SAFETY DATA SHEET

Gentem Preformed Thermoplastic Concrete Sealer

Section 1. Identification

Product identifier : Gentem Preformed Thermoplastic Concrete Sealer

Product code : Not available.

Chemical name : Xylene

Other means of : Dimethylbenzene, Methyl Toluene, Xylol, Xylenes (IBC code)

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Primer for preformed thermoplastic and road marking thermoplastic.

Area of application : Professional applications.

Supplier's details : Gentem Inc.
35 Fraser Court, Unit 2
Barrie, ON
L4N 5J5
Telephone: 1-888-919-842
www.gentem.ca

e-mail address of person responsible for this SDS info@gentem.ca

Emergency telephone number (with hours of operation) : **CHEMTREC**: 1-800-424-9300 or +1-703-527-3887 (24/7)

Section 2. Hazard identification

Classification of the substance or mixture

GHS Classification

Hazard Class	Category
- Flammable Liquid	3
- Acute Toxicity (Oral)	5
- Acute Toxicity (Inhalation)	4
- Skin Corrosion/Irritation	2
- Serious Eye Damage/ Irritation	2A
- Caricinogenicity	2
- Toxic to reproduction	1B
- STOST (Single exposure)	2 (central nervous system)
- STOST (Repeated exposure)	2 (central nervous system)
- Aspiration hazard	1
- Acute hazards to the aquatic environment	2

GHS label elements

Signal word : Warning

Hazard statements

- Flammable liquid and vapor
- May be harmful if swallowed
- Harmful if inhaled
- Causes skin irritation and serious eye irritation
- May damage fertility or the unborn child

- May cause damage to organs
- May cause damage to organs through prolonged or repeated exposure
- May be fatal if swallowed and enters airways
- Toxic to aquatic life

Precautionary statements

Prevention

- Keep container tightly closed.
- Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
- Wear protective gloves /protective clothing/eye protection/face protection
- Ground/Bond container and receiving equipment
- Use explosion-proof electrical/ventilating/lighting equipment.
- Take precautionary measures against static discharge.
- Use only non-sparking tools.
- Wash thoroughly after handling.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not eat, drink or smoke when using this product.
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Avoid release to the environment
- Use only outdoors or in a well-ventilated area.

Response

IF ON SKIN (or hair):

- Remove/take off immediately all contaminated clothing.
- Rinse skin with water/shower.
- Call a POISON CENTER/doctor/physician if you feel unwell.

IN CASE OF FIRE:

- Use appropriate media for extinction.

IF INHALED:

- Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF ON SKIN:

- Wash with plenty of soap and water.
- Take of contaminated clothing and wash before re-use.
- If skin irritation occurs: Get medical advice/attention.

IF IN EYES:

- Rinse cautiously with water for several minutes.
- Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists, get medical advice/attention.
- Wash hands after handling

IF EXPOSED OR CONCERNED:

- Get medical attention/advice.

IF SWALLOWED:

- Immediately call a POISON CENTER or doctor/physician.
- Do NOT induce vomiting.

Storage

: Store in locked, well-ventilated place. Keep cool..

Disposal

: Dispose of the contents in accordance to the local mandatory rules and regulations.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
Xylene	89.2	100-41-4/108-38-3/106-42-3/95-47-6/108-88-3
Hydrocarbon Resin	6.0	64742-16-1/265-116-8
Distillates (petroleum), heavy, hydro cracked	1.8	64741-76-0/265-077-7
Styrene-Isoprene-Styrene Polymer(SIS)	3.0	25038-32-8

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye: Irrigate immediately. If this chemical contacts the eyes, immediately wash (irrigate) the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention immediately.

Skin: Soap wash promptly. If this chemical contacts the skin, promptly flush the contaminated skin with soap and water. If this chemical penetrates the clothing, promptly remove the clothing and flush the skin with water. If irritation persists after washing, get medical attention.

Breathing: Respiratory support. If a person breathes large amounts of this chemical, move the exposed person to fresh air at once. If breathing has stopped, perform artificial resuscitation. Keep the affected person warm and at rest. Get medical attention as soon as possible.

Swallow: Medical attention immediately. If this chemical has been swallowed, get medical attention immediately. DO NOT induce vomiting. Keep at rest.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing Media : Use foam or dry chemical to extinguish fire

Use water spray to cool fire exposed surfaces and to protect personnel.

