route: Inhalation
Exposure time: 2 hrs
Number of exposures: 6 hours/ day, 5 days/ week
Dose: 0 - 0,2 - 1 - 6 mg/m3
Method: OECD Test Guideline 453
Target Organs: Lungs, Nasal inner lining

Repeated dose toxicity - Assessment : Harmful if inhaled., The product causes irritation of eyes, skin and mucous membranes.

Aspiration toxicity

Components:

9016-87-9 Polymeric MDI:
No aspiration toxicity classification

101-68-8 Isocyanates:
No aspiration toxicity classification

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation		40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks		This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

	:	WC: B
EPA Hazardous Waste Code(s)	:	none
Waste from residues	:	Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container.

Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

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

49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Isocyanates	101-68-8	5000	14286

SARA 304 - Emergency Release Notification
This material does not contain any components with a section 304 EHS RQ.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)
This material does not contain any components with a SARA 302 RQ.

SARA 311/312 Hazards : Per the June 13, 2016 Federal Register notice, EPA harmonized the EPCRA 311/312 hazard categories with the 2012 OSHA hazard communication standard for classifying and labeling of chemicals (i.e. GHS). Please refer to Section 2 of the SDS to identify the appropriate hazard categories for reporting purposes.

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

SARA 313 : This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Polymeric MDI	9016-87-9	45 %
Isocyanates	101-68-8	35 %

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

Isocyanates	101-68-8	35 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

Isocyanates	101-68-8	35 %

Non-volatile (Wt) : Refer to the product technical data sheet for VOC information.

Massachusetts Right To Know

Isocyanates	101-68-8

Pennsylvania Right To Know

Polymeric MDI	9016-87-9
Isocyanates	101-68-8
Methylenediphenyl diisocyanate	26447-40-5

New Jersey Right To Know

Polymeric MDI	9016-87-9
Isocyanates	101-68-8
Methylenediphenyl diisocyanate	26447-40-5

New Jersey Trade Secret Registry Number for the product (NJ TSRN) : Not Applicable

California Prop. 65

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

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

TSCA : We certify that all of the components of this product are either listed on the TSCA Inventory or are not subject to the notification requirements per 40 CFR 720 30(h).

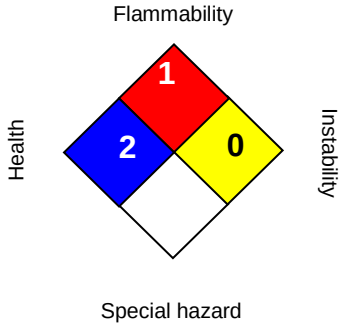
Section 4 / 12(b) : Not applicable

Section 5	Not applicable
Section 6	Not applicable

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

Revision Date : 08/16/2021

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.