

MA 18P 20111900000000000054
MODIFICATION

State of Maine



Master Agreement

Effective Date: 12/04/20

Expiration Date: 11/30/24

Master Agreement Description: Bridge Deck Sealant Deck-Sil 1700 & 5000 System

Buyer Information

William Allen 207-624-7871 ext. NULL WJE.Allen@maine.gov

Issuer Information

Sharon Krechkin 207-624-3038 ext. sharon.krechkin@maine.gov

Requestor Information

Sharon Krechkin 207-624-3038 ext. sharon.krechkin@maine.gov

Agreement Reporting Categories

Reason For Modification: Extend for final one-year period.

Authorized Departments

17A TRANSPORTATION

Vendor Information

Vendor Line #: 1

Vendor ID

VS0000020859

Vendor Name

Advanced Chemical Technologies Inc.

Alias/DBA

Advanced Chemical Technologies Inc.

Vendor Address Information

9608 North Robinson Ave.

Oklahoma City, OK 73114

US

Vendor Contact Information

Christina Agent
4058432585 ext.
sales@advchemtech.com

Commodity Information**Vendor Line #:** 1**Vendor Name:** Advanced Chemical Technologies Inc.**Commodity Line #:** 1**Commodity Code:** 45001**Commodity Description:** Bridge Deck Sealant Deck-Sil 1700 System**Commodity Specifications:****Commodity Extended Description:** Bridge Deck Sealant Deck-Sil 1700 System

Quantity 0.00000	UOM	Unit Price 0.000000
Delivery Days 14	Free On Board	
Contract Amount 0.00	Service Start Date	Service End Date
Catalog Name Deck Sil	Discount 0.0000 %	
	Discount Start Date 12/04/20	Discount End Date 11/30/24

Please see authorized signatures displayed on the next page

Each signatory below represents that the person has the requisite authority to enter into this Contract. The parties sign and cause this Contract to be executed.

State of Maine - Department of Administrative and Financial Services

DocuSigned by:
David Morris 12/6/2023
2A644AF5681F482...

Signature Date

David Morris, Acting Chief Procurement Officer

Advanced Chemical Technologies Inc.

DocuSigned by:
Kevin Brown 12/6/2023
55E7D44FF29E429...

Signature Date

Kevin Brown, President

State of Maine – Department of Administrative and Financial Services
Division of Procurement Services
9 State House Station
Augusta, Maine 04333-0009

Contract Number
MA 201119-054

Tel. (207) 624-7340

EXTENSION OF MASTER AGREEMENT CONTRACT

Commodity Item: Bridge Deck Sealant Deck-Sil 1700 System

Contractor: Advanced Chemical technologies Inc

Mater Agreement Competitive Bid RFQ: 17A 201020-090

Contract Period Extended Through: November 30, 2024

Extended Contract Pricing: Extended at current pricing. Add EP5000 Epoxy Overlay Sealer

Dollar value the vendor has recorded that State of Maine has spent on commodities and/or services covered by this contract over the last twelve months: \$

Agreement to extend Master Agreement 18P – 2011190000000000054 authorized by:

State of Maine – Department of Administrative and Financial Services

DocuSigned by:

David Morris

2A644AF5681F482...

David Morris, Acting Chief Procurement Officer

Date 12/6/2023

and

Advanced Chemical technologies Inc

DocuSigned by:

Kevin Brown

55E7D44FF29E429...

Kevin Brown, President

Date 12/6/2023

RIDERS

<input checked="" type="checkbox"/>	The following riders are hereby incorporated into this Contract and made part of it by reference: (check all that apply)
<input checked="" type="checkbox"/>	Rider A – Scope of Work and/or Specifications
<input checked="" type="checkbox"/>	Rider B – Terms and Conditions
<input type="checkbox"/>	Rider C - Exceptions
<input checked="" type="checkbox"/>	Bid Cover Page and Debarment Form – Appendix A from RFQ
<input checked="" type="checkbox"/>	Municipality Political Subdivision and School District Participation Certification – Appendix D from RFQ
<input checked="" type="checkbox"/>	SDS
<input type="checkbox"/>	Other

RIDER A
Scope of Work and/or Specifications
MA 201119-054

Commodity: Bridge Deck Sealant Deck-Sil 1700 System

Master Agreement Competitive Bid RFQ: 17A 201020-090

Contract Period: Through November 30, 2022. The State of Maine with vendor approval can opt to issue up to two (2) one (1) year extensions. *Final Extension Through November 30, 2024*

Vendor Contact Person: The vendor contact person will help consumers place orders, inquire about orders that have not been delivered, all shipping issues, quality issues and any issues pertaining to the Master Agreement (MA) contract. All orders not submitted through a Delivery Order will be sent through the vendor contact person. The vendor contact person for this MA is:

Name: Tim Woolery

Tel: 405-843-2585

Email: tim@advchemtech.com

Prices: Prices are with shipping terms of “Free on Board (FOB) – Destination”. The State intends for this to mean that all goods shall be priced to include shipping charges, if any, to the State’s desired location. The “FOB – Destination” shipping term is also intended to mean that the State shall not bear any responsibility for the goods in question until the State takes possession of them at the destination point of delivery.

Quantities: It is understood and agreed that the MA will cover the actual quantities required by the State over the length of the contract.

Ordering Procedures: Delivery Orders (DO) will be created in AdvantageME for all orders over \$5000.00. If a DO is used, the DO will be emailed to the email address referenced on the MA as a .pdf file. Orders less than \$5000.00 can be placed using a State of Maine issued P-Card (credit card).

Shipping Points: The items covered by this MA may be requested for and expect to be shipped to any State of Maine owned facility. Most shipments will be delivered to the following MaineDOT facilities:

Region 1 Dunstan Maintenance Lot, 570 US Route 1, Scarborough, ME 04070

Region 2 Maintenance Lot, 420 Lewiston Rd., West Gardiner, ME 04345

Region 3 Maintenance Lot, 547 Main St., Dixfield, ME 04224

Region 4 Maintenance Lot, 991 Fuller Rd., Carmel, ME 04419

Region 4 Headquarters, 219 Hogan Rd., Bangor, ME 04401

Region 4 Maintenance Lot, 327 Thorsen Rd., Hancock, ME 04640

Region 4 Maintenance Lot, 58 Old County Rd, Pembroke, ME 04666

Region 5 Maintenance Lot, 159 Bangor St., Houlton, ME 04730

Region 5 Maintenance Lot, 33 Spruce St., Presque Isle, ME 04769

Delivery: The vendor is responsible for the delivery of material in first class condition at the point of delivery, and in accordance with good commercial practice.

The State reserves the right to add other similar items or commodities to this Master Agreement Contract if it's in the State's best interest but does not obligate the State to purchase similar noncontracted items or commodities from this contracted vendor.

Specifications

Deck Sealant System Specifications for Master Agreement:

<u>DESCRIPTION</u>	<u>RESULTS</u>	<u>TEST</u>
Chloride Ion Penetration	0.003% @ ½" – 1"	AASHTO T-259, T-260
Chloride Ion Penetration After Abrasion	0.014% @ ½" – 1"	AASHTO T-259, T-260
Chloride Reduction	97.8% @ ½" – 1"	AASHTO T-259, T-260
Chloride Reduction After Abrasion	89.6% @ ½" – 1"	AASHTO T-259, T-260
Water Absorption	0.3% @ 48 hours 0.7% @ 50 days	ASTM C-642
Water Absorption After Abrasion	1.1% @ 48 hours 1.7% @ 50 days	ASTM C-642
Salt Scaling	0 Rating @ 100 cycles	ASTM C-672
Salt Scaling After Abrasion	1 Rating @ 100 cycles	ASTM C-672

**RIDER B
TERMS AND CONDITIONS**

- 1. DEFINITIONS:** The following definitions are applicable to these standard terms and conditions:
 - a. The term “Buyer” or “State” shall refer to the Government of the State of Maine or a person representing the Government of the State of Maine.
 - b. The term “Department” or “DAFS” shall refer to the State of Maine Department of Administrative and Financial Services.
 - c. The term “Bureau” or “BGS” shall refer to the State of Maine Bureau of General Services.
 - d. The term “Division” shall refer to the State of Maine Division of Purchases.
 - e. The term “Contractor”, “Vendor”, or “Provider” shall refer to the organization that is providing goods and/or services through the contract to which these standard terms and conditions have been attached and incorporated.
 - f. The term “Contract” or “Agreement” shall refer to the contract document to which these standard terms and conditions apply, taking the format of a Buyer Purchase Order (BPO) or Master Agreement (MA) or other contractual document that is mutually agreed upon between the State and the Contractor.