Shut off fuel to fire if possible to do so without hazard.

If a leak or spill has not ignited use water spray to disperse the vapors.

Specific hazards arising : **General Hazards:**

- Flammable Liquid; may release vapors that form flammable mixtures at or above the flash point. Toxic gases will form upon combustion.

: **Hazardous Combustion Products:**

- Fumes, smoke, and carbon monoxide.
- This liquid is volatile and gives off invisible vapors.
- Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode.

Special Protective Equipment and Precautions for Fire Fighters:	Respiratory and eye protection required for firefighting personnel. Avoid spraying water directly into storage containers due to danger of boil over. A self-contained breathing apparatus (SCBA) is recommended for indoor fires and any significant outdoor fires. For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of an SCBA is optional

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- Keep public away. Prevent additional discharge of material, if possible to do so without hazard.
- Prevent spills from entering sewers, watercourses or low areas.
- Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust.
- Recover by pumping (use an explosion proof motor or hand pump), or by using a suitable absorbent.
- Warn occupants and shipping in surrounding and downwind areas of fire and explosion hazard and request all to stay clear. Remove from surface by skimming or with suitable absorbents.
- If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in unconfined waters.
- Notify the appropriate authorities immediately.
- Take all additional action necessary to prevent and remedy the adverse effects of the spill.
- Provide adequate Ventilation.
- Remove all ignition sources.
- Collect leaking and spilled liquid in sealable containers as far as possible.
- Absorb remaining liquid in sand or inert absorbent and remove to safe place.
- Extra personal protection: filter respirator for organic gases and vapors

Section 7. Handling and storage

Precautions for safe handling

- Keep container closed. Handle and open containers with care.
- Do not handle or store near an open flame, heat, or other sources of ignition.
- Do not pressurize, cut, heat, or weld containers.
- Empty product containers may contain product residue.
- Do not reuse empty containers without commercial cleaning or reconditioning.
- Keep away from sources of ignition and from contact with oxidizing materials and strong acids

Conditions for safe storage, including any incompatibilities

- Store in a cool, well ventilated place away from incompatible materials.
- Fireproof. Separated from strong oxidants and strong acids.
- Protect material from direct sunlight.
- Material will accumulate static charges, which may cause an electrical spark (ignition source).
- Use proper grounding procedures.

Section 8. Exposure controls/personal protection

Appropriate engineering controls

- The use of local exhaust ventilation is recommended to control emissions near the source.
- Laboratory samples should be handled in a fume hood.

Personal Protective Equipment (PPE)

- The selection of personal protective equipment varies depending upon conditions of use.
- **Skin:** Prevent skin contact. Wear appropriate personal protective clothing to prevent skin contact.
- **Eyes:** Prevent eye contact. Wear appropriate eye protection to prevent eye contact.
- **Wash skin:** When contaminated. The worker should immediately wash the skin when it becomes contaminated.
- **Remove:** When wet (flammable). Work clothing that becomes wet should be immediately removed due to its flammability hazard (i.e., for liquids with a flash point <100°F).
- **Change:** No recommendation. No recommendation is made specifying the need for the worker to change clothing after the work shift.
- Where prolonged and/or repeated skin and eye contact is likely to occur, wear safety glasses with side shields, long sleeves, and chemical resistant gloves.
- Where eye contact is unlikely, but may occur as a result of short and/or periodic exposures, wear safety glasses with side shields.

Respirator Recommendations (NIOSH / OSHA)

- Up to 900 ppm**:**
  (APF = 10) Any chemical cartridge respirator with organic vapor cartridge(s)*
  (APF = 25) Any powered, air-purifying respirator with organic vapor cartridge(s)*
  (APF = 10) Any supplied-air respirator*
  (APF = 50) Any self-contained breathing apparatus with a full face piece
  Emergency or planned entry into unknown concentrations or IDLH conditions:
  (APF = 10,000) Any self-contained breathing apparatus that has a full face piece and is operated in a pressure-demand or other positive-pressure mode
  (APF = 10,000). Any supplied-air respirator that has a full face piece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Escape

