



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 18-Sep-2026

Version 2.0

1. Identification

Product identifier

Product Name THERMA-LOK® 504X Part B (Resin)

Other means of identification

Product Code 504X (Part B)

Synonyms Urethane System Resin Component

Chemical family resin

Recommended use of the chemical and restrictions on use

Recommended Use polyurethane component; industrial chemicals

Suitable for use in industrial sector Polymers industry; chemical industry

Restrictions on use Uses other than recommended

Details of the supplier of the safety data sheet

Supplier Address / Manufacturer Address Innovative Polymer Systems

4117 Capital Drive

New Albany, IN 47150

Phone: (812) 776-6727

Emergency telephone number

Emergency Telephone Call CHEMTREC Day or Night:

Within USA and Canada: 1-800 424-9300

2. Hazards Identification

According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Skin Corr.	1C	Skin corrosion
Eye Dam.	1	Serious eye damage
Carc.	2	Carcinogenicity
Aquatic Acute	3	Hazardous to the aquatic environment - acute
Aquatic Chronic	3	Hazardous to the aquatic environment - chronic

Label elements



GHS05 (Corrosion), GHS08 (Health Hazard)

Signal Word:

Danger

Hazard Statement:

H314	Causes severe skin burns and eye damage.
H351	Suspected of causing cancer.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P201	Obtain special instructions before use.
P273	Avoid release to the environment.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe mist or vapour.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or physician.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P313	IF exposed or concerned: Get medical attention.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P363	Wash contaminated clothing before reuse.

Precautionary Statements (Storage):

P405	Store locked up.
------	------------------

Precautionary Statements (Disposal):

P501	Dispose of contents and container in accordance with local regulations.
------	---

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition / Information on Ingredients

According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Aromatic Compound

NJ TSRN 161090809-7673

Content (W/W) >= 10.0 - <= 30.0%**Synonym** No data available.**Alkyl halide Phosphate**

NJ TSRN 161090809-7039

Content (W/W) > 10.0 - <= 30.0%**Synonym** No data available.

Alkanolamine

NJ TSNR 161090809-7827

Content (W/W) $\geq 1.0 - \leq 5.0\%$ **Synonym** No data available.**(OLIGOMER) Alcohols, C9-11, ethoxylated ($>1 < 2,5$ mol EO)****CAS Number** 68439-46-3**Content (W/W)** $\geq 1.0 - < 7.0\%$ **Synonym** No data available.**Proprietary amine alkoxylate****Content (W/W)** $\geq 1.0 - \leq 7.0\%$ **Synonym** No data available.**N'-(3-(dimethylamino)propyl)-N,N-dimethylpropane-1,3-diamine****CAS Number** 6711-48-4**Content (W/W)** $\geq 1.0 - \leq 7.0\%$ **Synonym** No data available.

The actual concentration is withheld as a trade secret.

NJ TSNR New Jersey Trade Secret Registry Number

4. First-Aid Measures

Description of first aid measures**General advice:**

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

If on skin:

Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist. If irritation develops, seek medical attention.

If in eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist. Remove contact lenses, if present. Immediate medical attention required.

If swallowed:

Do not induce vomiting. Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed**Symptoms** corneal injury, skin corrosion**Information on** N'-(3-(dimethylamino)propyl)-N,N-dimethylpropane-1,3-diamine**Symptoms** Overexposure may cause: corneal injury, skin corrosion, severe pain, coughing, respiratory disorders, dyspnea, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps**Information on** Alkanolamine**Symptoms** Overexposure may cause: corneal injury, skin corrosion, severe pain, coughing, respiratory disorders, dyspnea, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps**Information on** Alkyl halide Phosphate**Symptoms** Overexposure may cause: convulsions, depression, hypoxemia, tremors

Hazards Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11. (Further) symptoms and / or effects are not known so far
Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:	Treat according to symptoms (decontamination, vital functions), no known specific antidote.
------------	---

5. Fire-Fighting Measures**Extinguishing media****Suitable extinguishing media:**

water spray, dry powder, carbon dioxide, foam

Unsuitable extinguishing media for safety reasons:

water jet

Special hazards arising from the substance or mixture**Hazards during fire-fighting:**

No particular hazards known.

Advice for fire-fighters**Protective equipment for fire-fighting:**

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures**Further accidental release measures:**

High risk of slipping due to leakage/spillage of product.

Personal precautions, protective equipment and emergency procedures

Use personal protective clothing.

Environmental precautions

Do not empty into drains. Do not discharge into the subsoil/soil.

