

SAFETY DATA SHEET

Forsch Polymer Corp.

ISO 400A

Version: 1.0

Revision Date: 12/05/2014

Print Date: 07/02/2015

SECTION 1. PRODUCT AND

IDENTIFICATION

COMPANY Product name : ISO 400A

Product Use Description: Used in polyurethane manufacturing.

Company: Forsch Polymer Corp.
3025 S. Wyandot St.
Englewood, CO.
80110
United States of America

Telephone: (US) (303) 322-9611

Emergency telephone number: (303) 548-7716

For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Prepared by Bill@forschpolymer.com
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chemical Recommended use : Used in polyurethane manufacturing.

Restrictions on use : Reserved for industrial and professional use.

2. HAZARDS IDENTIFICATION

Form	viscous liquid
Colour	colourless
Odour	slight

GHS Classification

Acute toxicity (Inhalation) : Category 4
Respiratory sensitisation : Category 1
Skin sensitisation : Category 1
Carcinogenicity : Category 2

GHS Label element

Signal word : **Danger**

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Hazard pictograms



Hazard statements

: H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H351 Suspected of causing cancer.

Other hazards

: None

Precautionary statements

: **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
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.
P281 Use personal protective equipment as required.
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 victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity:

IARC

Group 2B: Possibly carcinogenic to humans

m-tolylidene diisocyanate 26471-62-5

OSHA

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

NTP

Reasonably anticipated to be a human carcinogen

m-tolylidene diisocyanate 26471-62-5

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
m-tolyldiene diisocyanate	26471-62-5	>= 0.1 - < 1 %

SECTION 4. FIRST AID MEASURES

If inhaled	: Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.
In case of skin contact	Remove contaminated clothing and shoes. Wash off with soap and plenty of water. Obtain medical attention. Wash contaminated clothing before re-use. Destroy contaminated shoes.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
If swallowed	: Do NOT induce vomiting. Immediately give large quantities of water to drink. If possible drink milk afterwards. Get medical attention immediately.
Most important symptoms and effects, both acute and delayed	: Lachrymation Breathing difficulties sensitising effects
Notes to physician	Oxygen, if needed. For specialist advice physicians should contact the Poisons Information Service.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Alcohol-resistant foam Dry chemical
Specific hazards during firefighting	: Burning produces irritant fumes. Exposure to decomposition products may be a hazard to health.

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Specific extinguishing methods : Fight fire with normal precautions from a reasonable distance. Keep away from fire, sparks and heated surfaces. Use water spray to cool unopened containers. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Full protective flameproof clothing

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye/face protection. Ventilate the area.

Environmental precautions : Should not be released into the environment. Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labelled containers. Ventilate the area.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Use only with adequate ventilation. Do not breathe vapours or spray mist. Protect from moisture. Open drum carefully as content may be under pressure.

Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Keep under nitrogen. Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

Materials to avoid : Water, Alcohols, Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

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Components	CAS-No.	Form of exposure	Permissible concentration	Basis
m-tolylidene diisocyanate	26471-62-5	TWA	0.005 ppm	ACGIH
		STEL	0.02 ppm	ACGIH
		C	0.02 ppm 0.14 mg/m ³	OSHA Z-1
		TWA	0.005 ppm 0.04 mg/m ³	OSHA PO
		STEL	0.02 ppm 0.15 mg/m ³	OSHA PO

Engineering measures : Use mechanical ventilation for general area control.
Ensure that extracted air cannot be returned to the workplace through the ventilation system.
Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Wear a positive-pressure supplied-air respirator.

Hand protection
Remarks : Impervious butyl rubber gloves

Eye protection : Safety glasses with side-shields
Tightly fitting safety goggles

Skin and body protection : impervious clothing

Hygiene measures : Avoid contact with moisture and prolonged exposure to temperatures above 140°F (60°C).
Purge open drums with nitrogen before resealing.
Do not use spot heating devices such as band heaters or torches.
Make sure contents are completely liquid and uniform before using.
(SEE TECHNICAL BULLETIN FOR ADDITIONAL DETAILS)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : viscous liquid

Color : colourless

Odor : slight

Odour Threshold : No data available

pH : Not applicable

Melting point/range : .