(APF = 50) Any air-purifying, full-face piece respirator (gas mask) with a chin-style, front- or back- mounted organic vapor canister/Any appropriate escape-type, self-contained breathing apparatus

APF: Assigned Protection Factor

Section 9. Physical and chemical properties

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Property	Value, Description
Appearance (physical state, color etc);	Clear, colorless liquid.
Odor;	Aromatic odor.
Odor threshold;	Not available
pH;	Not applicable
Melting point/freezing point;	-35 deg C
Initial boiling point and boiling range;	139 to 141 deg C
Flash point;	27 deg C TCC Minimum
Evaporation rate;	0.8 Approximate
Upper/lower flammability or explosive limits;	1.9 to 12.3 % by volume Approximate
Vapor pressure;	1.893 kPa at 38 deg C Approximate
Vapor density;	3.7 (Air = 1)
Relative density;	0.87 at 15.5 deg C
Solubility(ies);	0.02% at 25 deg C in water
Partition coefficient: n-octanol/water;	Not available
Auto-ignition temperature;	500 deg C Approximate
Decomposition temperature;	Not available
Viscosity.	0.69 cST at 25 deg C Approximate

Section 10. Stability and reactivity

Reactivity/Chemical Stability : This product is stable under normal temperature and pressure

Possibility of hazardous reactions : Hazardous polymerization will not occur.

Conditions to avoid : Temperature above ambient, ignition sources.

Incompatible materials : Strong oxidizing agents, concentrated nitric and Sulphur acids, acetic acid, halogen, molten Sulphur and 1,3-dichloro-5,5-dimethyl-2,4-imidazolidindione (dichlorohydrantoin).

Hazardous decomposition products. : Carbon Monoxide, Carbon Dioxide

Section 11. Toxicological information

LD50: 4-g/kg oral rat
LC50: 6,500-ppm rat

Inhalation: High vapor/aerosol concentrations (greater than approximately 1000 ppm) are irritating to the eyes and the respiratory tract, and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death. Negligible hazard at normal temperatures (up to 38 deg C).

Eye Contact: Irritating, but will not injure eye tissue.

Skin Contact: Frequent or prolonged contact may irritate the skin.
Low toxicity. Brief contact with the liquid will not result in significant irritation unless evaporation is prevented. Skin contact may aggravate an existing dermatitis condition.

Ingestion: Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause mild to severe pulmonary injury and possibly death. Low toxicity.

Special Health Precautions: Health studies have shown that many petroleum hydrocarbons pose potential human health risks, which may vary, from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

Occupational Exposure Limit

ACGIH Recommends: For Xylene, 100 ppm (434 mg/m3).

The previous OSHA limit for the xylenes was 100 ppm as an 8-hour TWA. Based on the ACGIH recommendation, OSHA proposed to revise this limit to a TWA of 100 ppm and a 15-minute STEL of 150 ppm. NIOSH (Ex. 8-47, Table N1) as well as the AFL-CIO (Ex. 194) concurred with these limits, and they are established in the final rule. The xylene isomers are clear, flammable liquids with an aromatic hydrocarbon odor.

Rats and rabbits exposed to a mixture of xylene isomers at a concentration of 690 ppm for eight hours daily, six days per week showed no blood abnormalities, but rabbits exposed on the same regimen at 1150 ppm for 55 days showed a decrease in red and white blood cell counts and an increase in platelet count (Fabre and Truhaut 1954, as cited in ACGIH 1986/Ex. 1-3, p. 637).

Studies of workers exposed to xylene revealed headache, fatigue, lassitude, irritability, and gastrointestinal disturbances as the most common symptoms (Gerarde 1960d/Ex. 1-738a). At unspecified exposure levels, Browning (1965b/Ex. 1-1016) also noted gastrointestinal disturbances, in addition to kidney, heart, liver, and neurological damage; blood dyscrasias, some of which resulted in death, were also reported in these workers. A study by Nelson, Enge, Ross et al. (1943/Ex. 1-66), in which human volunteers were exposed to 200 ppm xylene, found eye, nose, and throat irritation in the subjects at this level of exposure.