Methods and material for containment and cleaning up

Spills should be contained, solidified, and placed in suitable containers for disposal.

7. Handling and Storage**Precautions for safe handling**

Ensure thorough ventilation of stores and work areas. Avoid inhalation of mists/vapours. When using do not eat, drink or smoke. Wear suitable gloves and eye/face protection. Protect against moisture.

Protection against fire and explosion:

No special precautions necessary.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Suitable materials for containers Carbon steel (Iron), High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4301 (V2), Stove-lacquer RDL 29

Further information on storage conditions From this information no suitability of the materials mentioned above for the design of installations, including containers for permanent storage, can be inferred. Special conditions apply to the selection of materials in this regard, which we can communicate on request. Containers should be stored tightly sealed in a dry place.

Storage stability:

Storage temperature 27 - 35 °C Protect against moisture. The stated storage temperature is noted for health and safety in the workplace. With regard to Quality, please refer to the product specific Technical Bulletin.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

Aromatic Compound	ACGIH, US:	TWA value 10 mg/m ³ ;
	OSHA Z1:	PEL 15 mg/m ³ Total dust ;
	OSHA Z1:	PEL 5 mg/m ³ Respirable fraction ;

Advice on system design:

Provide local exhaust ventilation to control vapours/mists.

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator as needed.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Wear face shield or tightly fitting safety goggles (chemical goggles) if splashing hazard exists.

Body protection:

Standard work clothes and shoes., Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practice. Wear protective clothing as necessary to prevent contact. Avoid inhalation of vapours/mists. Wash soiled clothing immediately. Do not eat, drink or use tobacco while working. Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical state:	liquid	
Form:	liquid	
Odour:	amine-like	
Odour threshold:	No applicable information available.	
Colour:	yellow cloudy	
pH value:	9.5 - 10.5	
Freezing point:	0 °C	
Melting point:	No data available.	
Boiling point:	100 °C	
Sublimation point:	No applicable information available.	
Flash point:	> 93.33 °C	(closed cup)
Flammability:	not flammable	(derived from flash point)
Lower explosion limit:	For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Autoignition:	> 250 °C	
Vapour pressure:	< 0.1 hPa (25 °C)	
Density:	approx. 1.21 g/cm ³ (20 °C)	
Relative density:	No applicable information available.	

Relative vapour density:	No applicable information available.	
Partitioning coefficient n-octanol/water (log Pow):	not applicable	
Self-ignition temperature:	not self-igniting	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:	300 mPa.s (25 °C)	
Viscosity, kinematic:	not determined	
Solubility in water:	slightly soluble	
Solubility (quantitative):	No applicable information available.	
Solubility (qualitative):	No applicable information available.	
Molecular weight:	No data available.	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.	

Particle characteristics

No applicable information available.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

No corrosive effect on metal.

Oxidizing properties:

Not an oxidizer.

Chemical stability

The product is chemically stable.

Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

Temperature < 0 degrees Celsius

Incompatible materials

acids, oxidizing agents, isocyanates

Hazardous decomposition products**Decomposition products:**

Hazardous decomposition products carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide

Thermal decomposition:

No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects**Oral**

Type of value ATE

Value 4,845 mg/kg

Inhalation

No applicable information available.

Dermal

No applicable information available.

Assessment other acute effects**Assessment of STOT single:**

Not classified, due to lack of data.

Irritation / corrosion

Assessment of irritating effects Corrosive! Damages skin and eyes. May cause severe damage to the eyes.

Information on N'-(3-(dimethylamino)propyl)-N,N-dimethylpropane-1,3-diamine

Assessment of irritating effects Corrosive! Damages skin and eyes.

Information on Alkanolamine

Assessment of irritating effects Corrosive! Damages skin and eyes.

Information on Proprietary amine alkoxylate

Sensitization

Assessment of sensitization Not classified, due to lack of data.

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects**Repeated dose toxicity**

Assessment of repeated dose toxicity Not classified, due to lack of data.

Genetic toxicity

Assessment of mutagenicity Not classified, due to lack of data.

Carcinogenicity

Assessment of carcinogenicity Indication of possible carcinogenic effect in animal tests.

Information on Alkyl halide Phosphate

Assessment of carcinogenicity Indication of possible carcinogenic effect in animal tests. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Reproductive toxicity

Assessment of reproduction toxicity Not classified, due to lack of data.

Teratogenicity

Assessment of teratogenicity Not classified, due to lack of data.

Other Information

The product has not been tested. The statement has been derived from the properties of the individual components.