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Not applicable
Boiling point/boiling range : No data available
Evaporation rate : No data available
Flash point : > 204 °C
Method: closed cup

Upper explosion limit : No data available :
Lower explosion limit : No data available :
Vapour pressure : No data available :
Relative vapour density : No data available :
Relative density : 1.02 - 1.11 (20 °C)

Solubility(ies)

Water solubility : Decomposes in contact with water.
Solubility in other solvents : soluble
Solvent: Dimethylformamide

Solvent: Tetrahydrofuran

Partition coefficient: n-
octanol/water : No data available
Auto-ignition temperature : No data available
Thermal decomposition : No data available
Viscosity
Viscosity, dynamic : 400 - 22,500 mPa.s (30 - 100 °C)
Method: No information available.
Viscosity, kinematic : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : No decomposition if stored and applied as directed.
Possibility of hazardous
reactions : Hazardous polymerisation does not occur.
Conditions to avoid : Extremes of temperature and direct sunlight.
Exposure to moisture.
Contamination

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Incompatible materials : Water
Alcohols
Strong oxidizing agents

Hazardous decomposition products •
Carbon oxides
Hydrocarbons
Nitrogen oxides (NOx)
Isocyanates

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity
m-tolylidene diisocyanate : LD50: > 5,000 mg/kg
(Component) Species: Rat

Acute inhalation toxicity : Acute toxicity estimate: 10 mg/l
(Product) Exposure time: 4 h
Method: Calculation method

Acute dermal toxicity
m-tolylidene diisocyanate : LD50: > 9,400 mg/kg
(Component) Species: Rabbit

Skin irritation
m-tolylidene diisocyanate : Species: Rabbit
(Component) Result: Severe skin irritation

Eye irritation
m-tolylidene diisocyanate : Species: Rabbit
(Component) Result: Risk of serious damage to eyes.

Sensitisation (Product) : Remarks: May cause sensitisation by inhalation.
May cause sensitisation of susceptible persons by skin contact.

Aspiration toxicity (Product) : No aspiration toxicity classification

Further information (Product) : The product itself has not been tested.

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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish (Product) : Remarks:
No data available

Toxicity to daphnia and other aquatic invertebrates
m-tolylidene diisocyanate : LC50: > 508 mg/l
(Component) Exposure time: 48 h
Species: Grass shrimp (*Palaemonetes pugio*)

EC50: 12.5 mg/l
Exposure time: 48 h
Species: *Daphnia magna* (Water flea)

Toxicity to algae
m-tolylidene diisocyanate : EC50: 4,300 mg/l
(Component) Exposure time: 96 h
Species: *Chlorella vulgaris* (Fresh water algae)

Elimination information (persistence and degradability)

Bioaccumulation (Product) : Remarks:
No data available

Mobility (Product) : Remarks:
No data available

Biodegradability (Product) : Result: No data available

Further information on ecology

Ecotoxicology Assessment

Results of PBT assessment (Product)
This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
Additional ecological : This product has no known ecotoxicological effects.
information (Product)

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : In accordance with local and national regulations.
Waste must be classified and labelled prior to recycling or disposal.

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Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : In well ventilated area, fill drums with several centimeters of water. Leave drum open and slowly shake and roll to allow water contact. Leave open to air for sufficient time to cure.

SECTION 14. TRANSPORT INFORMATION

ADR

Not dangerous goods

RID

Not dangerous goods

MERCOSUR

Not dangerous goods

DOT

Not dangerous goods

IATA

Not dangerous goods

IMDG

Not dangerous goods

SECTION 15. REGULATORY INFORMATION

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

US State Regulations

California Prop 65

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

m-tolylidene diisocyanate 26471-62-5 **The components of this product are reported in the following inventories:**
US.TSCA On TSCA Inventory

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AICS	DSL	All components of this product are on the Canadian DSL. On the inventory, or in compliance with the inventory
	NZIoC	Not in compliance with the inventory
	ENCS	On the inventory, or in compliance with the inventory
	KECI	On the inventory, or in compliance with the inventory
	PICCS	On the inventory, or in compliance with the inventory
	IECSC	On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

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.