- 2. WARRANTY:** The Contractor warrants the following:
 - a. That all goods and services to be supplied by it under this Contract are fit and sufficient for the purpose intended, and
 - b. That all goods and services covered by this Contract will conform to the specifications, drawing samples, symbols or other description specified by the Division, and
 - c. That such articles are merchantable, good quality, and free from defects whether patent or latent in material and workmanship, and
 - d. That all workmanship, materials, and articles to be provided are of the best grade and quality, and
 - e. That it has good and clear title to all articles to be supplied by it and the same are free and clear from all liens, encumbrances and security interest.

Neither the final certificate of payment nor any provision herein, nor partial nor entire use of the articles provided shall constitute an acceptance of work not done in accordance with this agreement or relieve the Contractor liability in respect of any warranties or responsibility for faulty material or workmanship. The Contractor shall remedy any defects in the work and pay any damage to other work resulting therefrom, which shall appear within one year from the date of final acceptance of the work provided hereunder. The Division of Purchases shall give written notice of observed defects with reasonable promptness.

3. TAXES: Contractor agrees that, unless otherwise indicated in the order, the prices herein do not include federal, state, or local sales or use tax from which an exemption is available for purposes of this order. Contractor agrees to accept and use tax exemption certificates when supplied by the Division as applicable. In case it shall ever be determined that any tax included in the prices herein was not required to be paid by Contractor, Contractor agrees to notify the Division and to make prompt application for the refund thereof, to take all proper steps to procure the same and when received to pay the same to the Division.

4. PACKING AND SHIPMENT: Deliveries shall be made as specified without charge for boxing, carting, or storage, unless otherwise specified. Articles shall be suitably packed to secure lowest transportation cost and to conform to the requirements of common carriers and any applicable specifications. Order numbers and symbols must be plainly marked on all invoices,

packages, bills of lading, and shipping orders. Bill of lading should accompany each invoice. Count or weight shall be final and conclusive on shipments not accompanied by packing lists.

5. DELIVERY: Delivery should be strictly in accordance with delivery schedule. If Contractor's deliveries fail to meet such schedule, the Division, without limiting its other remedies, may direct expedited routing and the difference between the expedited routing and the order routing costs shall be paid by the Contractor. Articles fabricated beyond the Division's releases are at Contractor's risk. Contractor shall not make material commitments or production arrangements in excess of the amount or in advance of the time necessary to meet delivery schedule, and, unless otherwise specified herein, no deliveries shall be made in advance of the Division's delivery schedule. Neither party shall be liable for excess costs of deliveries or defaults due to the causes beyond its control and without its fault or negligence, provided, however, that when the Contractor has reason to believe that the deliveries will not be made as scheduled, written notice setting forth the cause of the anticipated delay will be given immediately to the Division. If the Contractor's delay or default is caused by the delay or default of a subcontractor, such delay or default shall be excusable only if it arose out of causes beyond the control of both Contractor and subcontractor and without fault of negligence or either of them and the articles or services to be furnished were not obtainable from other sources in sufficient time to permit Contractor to meet the required delivery schedule.

6. FORCE MAJEURE: The State may, at its discretion, excuse the performance of an obligation by a party under this Agreement in the event that performance of that obligation by that party is prevented by an act of God, act of war, riot, fire, explosion, flood or other catastrophe, sabotage, severe shortage of fuel, power or raw materials, change in law, court order, national defense requirement, or strike or labor dispute, provided that any such event and the delay caused thereby is beyond the control of, and could not reasonably be avoided by, that party. The State may, at its discretion, extend the time period for performance of the obligation excused under this section by the period of the excused delay together with a reasonable period to reinstate compliance with the terms of this Agreement.

7. INSPECTION: All articles and work will be subject to final inspection and approval after delivery, notwithstanding prior payment, it being expressly agreed that payment will not constitute final acceptance. The Division of Purchases, at its option, may either reject any article or work not in conformity with the requirements and terms of this order, or re-work the same at Contractor's expense. The Division may reject the entire shipment where it consists of a quantity of similar articles and sample inspection discloses that ten (10%) percent of the articles inspected are defective, unless Contractor agrees to reimburse the Division for the cost of a complete inspection of the articles included in such shipment. Rejected material may be returned at Contractor's risk and expense at the full invoice price plus applicable incoming transportation charges, if any. No replacement of defective articles of work shall be made unless specified by the Division.

8. INVOICE: The original and duplicate invoices covering each and every shipment made against this order showing Contract number, Vendor number, and other essential particulars, must be forwarded promptly to the ordering agency concerned by the Vendor to whom the order is issued. Delays in receiving invoice and also errors and omissions on statements will be considered just cause for withholding settlement without losing discount privileges. All accounts are to be carried in the name of the agency or institution receiving the goods, and not in the name of the Division of Purchases.

9. ALTERATIONS: The Division reserves the right to increase or decrease all or any portion of the work and the articles required by the bidding documents or this agreement, or to eliminate

all or any portion of such work or articles or to change delivery date hereon without invalidating this Agreement. All such alterations shall be in writing. If any such alterations are made, the contract amount or amounts shall be adjusted accordingly. In no event shall Contractor fail or refuse to continue the performance of the work in providing of articles under this Agreement because of the inability of the parties to agree on an adjustment or adjustments.

10. TERMINATION: The Division may terminate the whole or any part of this Agreement in any one of the following circumstances:

- a. The Contractor fails to make delivery of articles, or to perform services within the time or times specified herein, or
- b. If Contractor fails to deliver specified materials or services, or
- c. If Contractor fails to perform any of the provisions of this Agreement, or
- d. If Contractor so fails to make progress as to endanger the performance of this Agreement in accordance with its terms, or
- e. If Contractor is adjudged bankrupt, or if it makes a general assignment for the benefit of its creditors or if a receiver is appointed because of its insolvency, or
- f. Whenever for any reason the State shall determine that such termination is in the best interest of the State to do so.

In the event that the Division terminates this Agreement in whole or in part, pursuant to this paragraph with the exception of 8(f), the Division may procure (articles and services similar to those so terminated) upon such terms and in such manner as the Division deems appropriate, and Contractor shall be liable to the Division for any excess cost of such similar articles or services.

11. NON-APPROPRIATION: Notwithstanding any other provision of this Agreement, if the State does not receive sufficient funds to fund this Agreement and other obligations of the State, if funds are de-appropriated, or if the State does not receive legal authority to expend funds from the Maine State Legislature or Maine courts, then the State is not obligated to make payment under this Agreement.

12. COMPLIANCE WITH APPLICABLE LAWS: Contractor agrees that, in the performance hereof, it will comply with applicable laws, including, but not limited to statutes, rules, regulations or orders of the United States Government or of any state or political subdivision(s) thereof, and the same shall be deemed incorporated herein by reference. Awarding agency requirements and regulations pertaining to copyrights and rights in data. Access by the grantee, the subgrantee, the Federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers and records of the Contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions. Retention of all required records for three years after grantees or subgrantees make final payments and all other pending matters are closed. Compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h), section 508 of the Clean Water Act, (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15). (Contracts, subcontracts, and subgrants of amounts in excess of \$100,000). Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).

13. INTERPRETATION: This Agreement shall be governed by the laws of the State of Maine as to interpretation and performance.

14. DISPUTES: The Division will decide any and all questions which may arise as to the quality and acceptability of articles provided and installation of such articles, and as to the manner of performance and rate of progress under this Contract. The Division will decide all questions, which may arise as to the interpretation of the terms of this Agreement and the fulfillment of this Agreement on the part of the Contractor.

15. ASSIGNMENT: None of the sums due or to become due nor any of the work to be performed under this order shall be assigned nor shall Contractor subcontract for completed or substantially completed articles called for by this order without the Division's prior written consent. No subcontract or transfer of agreement shall in any case release the Contractor of its obligations and liabilities under this Agreement.

16. STATE HELD HARMLESS: The Contractor agrees to indemnify, defend, and save harmless the State, its officers, agents, and employees from any and all claims and losses accruing or resulting to any and all contractors, subcontractors, material men, laborers and other persons, firm or corporation furnishing or supplying work, services, articles, or supplies in connection with the performance of this Agreement, and from any and all claims and losses accruing or resulting to any person, firm or corporation who may be injured or damaged by the Contractor in the performance of this Agreement.