NIOSH developed a criteria document for xylene in 1975 (NIOSH 1975; as cited in ACGIH 1986/Ex. 1-3, p. 637), in which the work of Morley, Eccleston, Douglas, and colleagues (1970/Ex. 1-794) was discussed. These authors observed liver dysfunction and renal impairment in three workers overexposed to xylene (estimated concentration of 10,000 ppm). One of these workers died, but the others recovered slowly. Furniture polishers were reported by Matthaus (1964/Ex. 1-830) to have suffered corneal damage as a result of exposure to xylene at unknown concentrations.

One other commenter, Stanley L. Dryen of Chevron Corporation (Ex. 3-896, p. 15), objected to OSHA's issuing of a STEL, stating that there was no basis for one. OSHA disagrees and points out that a 100-ppm TWA limit alone would permit short-term exposure to several hundred ppm xylene, well above the 200-ppm level reported to be irritating as a result of short-term exposures. OSHA notes that NIOSH also recommends a short-term limit to supplement the TWA.

After reviewing this evidence, OSHA concludes that both a TWA and a STEL are necessary to prevent the risks of narcosis, blood effects, and irritant effects at the elevated levels possible at the current exposure limit. The Agency considers the effects of narcosis, irritation, and blood effects to constitute material impairments of health and functional capacity. Therefore, to reduce the risk of irritation to workers exposed to the xylenes, OSHA is establishing a 150-ppm STEL and a 100-ppm TWA for xylene isomers in the final rule.

Section 12. Ecological information

Toxicity

Fish: Toxic: 1 < LC/EC/IC50 <= 10 mg/l

Aquatic Invertebrates: Toxic: 1 < LC/EC/IC50 <= 10 mg/l

Algae: Toxic: 1 < LC/EC/IC50 <= 10 mg/l.

Mobility in soil

If product enters soil, it will be highly mobile and may contaminate groundwater. Floats on water.

Persistence Degradability

Readily biodegradable. Oxidizes rapidly by photochemical reactions in air.

Bioaccumulation

Does not bioaccumulate significantly

Other Adverse Effects

In view of the high rate of loss from solution, the product is unlikely to pose a significant hazard to aquatic life.

Section 13. Disposal considerations

Disposal methods : Material Disposal:
Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations

Container Disposal:
Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not, puncture, cut, or weld uncleaned drums. Send to drum recovered or metal reclaimer.

Local Legislation: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations.

Do not let this chemical enter the environment

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Section 14. Transport information

UN Number: 1307
Shipping Name: Xylenes or Xylenes Solution Packing Group: III
Primary TDG: Class 3 Subsidiary TDG: Class 9.2
Note: C Xn symbol
R: 10-20/21-38 S: 2-25
UN Hazard Class: 3 UN Packing Group: III
Transport Emergency Card: TEC (R)-30S1307-III WHMIS Information:
Class B, Division 2: Flammable Liquids
Class D, Division 2, Subdivision B: Toxic Material

Transport in Bulk (Annex II of MARPOL 73/78 and the IBC code)
Pollution Category : Y Ship Type : 2
Product Name : Xylenes

Section 15. Regulatory information

Permissible Exposure Level (Long Term) in Singapore: 100ppm (434mg/m3) Permissible Exposure Level (Short Term) in Singapore: 150ppm (651mg/m3)
TWA; 150 ppm as STEL A4 (ACGIH 2001). BEI specified by (ACGIH 2001).
EU OEL: 50 ppm as TWA; 100 ppm as STEL (skin) (EU 2000). OSHA PEL: TWA 100 ppm (435 mg/m3)
NIOSH REL: TWA 100 ppm (435 mg/m3) ST 150 ppm (655 mg/m3) NIOSH IDLH: 900 ppm
NFPA Code: H 2; F 3; R 0
ICSC # 0085
CAS # 108-38-3
UN # 1307
EC # 601-022-00-9

Section 16. Other information

CAUTION: The information given above (“the Information”) relates only to the substance or mixture listed herein. The Information may not be valid when used in combination with any other substance or mixture or in any process. If the substance or mixture is to be used for a purpose other than that stated herein or under conditions other than specified herein, the Information cannot be relied upon as being complete or accurate, and the user is advised to consult the supplier before using the substance or mixture for such other purpose or under such other conditions. The Information is given based on information available at the indicated date of preparation and no representation or warranty is given that it will be correct as of any time after the indicated date of preparation.

History

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