Medical conditions aggravated by overexposure

Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

Acutely harmful for aquatic organisms. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity to fish

Information on Alkyl halide Phosphate

LC50 (96 h) 51 mg/l, Pimephales promelas (OECD Guideline 203, static) The statement of the toxic effect relates to the analytically determined concentration.

Information on Alkanolamine

LC50 (96 h) > 54 mg/l, Oncorhynchus mykiss (OECD Guideline 203) Limit concentration test only (LIMIT test). No effects at the highest test concentration. Nominal values (confirmed by concentration control analytics)

Information on N'-(3-(dimethylamino)propyl)-N,N-dimethylpropane-1,3-diamine

LC50 (96 h) > 21.5 - < 46.4 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EWG, C.1, static) The statement of the toxic effect relates to the analytically determined concentration. The product will cause changes in the pH value of the test system. The result refers to an unneutralized sample. After neutralization no appreciable reduction in harmful effect can be observed.

Aquatic invertebrates

Information on Alkyl halide Phosphate

EC50 (48 h) 131 mg/l, Daphnia magna (OECD Guideline 202, part 1, static) The statement of the toxic effect relates to the analytically determined concentration.

Information on Alkanolamine

EC50 (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1, static) Nominal concentration. The value meets the highest applied test concentration. The product will cause changes in the pH value of the test system. The result refers to an unneutralized sample.

Information on N'-(3-(dimethylamino)propyl)-N,N-dimethylpropane-1,3-diamine

EC50 (48 h) 50.3 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Aquatic plants

Information on Alkyl halide Phosphate

EC50 (72 h) 82 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static) Nominal concentration. No observed effect concentration (72 h) 42 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static) Nominal concentration.

Information on Alkanolamine

EC50 (72 h) 54 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201) Nominal values (confirmed by concentration control analytics) EC10 (72 h) 35 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201) Nominal values (confirmed by concentration control analytics)

Information on N'-(3-(dimethylamino)propyl)-N,N-dimethylpropane-1,3-diamine

EC50 (72 h) 7.9 mg/l (growth rate), Pseudokirchneriella subcapitata (Algal growth inhibition test, static) EC10 (72 h) 1.7 mg/l (growth rate), Pseudokirchneriella subcapitata (Algal growth inhibition test, static)

Chronic toxicity to aquatic invertebrates

Information on Alkyl halide Phosphate

No observed effect concentration (21 d) 32 mg/l, Daphnia magna (OECD Guideline 202, part 2, semistatic) Nominal concentration.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

Information on Alkyl halide Phosphate

DIN EN ISO 8192 aquatic

activated sludge/EC50 (3 h) 784 mg/l Nominal concentration.

Information on Alkanolamine

OECD Guideline 209 static

activated sludge, domestic/EC20 (30 min) > 1,000 mg/l No effects at the highest test concentration. The value meets the highest applied test concentration.

Information on N'-(3-(dimethylamino)propyl)-N,N-dimethylpropane-1,3-diamine

OECD Guideline 209 static

activated sludge of a predominantly domestic sewage/EC50 (3 h) > 1,000 mg/l

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Poorly biodegradable.

Elimination information

Poorly biodegradable.

Bioaccumulative potential

Assessment bioaccumulation potential

Does not significantly accumulate in organisms.

Mobility in soil

Assessment transport between environmental compartments

Adsorption to solid soil phase is not expected.

Additional information

Adsorbable organically-bound halogen(AOX):

This product contains no organically-bound halogen.

Other ecotoxicological advice:

Do not allow to enter soil, waterways or waste water channels. Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

13. Disposal considerations

Waste disposal of substance:

Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system.

Container disposal:

Do not reuse empty containers. Under no circumstances should empty drums be burned or cut open with gas or electric torch as toxic decomposition products may be liberated. Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Do not attempt to refill or clean containers since residue is difficult to remove.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Chemical	TSCA, US
----------	----------

All substances are TSCA listed and active.

EPCRA 311/312 (Hazard categories) Refer to SDS section 2 for GHS hazard classes applicable for this product.

State regulations

State RTK	CAS Number	Chemical name
PA	Trade Secret	Aromatic Compound

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING This product can expose you to chemicals including ETHYLENE OXIDE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes:

Health: 3	Fire: 1	Reactivity: 1	Special:
-----------	---------	---------------	----------

HMIS III rating

Health: 3	Flammability: 1	Physical hazard: 1
-----------	-----------------	--------------------

16. Other information

Prepared By IPS Technical Service Department.

Revision Date 18-Sep-2026

Revision Note Version 2.0.

Disclaimer

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.

END OF SAFETY DATA SHEET