17. SOLICITATION: The Contractor warrants that it has not employed or written any company or person, other than a bona fide employee working solely for the Contractor to solicit or secure this Agreement, and it has not paid, or agreed to pay any company, or person, other than a bona fide employee working solely for the Contractor any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon, or resulting from the award for making this Agreement. For breach or violation of this warranty, the Division shall have the absolute right to annul this agreement or, in its discretion, to deduct from the Agreement price or consideration, or otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gifts, or contingent fee.

18. WAIVER: The failure of the Division to insist, in any one or more instances, upon the performance of any of the terms, covenants, or conditions of this order or to exercise any right hereunder, shall not be construed as a waiver or relinquishment of the future performance of any such term, covenant, or condition or the future exercise of such right, but the obligation of Contractor with respect to such future performance shall continue in full force and effect.

19. MATERIAL SAFETY: All manufacturers, importers, suppliers, or distributors of hazardous chemicals doing business in this State must provide a copy of the current Material Safety Data Sheet (MSDS) for any hazardous chemical to their direct purchasers of that chemical.

20. COMPETITION: By accepting this Contract, Contractor agrees that no collusion or other restraint of free competitive bidding, either directly or indirectly, has occurred in connection with this award by the Division of Purchases.

21. INTEGRATION: All terms of this Contract are to be interpreted in such a way as to be consistent at all times with this Standard Terms and Conditions document, and this document shall take precedence over any other terms, conditions, or provisions incorporated into the Contract.

Appendix A

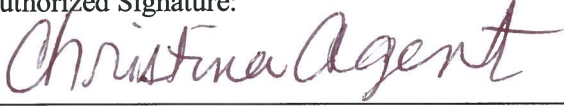
**STATE OF MAINE
DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL SERVICES
DIVISION OF PROCUREMENT SERVICES**

BID COVER PAGE and DEBARMENT FORM

Bidder's Organization Name: ADVANCED CHEMICAL TECHNOLOGIES, INC.		
Chief Executive - Name/Title: KEVIN BROWN, PRESIDENT		
Tel: 405-843-2585	Fax: 405-843-2596	E-mail: kevinbrown@advchemtech.com
Headquarters Street Address:		
9608 NORTH ROBINSON AVENUE		
Headquarters City/State/Zip: OKLAHOMA CITY, OK 73114		
<i>(provide information requested below if different from above)</i>		
Lead Point of Contact for Bid - Name/Title: CHRISTINA AGENT		
Tel: 405-843-2585	Fax: 405-843-2596	E-mail: salesoffice@advchemtech.com
Street Address: 9608 NORTH ROBINSON AVENUE		
City/State/Zip: OKLAHOMA CITY, OK 73114		

By signing below Bidder affirms:

- Their bid complies with all requirements of this RFQ;
- This bid and the pricing structure contained herein will remain firm for a period of 180 days from the date and time of the bid opening;
- That no personnel currently employed by the Department or any other State agency participated, either directly or indirectly, in any activities relating to the preparation of the Bidder's proposal;
- That no attempt has been made or will be made by the Bidder to induce any other person or firm to submit or not to submit a proposal; and
- The undersigned is authorized to enter into contractual obligations on behalf of the above-named organization.

Name: CHRISTINA AGENT	Title: OFFICE MANAGER
To have your bid accepted, this Appendix MUST have an actual wet signature or utilize DocuSign or Adobe Sign forms of electronic signature.	
Authorized Signature: 	Date: NOVEMBER 4, 2020

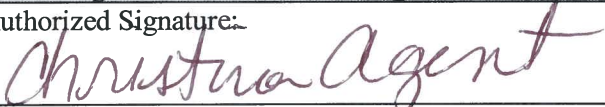
Debarment, Performance, and Non-Collusion Certification

By signing this document, I certify to the best of my knowledge and belief that the aforementioned organization, its principals, and any subcontractors named in this proposal:

- a. *Are not presently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from bidding or working on contracts issued by any governmental agency.*
- b. *Have not within three years of submitting the proposal for this contract been convicted of or had a civil judgment rendered against them for:*
 - i. *fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government transaction or contract.*
 - ii. *violating Federal or State antitrust statutes or committing embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;*
 - iii. *are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and*
 - iv. *have not within a three (3) year period preceding this proposal had one or more federal, state or local government transactions terminated for cause or default.*
- c. *Have not entered into a prior understanding, agreement, or connection with any corporation, firm, or person submitting a response for the same materials, supplies, equipment, or services and this proposal is in all respects fair and without collusion or fraud. The above mentioned entities understand and agree that collusive bidding is a violation of state and federal law and can result in fines, prison sentences, and civil damage awards.*

- **Failure to provide this certification may result in the disqualification of the Bidder's proposal, at the discretion of the Department.**

To the best of my knowledge all information provided in the enclosed proposal, both programmatic and financial, is complete and accurate at the time of submission.

Name: CHRISTINA AGENT	Title: OFFICE MANAGER
To have your bid accepted, this Appendix MUST have an actual wet signature or utilize Docu Sign or Adobe Sign forms of electronic signature.	
Authorized Signature: 	Date: NOVEMBER 4, 2020

STATE OF MAINE
DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL SERVICES
DIVISION OF PROCUREMENT SERVICES

MUNICIPALITY POLITICAL SUBDIVISION and SCHOOL DISTRICT PARTICIPATION
CERTIFICATION

RFQ # 17A 201020-090
Bridge Deck Sealant Deck-Sil 1700 System or Equivalent

The Division of Procurement Services is committed to providing purchasing opportunities for **municipalities, political subdivisions and school districts** in Maine by allowing them access, through our vendors, to our contract pricing. A bidder's willingness to extend contract pricing to these entities will be taken into consideration in making awards.

Orders from Municipality, Political Subdivisions and School Districts: If the bidder elects to permit Municipalities, Political Subdivisions and School Districts to utilize the resulting Master Agreement Contract, The State of Maine will not be responsible for any order placed by these groups. All orders will originate from these groups and they will be liable for all payments.

Will you accept orders from political subdivisions and school districts in Maine at the prices quoted?

X Yes

Yes, with conditions as follows:

No

Name of Company:

ADVANCED CHEMICAL TECHNOLOGIES, INC.

Address:

9608 NORTH ROBINSON AVENUE OKLAHOMA CITY, OK 73114

Signature:

Christina Agent

Date: NOVEMBER 4, 2020

SIL-ACT® Product Data

DECK-SIL® System

1700 Series



ADVANCED
CHEMICAL
TECHNOLOGIES, Inc.

"Protecting the World's Infrastructure"

For Use under U. S. Patent No. 9,242,269

Dual Layer Concrete Deck Sealing & Refurbishment

DESCRIPTION & BENEFITS

DECK-SIL® 1700 series is a unique concrete infrastructure sealing system comprised of two well-proven product technologies. These two technologies are applied as a system to provide a dual layer of protection.

The DECK-SIL® 1700 series combines the proven concrete protection of DECK-SIL® PS 1700 silane with the low viscosity crack and surface sealing benefits of DECK-SIL® EP 1700.

DECK-SIL® 1700 series shows a significant increase in penetration of DECK-SIL® PS 1700 silane. This deeper penetration of the silane promotes improved performance of the silane. The combined effect of the DECK-SIL® 1700 series promotes longer bridge life due to deeper silane penetration and the flood coat filling performance of the DECK-SIL® EP 1700.

COMPONENTS

DECK-SIL® PS 1700 – is a clear penetrating treatment, that causes concrete to become repellent to water, chloride, waterborne contaminants and other weathering elements, preventing the premature deterioration of concrete and masonry structures.

DECK-SIL® EP 1700 – two-component, low viscosity, epoxy polymer specially formulated to provide a protective barrier and extend the life of concrete surfaces. The low viscosity allows deep penetration into the smallest cracks providing a protective barrier against the ingress of water, salts, ions and other waterborne contaminants, thus greatly extending the service life of concrete structures.

BENEFITS

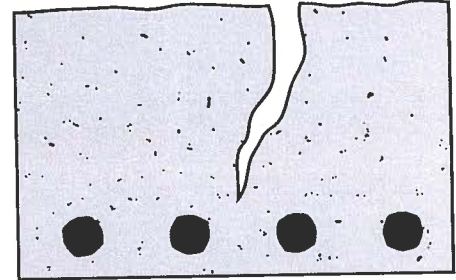
- Alternative to full overlay system
- Quick Turnaround
- One time surface preparation – saves time and money
- Extra protection with no extended lane closure time
- Dual layer protection – extends life of structure

Only DECK-SIL® 1700 series offers these unique benefits.

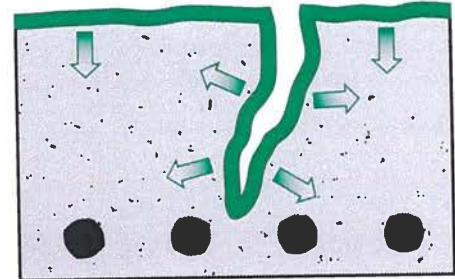
DECK-SIL® 1700 SYSTEM PROPERTIES

PS 1700	
Active Ingredient	Alkyltrialkoxysilane
Density	7.68 lb/gal
Active Content	100% active
VOC Content	< 350 g/L
Appearance	Clear
Surface Appearance after Application	Unchanged
Drying time at 70°F	1 hour
EP 1700	
Mixing Ratio	1:1 By Volume
% Volatile	< 30%
VOC	178 g/L (1.49lb./gal)
Bond Strength	2789 psi

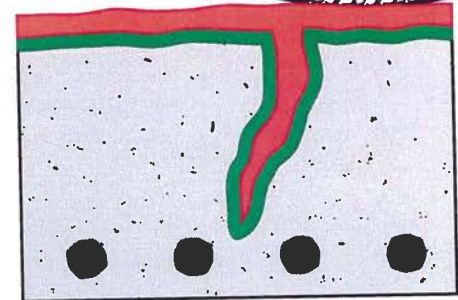
Concrete surface with cracking needing repair.



Step 1. Apply DECK-SIL® PS 1700 treatment which penetrates into the concrete.



Step 2. Apply DECK-SIL® EP 1700 treatment to heal and seal surface.



Even after extensive traffic wear, the surface remains sealed against water ingress.

DECK-SIL® 1700 SYSTEM PERFORMANCE RESULTS			
(U.S. Patent No. 9,242,269)			
Test Method	Test Value	Units	Notes
AASHTO T259			
1.6-13 mm	95.4	% Chloride Reduction vs. Control	Not Sand Blasted
13-25 mm	97.5	% Chloride Reduction vs. Control	Not Sand Blasted
1.6-13 mm	92.7	% Chloride Reduction vs. Control	Sand Blasted
13-25 mm	100	% Chloride Reduction vs. Control	Sand Blasted
Hydrophobic Depth Modified OHD-L40			
	3.1	mm*	Not Sand Blasted
	2.1	mm*	Sand Blasted
* Control had 0 mm			
ASTM D6489			
24-hours	96.2	% Reduction of Water Absorption vs. Control	Not Sand Blasted
48-hours	94.7	% Reduction of Water Absorption vs. Control	Not Sand Blasted
24-hours	95.6	% Reduction of Water Absorption vs. Control	Sand Blasted
48-hours	93.6	% Reduction of Water Absorption vs. Control	Sand Blasted
NCHRP 244 SERIES II			
	99	% Chloride Reduction vs. Control	Sand Blasted
NCHRP 244 SERIES IV SOUTHERN EXPOSURE			
	97	% Chloride Reduction vs. Control	Sand Blasted
Cracked Beam Testing 24 cycles 48 weeks			
	100	% Reduction in Rust vs. Control**	Sand Blasted
	92.4	% Reduction in Chloride at Crack at Rebar Level vs. Control	Sand Blasted
** Control top bars were 43% corroded and bottom bars were 4% corroded			
ASTM C642			
48-hours	0.3%	Water Absorption	Not Sand Blasted
50-days	0.7%	Water Absorption	Not Sand Blasted
48-hours	1.1%	Water Absorption	Sand Blasted
50-days	1.7%	Water Absorption	Sand Blasted
ASTM C 672 Salt Scaling			
		0 Rating @ 100 cycles	Not Sand Blasted
		1 Rating @ 100 cycles	Sand Blasted

PART 1. SURFACE PREPARATION

- All concrete shall have cured to design strength prior to the application of the DECK-SIL® 1700 System.
- Surfaces must be clean, dry, and free of all dirt, grease, curing compounds etc. The surface shall be prepared using sand or shot blasting to remove surface contaminants and other foreign matter. For best results shot blast to ICRI 3.
- All surfaces shall be dry prior to commencing the application.

PART 2. DECK-SIL® PS 1700 APPLICATION

- The DECK-SIL® PS 1700 solution is ready to use and shall be applied as supplied. It cannot be diluted or altered in any way. Do NOT allow any water to get into the solution. Application equipment should contain no water, and should be flushed with small amounts of SIL-ACT® Equipment Cleaner prior to commencing the application.
- The DECK-SIL® PS 1700 must be applied using spray bar type equipment. The most effective method for applying the treatment is to apply it on the surface using low pressure (15psi / 1.05kg/cm) positive displacement equipment. All spray equipment should be fitted with a fan spray nozzle and adjusted to a "wet spray" condition. Two thin applications may be preferable to prevent excessive run-off of the DECK-SIL® PS 1700.
- The application rate of the DECK-SIL® PS 1700 will vary according to the porosity of the concrete substrate but will generally be at 100 sq. ft. per gallon.
- The DECK-SIL® PS 1700 is visually dry, typically 30 minutes to 3 hours depending on temperature and humidity before applying the DECK-SIL® EP 1700.
- Apply DECK-SIL® PS 1700 three feet past pre-determined "end of day" termination point, this allows for next day starting point.

PART 3. DECK-SIL® EP 1700 APPLICATION**3.01 MIXING INSTRUCTIONS**

- At time of mixing DECK-SIL® EP 1700 the ambient air temperature must be 40 °F (5 °C) or above. Each component should be thoroughly stirred before blending. Mix hardener Part B into the resin Part A for a minimum of three minutes with a low speed electric drill motor equipped with a mixing paddle until completely blended. Refer to the Product Data Sheet for specific mixing instructions and mix ratio. DO NOT mix more EP 1700 than what can be used during the pot life. Immediately after mixing, spread the epoxy onto the surface to optimize working time.

3.02 APPLICATION

- DECK-SIL® EP 1700 can be applied with a brush, roller, squeegee or sprayed with a low pressure sprayer. Spread and allow to pond over hairline cracks. Let material penetrate and remove excess. Continue to pond material over cracks for a minimum of 5 minutes to ensure the cracks are filled. **Important:** Before DECK-SIL® EP 1700 begins to solidify, broadcast aggregate approved by engineer to refusal on treated area to improve skid resistance.
- The application rate of the DECK-SIL® EP 1700 will vary according to the porosity of the concrete substrate but will generally be at 80 sq. ft. to 100 sq. ft. per gallon.
- For maximum penetration and results apply DECK-SIL® EP 1700 as soon as DECK-SIL® PS 1700 is visually dry, typically 30 minutes to 3 hours depending on temperature and humidity.
- Application of DECK-SIL® EP 1700 must be done within 8 hours after the DECK-SIL® PS 1700 treatment.
- Stop DECK-SIL® EP 1700 three feet short of DECK-SIL® PS 1700 to provide for next days starting point. This allows for consistent application of DECK-SIL® 1700 System.

3.03 LIMITATIONS

- DECK-SIL® EP 1700 must NOT be diluted with solvent or any other liquid. This will adversely affect cure time and strength properties.
- Do not apply the DECK-SIL® EP 1700 if rain is imminent. If rain does occur, allow sufficient time for the surface to dry before commencing the EP 1700 application.

3.04 STORAGE

- DECK-SIL® EP 1700 should be stored in a dry environment between 40-95°F (5-35 °C). Under these conditions, the shelf life is one year in unopened, damage-free containers.

WARRANTY

Limited warranty available.

DECK-SIL® 1700 System is protected by U. S. Patent No. 9,242,269.

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure: That ACT's products are safe, effective, and fully satisfactory for the intended end use. ACT's sole warranty is that the product will meet the ACT's sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. ACT's specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability, unless ACT provides you with a specific, duly signed endorsement of fitness for use. ACT disclaims liability for any incidental or consequential damages. Suggestions of use shall not be taken as inducements to infringe any patent.

ADVANCED CHEMICAL TECHNOLOGIES, INC.*"Protecting the World's Infrastructure"*



SAFETY DATA SHEET

SECTION 1

MATERIAL IDENTIFICATION

PRODUCT NAME / DESCRIPTION: DECK-SIL® PS 1700
DECK-SIL® Product for Use under U. S. Patent No. 9,242,269.

DISTRIBUTED / MANUFACTURED BY:

Advanced Chemical Technologies, Inc.
 9608 N Robinson
 Oklahoma City, OK 73114

Date: 03/15/2018, version 2
 Phone: (405) 843-2585
 Emergency Phone: (800) 255-3924

SECTION 2

HAZARD IDENTIFICATION

CLASSIFICATION:

Flammable Liquid:	Category 3
Skin Irritation:	Category 2
Specific Target Organ Systemic Toxicity – Single Exposure:	Category 3

SIGNAL WORD:

WARNING!

HAZARD STATEMENTS:

Flammable liquid and vapor.
 Causes skin irritation.
 May cause drowsiness or dizziness.



PRECAUTIONARY STATEMENTS

Prevention:

Keep away from heat/sparks/ open flames/hot surfaces. No smoking.
 Keep container tightly closed.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ventilating/lighting/equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Avoid breathing spray.
 Wash skin thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves/eye protection/face protection.

Response:

IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

If skin irritation occurs: Get medical advice/attention.
 Take off contaminated clothing and wash it before reuse.
 Storage:
 Store in a well-ventilated place. Keep cool.
 Store locked up.
 Disposal:
 Dispose of contents/container to an approved waste disposal plant.

Other hazards:
 Vapors may form explosive mixture with air.
 Static-accumulating flammable liquid.

SECTION 3**HEALTH HAZARDS**

Substance name: Isobutyl trimethoxysilane
CAS No.: 18395-30-7
Chemical nature: Alkoxysilane

Hazardous ingredients

<u>Chemical name</u>	<u>CAS No.</u>	<u>Concentration%</u>
Isobutyl trimethoxysilane	18395-30-7	>=90 - <=100
Methanol	67-56-1	>=0.1 - <1

SECTION 4**FIRST AID**

Eye Contact: In case of contact, immediately flush eyes with cool running water. Get medical attention if irritation develops and persists.

Skin Contact: In case of skin 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.

Ingestion: DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

SECTION 5**FIRE FIGHTING MEASURES**

Fire Hazard Classification (OSHA/NFPA): 3

Suitable extinguishing media: Water spray
 Alcohol resistant foam
 Carbon dioxide (CO₂)
 Dry chemical.

Unsuitable extinguishing media: High volume water jet

Hazardous combustion products: Carbon oxides
 Silicon oxides
 Formaldehyde

Specific hazards during fire fighting: Do not use a solid stream as it may scatter and spread fire.
 Flash back possible over considerable distance.
 Vapors may form explosive mixtures with air.
 Exposure to combustion products may be a hazard to health.

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
 Use water spray to cool unopened containers.
 Remove undamaged containers from fire area if it is safe to do 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, PPE, and Emergency Procedures:	Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions:	Discharge into the environment must be avoided. 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 jet. 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 absorbent. Local or national regulations may apply to releases and disposal of material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.

SECTION 7**HANDLING AND STORAGE**

Technical measures:	Ensure all equipment is electrically grounded before beginning transfer operations. This material can accumulate static charge due to inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations. Restrict flow velocity in order to reduce the accumulation of static electricity.
Local/Total ventilation:	Use with local exhaust ventilation.
Advice on safe handling:	Use only in an area equipped with explosion proof exhaust ventilation. Do not get on skin or clothing. Do not breathe vapors or spray mist. Do not swallow. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice. Non-sparking. Tools should be used. Keep container tightly closed. Keep away from water. Protect from moisture. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment.
Conditions for safe storage:	Keep in properly labeled containers. Store locked up. Keep tightly closed. Keep in cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.
Materials to avoid:	Do not store with the following product types: Strong oxidizing agents Organic peroxides Flammable solids Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixtures which in contact with water emit flammable gases

Explosives
Gases

SECTION 8**PERSONAL PROTECTION / EXPOSURE CONTROLS****Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value Type (form of exposure)	Control Parameter / Permissible concentration	Basis
Methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m3	NIOSH REL
		ST	250 ppm 325 mg/m3	NIOSH REL
		TWA	200 ppm 260 mg/m3	OSHA Z-1

Hazardous components without workplace control parameters

Ingredients	CAS-No.	Value Type (form of exposure)	Control Parameter / Permissible concentration	Basis
Isobutyl trimethoxysilane	18395-30-7			

Occupational exposure limits of decomposition products

Ingredients	CAS-No.	Value Type (form of exposure)	Control Parameter / Permissible concentration	Basis
Methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m3	NIOSH REL
		ST	250 ppm 325 mg/m3	NIOSH REL
		TWA	200 ppm 260 mg/m3	OSHA Z-1

Biological occupational exposure limits

Ingredients	CAS-No.	Control Parameter	Biological Specimen	Sampling time	Permissible concentration	Basis
Methanol	67-56-1	Methanol	Urine	End of shift (as soon as possible after shift ends)	15 mg/l	ACCGIH BEI

Engineering measures::

Processing may form hazardous compounds.
Minimize workplace exposure concentrations.
Use only in an area equipped with explosion proof exhaust ventilation.
Use with local exhaust ventilation.

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 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
Material
Material
Remarks

Antistatic gloves
Impervious gloves
Flame retardant gloves
Choose gloves to protect hands against chemicals depending on the concentration

specific to place of work. Breakthrough time is not determined for the product. Change gloves often! 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 the workday.

Eye protection:

Wear the following personal protective equipment:

Safety glasses

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:

Flame retardant antistatic protective clothing

Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.).

Hygiene measures:

Ensure that eye flushing systems and safety showers are located close to the working place.

When using, do not eat, drink or smoke.

Wash contaminated clothing before re-use.

These precautions are for room temperature handling. Use at elevated temperature or aerosol spray applications may require added precautions.

For further information regarding use of silicones/organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these types of materials in consumer aerosol applications that has been developed by the silicone industry (www.SEHSC.com)

SECTION 9

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Color:	Colorless
Odor:	Slight
Odor Threshold:	No data available
pH:	No data available
Melting point/Freezing point:	No data available
Initial boiling point and boiling range:	155.5° C
Flash Point:	32° C
	Method: Tag closed cup
Evaporation Rate:	No data available
Flammability (solid, gas):	Not applicable
Upper Explosion Limit (UEL):	16%(V)
Lower Explosion Limit (LEL):	0.92%(V)
Vapor Pressure:	No data available
Relative Vapor Density:	No data available
Relative Density:	0.92
Solubility(ies) - Water solubility:	No data available
Partition Coefficient: n-octanol/water	No data available
Auto-ignition Temperature:	267° C
Decomposition Temperature:	No data available
Viscosity, kinematic:	1 cSt
Explosive properties:	Not explosive
Oxidizing properties:	The substance or mixture is not classified as oxidizing
Molecular weight:	No data available

SECTION 10

STABILITY AND REACTIVITY

Reactivity:	Not classified as a reactivity hazard
Chemical stability:	Stable under normal conditions
Possibility of hazardous reactions:	Flammable liquid and vapor. Vapors may form explosive mixture with air. Use at elevated temperatures may form highly hazardous

	compounds. Can react with strong oxidizing agents. Hazardous decomposition products will be formed upon contact with water or humid air. Hazardous decomposition products will be formed at elevated temperatures.
Conditions to avoid:	Exposure to moisture. Handling operations that can promote accumulation of static charges. Heat, flames, sparks.
Incompatible materials:	Oxidizing agents Water
Hazardous decomposition products:	
Contact with water or humid air:	Methanol
Thermal decomposition:	Formaldehyde

SECTION 11**TOXICOLOGICAL PROPERTIES****Information on likely routes of exposure**

Inhalation
Skin contact
Ingestion
Eye Contact

Acute toxicity

Not classified based on available information

Product:

Acute oral toxicity:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity:	Acute toxicity estimate: > 40 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method
Acute dermal toxicity:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Ingredients:**Isobutyl trimethoxysilane**

Acute oral toxicity:	LD50 (rat): 10,000 mg/kg Assessment: The substance or mixture has no acute oral toxicity Remarks: Based on test data
Acute inhalation toxicity:	LD50 (rat): >1525 ppm Exposure time: 4 h Test atmosphere: vapor Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Based on test data

Methanol

Acute oral toxicity:	Acute toxicity estimate (Humans): 300 mg/kg Method: Expert judgment
Acute inhalation toxicity:	Acute toxicity estimate (Humans): 3 mg/l Test atmosphere: vapor Method: Expert judgment
Acute dermal toxicity:	Acute toxicity estimate (Humans): 300 mg/kg Method: Expert judgment

Skin corrosion/irritation

Causes skin irritation

Ingredients:

Isobutyl trimethoxysilane

Species: Rabbit
 Result: Skin irritation
 Remarks: Based on test data

Methanol

Species: Rabbit
 Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information

Ingredients:**Isobutyl trimethoxysilane**

Species: Rabbit
 Result: No eye irritation
 Remarks: Based on test data

Methanol

Species: Rabbit
 Result: No eye irritation

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information
 Respiratory sensitization: Not classified based on available information

Ingredients:**Isobutyl trimethoxysilane**

Assessment: Does not cause skin irritation
 Test Type: Skin: test type not specified
 Remarks: No known sensitizing effect
 Result: Based on test data

Methanol

Test Type: Maximization Test (GPMT)
 Routes of exposure: Skin contact
 Species: Guinea pig
 Result: Negative

Germ cell mutagenicity

Not classified based on available information

Ingredients:**Isobutyl trimethoxysilane**

Genotoxicity in vitro:
 Test type: Bacterial reverse mutation assay (AMES)
 Result: Negative
 Remarks: Based on test data

Methanol

Genotoxicity in vitro:
 Test type: Bacterial reverse mutation assay (AMES)
 Method: OECD Test Guideline 471
 Result: Negative

Genotoxicity in vivo:

Test type: Mammalian erythrocyte micronucleus test (in vivo cytogenic assay)
 Species: Mouse
 Application route: Intraperitoneal injection
 Result: Negative

Carcinogenicity

Not classified based on available information

Ingredients:**Methanol**

Species: Mouse

Application route:	Inhalation (vapor)
Exposure time:	18 months
Method:	OECD Test Guideline 453
Result:	Negative
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 ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
NTP	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 NTP.

Reproductive toxicity

Not classified based on available information

Ingredients:**Methanol**

Effects on fertility

Test type:	Fertility/early embryonic development
Species:	Mouse
Application route:	Ingestion
Result:	Negative

Effects on fetal development

Test type:	Embryo-fetal development
Species:	Mouse
Application route:	Ingestion
Method:	OECD Test Guideline 414
Result:	Positive
Remarks:	The effects were seen only in maternally toxic doses

STOT – single exposure

May cause drowsiness or dizziness

Ingredients:**Isobutyl trimethoxysilane**

Routes of exposure:

Assessment:	Inhalation (vapor) May cause drowsiness or dizziness
Remarks:	Information taken from reference works and the literature

Methanol

Target Organs:	Eyes, Central Nervous System
Assessment:	Causes damage to organs

STOT – repeated exposure

Not classified based on available information

Ingredients:**Methanol**

Species:	Rat
NOAEL:	1.06 mg/l
Application route:	Inhalation (vapor)
Exposure time:	90 d

Aspiration toxicity

Not classified based on available information

SECTION 12**ECOLOGICAL INFORMATION****Ecotoxicity****Ingredients:**

Isobutyl trimethoxysilane

Toxicity to fish

LC50 (Dani rerio (zebra fish)): > 100 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia sp.): >864 mg/l

Exposure time: 48 h

Toxicity to algae

EC50 (Scenedesmus subspicatus): 1,170 mg/l

Exposure time: 72 h

Methanol

Toxicity to fish

LC50 (Lepomis macrochirus (Bluegill sunfish)): >15,400 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): >10,000 mg/l

Exposure time: 48 h

Toxicity to algae

EC50 (Pseudokirchneriella subcapitata (green algae)): 22,000 mg/l

Exposure time: 96 h

Method: OPPTS 850.5400

Toxicity to fish (Chronic toxicity)

NOEC (Oryzias latipes (Orange-red killfish)): 15,800 mg/l

Exposure time: 200 h

Toxicity to bacteria

EC50: 20,000 mg/l

Exposure time: 15 h

Persistence and degradability**Ingredients:****Isobutyl trimethoxysilane**

Biodegradability:

Result:

Not readily biodegradable

Biodegradation:

36 – 47%

Exposure time:

28 d

Method:

OECD Test Guideline 301B

Stability in water:

Degradation half life: 4.6 h pH:7

Methanol

Biodegradability:

Result:

Readily biodegradable

Biodegradation:

95%

Exposure time:

20 d

Bioaccumulation:**Ingredients:****Isobutyl trimethoxysilane**

Partition coefficient:

n-octanol/water:

Log Pow: -0.77

Mobility in soil:

No data available

Other adverse effects:

No data available

SECTION 13**DISPOSAL CONSIDERATIONS****Disposal methods**

Resource Conservation and Recovery Act (RCRA):

Waste Code:

Waste from residues:

Contaminated packaging:

When a decision is made to discard this material as supplied, it is classified as a RCRA hazardous waste.

D001: Ignitability

Dispose of in accordance with local regulations.

Dispose of as unused product.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Do not burn, or use cutting torch on, the empty drum.

SECTION 14**TRANSPORT INFORMATION****International Regulation****UNRTDG**

UN number: UN 1993
 Proper shipping name: FLAMMABLE LIQUID, N.O.S.
 (Isobutyl trimethoxysilane, Methanol)
 Class: 3
 Packing group: III
 Labels: 3

IATA-DGR

UN/ID No. UN 1993
 Proper shipping name: FLAMMABLE LIQUID, N.O.S.
 (Isobutyl trimethoxysilane, Methanol)
 Class: 3
 Packing group: III
 Labels: Flammable Liquids
 Packing instruction (cargo aircraft): 366
 Packing instruction (passenger aircraft): 355

IMDG-Code

UN number: UN 1993
 Proper shipping name: FLAMMABLE LIQUID, N.O.S.
 (Isobutyl trimethoxysilane, Methanol)
 Class: 3
 Packing group: III
 Labels: 3
 EmS Code: F-E, S-E
 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 1993
 Proper shipping name: FLAMMABLE LIQUID, N.O.S.
 (Isobutyl trimethoxysilane, Methanol)
 Class: 3
 Packing group: III
 Labels: FLAMMABLE LIQUID
 ERG Code: 128
 Marine pollutant: No

SECTION 15**REGULATORY INFORMATION****EPCRA – Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Methanol	67-56-1	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA – Superfund Amendments and Reauthorization Act**SARA 304 Extremely Hazardous Substances Reportable Quantity**

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

SARA 311/312 Hazards:

Fire hazard
Acute health Hazard

SARA 302:

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

SARA 313:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right-to know:

Isobutyl trimethoxysilane	18395-30-7	90 – 100%
Methanol	67-56-1	0.1 – 1%

New Jersey Right-to know:

Isobutyl trimethoxysilane	18395-30-7	90 – 100%
Methanol	67-56-1	0.1 – 1%

California Prop 65

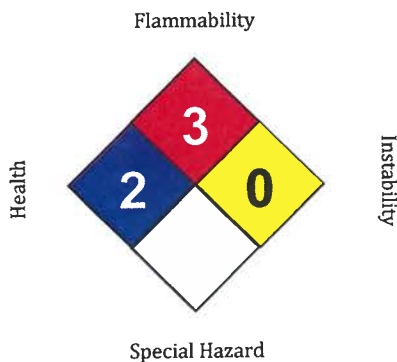
Methanol
WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

The ingredients in this product are reported in the following inventories:

NZIoC (New Zealand):	One or more ingredients are not listed or exempt.
REACH (European Union):	All ingredients (pre-)registered or exempt.
TSCA (United States of America):	All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
AICS (Australia):	All ingredients listed or exempt.
IECSC (China):	All ingredients listed or exempt.
ENCS/ISHL (Japan):	All components are listed on ENCS/ISHL or exempted from inventory listing.
KECI (Korea):	All ingredients listed, exempt or notified.
PICCS (Philippines):	All ingredients listed or exempt.
DSL (Canada):	All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

SECTION 16 OTHER INFORMATION

NFPA:	HMIS III:
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HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0

0 = not significant
1 = slight
2 = moderate
3 = high
4 = extreme
*** = chronic**

THIS INFORMATION IS OFFERED IN GOOD FAITH AS TYPICAL V A PRODUCT SPECIFICATION. NO WARRANTY, EXPRESSED OR IMPLIED, IS HEREBY MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.



**ADVANCED
CHEMICAL**
TECHNOLOGIES, INC.

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Printing date: 06/05/2018

Reviewed on 06/05/2018

1 Identification

- **Product identifier**
 - **Trade name: DECK-SIL® EP-1700 Seal Component A**
 - **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
 - **Product description** Penetrating epoxy healer sealer
 - **Details of the supplier of the safety data sheet**
 - **Manufacturer/Supplier:**
Advanced Chemical Technologies, Inc.
9608 North Robinson Avenue
Oklahoma City, OK 73114
Phone: 405-843-2585
Fax: 405-843-2596
Web: www.advchemtech.com
 - **Emergency telephone number:**
Chemtel: 1-800-255-3924
- DECK-SIL® Product for use under U.S. Patent No. 9,242,269.**

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS09 Environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02



GHS07



GHS09

- **Signal word** Warning
- **Hazard-determining components of labeling:**
Epoxy resin

(Contd. on page 2)



ADVANCED
CHEMICAL
TECHNOLOGIES, INC.

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Printing date: 06/05/2018

Reviewed on 06/05/2018

· **Hazard statements**

Flammable liquid and vapor.
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves / eye protection / face protection.
Wear protective gloves.
Wear eye protection / face protection.
Ground/bond container and receiving equipment.
Keep container tightly closed.
Use only non-sparking tools.
Avoid release to the environment.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use for extinction: CO₂, powder or water spray.
Collect spillage.
Take off contaminated clothing and wash it before reuse.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Unknown acute toxicity:**

75 percent of the mixture consists of ingredient(s) of unknown toxicity.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = 1
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

· **Other hazards** None known

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

(Contd. on page 3)



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· **Dangerous Components:**

CAS: 25068-38-6	Epoxy resin ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	70-90%
CAS: 1330-20-7 RTECS: ZE 2100000	xylene ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	15-35%

4 First-aid measures

· **Description of first aid measures**

· **After inhalation:**

In case of unconsciousness, place patient securely on side position for transportation.
Supply fresh air. If required, provide artificial respiration. Consult doctor if symptoms persist.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

· **After eye contact:**

Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Never give anything by mouth to an unconscious person.
Rinse out mouth and then drink plenty of water.
Seek medical treatment.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Special hazards arising from the substance or mixture** No further relevant information available.

· **Advice for firefighters**

· **Protective equipment:**

Because fire may produce thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (ie. sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

Dispose contaminated material as waste according to section 13.

· **Reference to other sections**

See Section 7 for information on safe handling.

(Contd. on page 4)



See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Avoid contact with skin, eyes and clothing
Avoid breathing fume/gas/mist/vapors/spray.
Do not take internally.
Use personal protection equipment as outlined in section 8.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool, dry place away from sparks and flame.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.

- **Control parameters**

- **Components with occupational exposure limits:**

1330-20-7 xylene

PEL	Long-term value: 435 mg/m ³ , 100 ppm
REL	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm
BEI	

- **Ingredients with biological limit values:**

1330-20-7 xylene

BEI	1.5 g/g creatinine urine end of shift Methylhippuric acids
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- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.



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Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Select glove material based on penetration times, rates of diffusion and degradation.

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

- **Eye protection:** Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Liquid

Color: Blue

- **Odor:** Like aromatic solvents

- **Odor threshold:** Not determined.

- **pH-value @ 20 °C (68 °F):** 7

- **Change in condition**

Melting point/Melting range: Not determined.

Boiling point/Boiling range: 137 °C (279 °F)

- **Flash point:** 30 °C (86 °F)

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 500 °C (932 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- **Explosion limits:**

Lower: 1.1 Vol %

Upper: 7.0 Vol %

- **Vapor pressure @ 20 °C (68 °F):** 6.7 hPa (5 mm Hg)

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- **Density @ 20 °C (68 °F):** 1.043 g/cm³ (8.704 lbs/gal)
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Solvent content:**
 - Organic solvents:** 25.0 %
 - VOC content:** 25.0 %
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Strong acids, strong bases, mercaptans and peroxides may initiate polymerization.
- **Hazardous decomposition products:** Carbon dioxide, carbon monoxide and nitrogen oxides.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

1330-20-7 xylene	
Oral	LD50 4300 mg/kg (rat)
Dermal	LD50 2000 mg/kg (rabbit)
- **Primary irritant effect:**
- **on the skin:**
 - Irritant to skin and mucous membranes.
 - May cause an allergic skin reaction.
- **on the eye:**
 - Irritating effect.
 - Causes serious eye irritation.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
 - The product shows the following dangers according to internally approved calculation methods for preparations:
 - Irritant
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

1330-20-7 xylene	3
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· **NTP (National Toxicology Program)**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Remark:** Toxic for fish

· **Additional ecological information:**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Do not allow product to reach sewage system.

It is the generators responsibility to determine if the waste meets applicable definitions of hazardous waste.

State and local regulations may differ from federal disposal regulations. Dispose of waste material according

to local, state and federal environmental regulations.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**

· **DOT, ADR, IMDG, IATA**

UN1993

· **UN proper shipping name**

· **DOT**

Flammable liquids, n.o.s. (Xylenes)

· **ADR**

UN1993 Flammable liquids, n.o.s. (Xylenes),

ENVIRONMENTALLY HAZARDOUS

· **IMDG**

FLAMMABLE LIQUID, N.O.S. (XYLENES, Epoxy resin),

MARINE POLLUTANT

· **IATA**

FLAMMABLE LIQUID, N.O.S. (XYLENES)

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· **Transport hazard class(es)**

· **DOT**



- **Class** 3 Flammable liquids
- **Label** 3

· **ADR**



- **Class** 3 (F1) Flammable liquids
- **Label** 3

· **IMDG**



- **Class** 3 Flammable liquids
- **Label** 3

· **IATA**



- **Class** 3 Flammable liquids
- **Label** 3
- **Packing group** III
- **DOT, ADR, IMDG, IATA** III
- **Environmental hazards:** Product contains environmentally hazardous substances: Epoxy resin
- **Marine pollutant:** Yes
- **Special marking (ADR):** Symbol (fish and tree)
- **Special precautions for user:** Symbol (fish and tree)
- **Danger code (Kemler):** Warning: Flammable liquids
- **EMS Number:** 30
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** F-E, S-E
- **Transport/Additional information:** Not applicable.
- **DOT**
- **Quantity limitations** On passenger aircraft/rail: 60 L
On cargo aircraft only: 220 L

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- **ADR**
- **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
- **IMDG**
- **Limited quantities (LQ)** 5L
- **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
- **UN "Model Regulation":** UN1993, Flammable liquids, n.o.s. (Xylenes), ENVIRONMENTALLY HAZARDOUS, 3, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 313 (Specific toxic chemical listings):**

1330-20-7 xylene

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

1330-20-7 xylene

I

- **TLV (Threshold Limit Value established by ACGIH)**

1330-20-7 xylene

A4

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**

GHS02 GHS07 GHS09

· **Signal word** Warning· **Hazard-determining components of labeling:**

Epoxy resin

· **Hazard statements**

Flammable liquid and vapor.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves / eye protection / face protection.

Wear protective gloves.

Wear eye protection / face protection.

Ground/bond container and receiving equipment.

Keep container tightly closed.

Use only non-sparking tools.

Avoid release to the environment.

Take precautionary measures against static discharge.

Wash thoroughly after handling.

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

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Collect spillage.

Take off contaminated clothing and wash it before reuse.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

· **State Right to Know**

CAS: 25068-38-6

Epoxy resin

⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317

70-90%

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CAS: 1330-20-7	xylene	15-35%
RTECS: ZE 2100000	⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	

All ingredients are listed.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

- **Date of preparation / last revision** 09/20/2017 / 1

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

- *** Data compared to the previous version altered.**

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1 Identification

- **Product identifier**
- **Trade name: DECK-SIL® EP-1700 Seal Component B**
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Product description** Penetrating epoxy healer sealer
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Advanced Chemical Technologies, Inc.
9608 North Robinson Avenue
Oklahoma City, OK 73114
Phone: 405-843-2585
Fax: 405-843-2596
Web: www.advchemtech.com
Emergency telephone number:
Chemtel: 1-800-255-3924

DECK-SIL® Product for use under U.S. Patent No. 9,242,269.**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 Environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Sens. 1 H317 May cause an allergic skin reaction.

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- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02 GHS05 GHS07 GHS08 GHS09

- **Signal word** Danger

- **Hazard-determining components of labeling:**

4-nonylphenol, branched
 cyclohex-1,2-ylenediamine
 Benzyl alcohol
 2,4,6-tris(dimethylaminomethyl)phenol

- **Hazard statements**

Flammable liquid and vapor.
 Harmful if swallowed.
 Causes severe skin burns and eye damage.
 May cause an allergic skin reaction.
 Suspected of damaging fertility or the unborn child.
 Very toxic to aquatic life.
 Very toxic to aquatic life with long lasting effects.

- **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 Use explosion-proof electrical/ventilating/lighting/equipment.
 Do not breathe dusts or mists.
 Wear protective gloves / eye protection / face protection.
 Wear protective gloves.
 Wear eye protection / face protection.
 Ground/bond container and receiving equipment.
 Keep container tightly closed.
 Use only non-sparking tools.
 Avoid release to the environment.
 Take precautionary measures against static discharge.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Contaminated work clothing must not be allowed out of the workplace.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
 Continue rinsing.
 Immediately call a poison center/doctor.
 If swallowed: Call a poison center/doctor if you feel unwell.
 Specific treatment (see on this label).
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 Wash contaminated clothing before reuse.
 IF exposed or concerned: Get medical advice/attention.
 If skin irritation or rash occurs: Get medical advice/attention.
 If swallowed: Rinse mouth. Do NOT induce vomiting.

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In case of fire: Use for extinction: CO₂, powder or water spray.

Collect spillage.

Store locked up.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Unknown acute toxicity:**

65 percent of the mixture consists of ingredient(s) of unknown toxicity.

• **Classification system:**

• **NFPA ratings (scale 0 - 4)**



• **HMIS-ratings (scale 0 - 4)**



• **Other hazards** None known

3 Composition/information on ingredients

• **Chemical characterization: Mixtures**

• **Description:** Mixture of substances listed below with nonhazardous additions.

• **Dangerous Components:**

CAS: 84852-15-3	4-nonylphenol, branched ⚠ Repr. 2, H361; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	25-50%
CAS: 1330-20-7 RTECS: ZE 2100000	xylene ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	15-35%
CAS: 694-83-7	cyclohex-1,2-ylenediamine ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318; ⚠ Skin Sens. 1, H317; H227	5-10%
CAS: 90-72-2	2,4,6-tris(dimethylaminomethyl)phenol ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	5-10%
CAS: 100-51-6 RTECS: DN 3150000	Benzyl alcohol ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	5-10%

4 First-aid measures

• **Description of first aid measures**

• **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

• **After inhalation:**

In case of unconsciousness, place patient securely on side position for transportation.

Supply fresh air. If required, provide artificial respiration. Consult doctor if symptoms persist.

• **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

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- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
Do not induce vomiting.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:**
Because fire may produce thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Use neutralizing agent.
Absorb with liquid-binding material (ie. sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Open and handle receptacle with care.
Ensure good ventilation/exhaustion at the workplace.
Avoid contact with skin, eyes and clothing
Avoid breathing fume/gas/mist/vapors/spray.
Do not take internally.
Use personal protection equipment as outlined in section 8.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Keep protective respiratory device available.

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Printing date 06/05/2018

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a well ventilated place.
Store in a cool, dry place away from sparks and flame.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**

• **Components with occupational exposure limits:****1330-20-7 xylene**

PEL	Long-term value: 435 mg/m ³ , 100 ppm
REL	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm BEI

100-51-6 Benzyl alcohol

WEEL	Long-term value: 10 ppm
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• **Ingredients with biological limit values:****1330-20-7 xylene**

BEI	1.5 g/g creatinine urine end of shift Methylhippuric acids
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- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure, use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Penetration time of glove material**

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

- **Eye protection:** Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Liquid
Color: Dark amber

- **Odor:** Solvent-like

- **Odor threshold:** Not determined.

- **pH-value @ 20 °C (68 °F):** 12

- **Change in condition**

Melting point/Melting range: Not determined.

Boiling point/Boiling range: 137 °C (279 °F)

- **Flash point:** 30 °C (86 °F)

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 435 °C (815 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- **Explosion limits:**

Lower: 1.1 Vol %

Upper: 13.0 Vol %

- **Vapor pressure @ 20 °C (68 °F):** 6.7 hPa (5 mm Hg)

- **Density @ 20 °C (68 °F):** 0.9 g/cm³ (7.511 lbs/gal)

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with**

Water: Fully miscible.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

Dynamic: Not determined.

Kinematic: Not determined.

- **Solvent content:**

Organic solvents: 35.0 %

VOC content: 35.0 %

- **Other information** No further relevant information available.

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10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**
 - Strong oxidizing agents.
 - Strong acids, strong bases
- **Hazardous decomposition products:** Carbon dioxide, carbon monoxide and nitrogen oxides.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

1330-20-7 xylene	
Oral	LD50 4300 mg/kg (rat)
Dermal	LD50 2000 mg/kg (rabbit)
- **Primary irritant effect:**
- **on the skin:**
 - Strong caustic effect on skin and mucous membranes.
 - May cause an allergic skin reaction.
- **on the eye:**
 - Strong irritant with the danger of severe eye injury.
 - Corrosive effect.
 - Causes serious eye irritation.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
 - The product shows the following dangers according to internally approved calculation methods for preparations:
 - Harmful
 - Corrosive
 - Irritant
 - Swallowing will lead to a corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**

1330-20-7 xylene	3
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- **NTP (National Toxicology Program)**
 - None of the ingredients are listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**
 - None of the ingredients are listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:**
 - Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

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- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 3 (Self-assessment): extremely hazardous for water
 Do not allow product to reach ground water, water course or sewage system, even in small quantities.
 Must not reach bodies of water or drainage ditch undiluted or unneutralized.
 Danger to drinking water if even extremely small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Very toxic for aquatic organisms
 Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Do not allow product to reach sewage system.
 It is the generators responsibility to determine if the waste meets applicable definitions of hazardous waste. State and local regulations may differ from federal disposal regulations. Dispose of waste material according to local, state and federal environmental regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN2920
- **UN proper shipping name**
- **DOT** Corrosive liquids, flammable, n.o.s.
- **ADR** UN2920 Corrosive liquids, flammable, n.o.s. (4-nonylphenol, branched, Xylenes), ENVIRONMENTALLY HAZARDOUS
- **IMDG** CORROSIVE LIQUID, FLAMMABLE, N.O.S. (4-nonylphenol, branched, XYLENES), MARINE POLLUTANT
- **IATA** CORROSIVE LIQUID, FLAMMABLE, N.O.S.
- **Transport hazard class(es)**
- **DOT**



- **Class** 8 Corrosive substances

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· Label	8, 3
· ADR	
	
· Class	8 (CF1) Corrosive substances
· Label	8+3
· IMDG	
	
· Class	8 Corrosive substances
· Label	8/3
· IATA	
	
· Class	8 Corrosive substances
· Label	8 (3)
· Packing group	II
· DOT, ADR, IMDG, IATA	Product contains environmentally hazardous substances: 4-nonylphenol, branched
· Environmental hazards:	Yes
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· Special precautions for user	Warning: Corrosive substances
· Danger code (Kemler):	83
· EMS Number:	F-E,S-C
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· Remarks:	Special marking with the symbol (fish and tree).
· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L

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· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN2920, Corrosive liquids, flammable, n.o.s. (4-nonylphenol, branched, Xylenes), ENVIRONMENTALLY HAZARDOUS, 8 (3), II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

1330-20-7 xylene

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

1330-20-7 xylene

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· **TLV (Threshold Limit Value established by ACGIH)**

1330-20-7 xylene

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS05 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labeling:**

4-nonylphenol, branched
cyclohex-1,2-ylenediamine



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Benzyl alcohol
2,4,6-tris(dimethylaminomethyl)phenol

· **Hazard statements**

Flammable liquid and vapor.
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
Do not breathe dusts or mists.
Wear protective gloves / eye protection / face protection.
Wear protective gloves.
Wear eye protection / face protection.
Ground/bond container and receiving equipment.
Keep container tightly closed.
Use only non-sparking tools.
Avoid release to the environment.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing must not be allowed out of the workplace.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a poison center/doctor.
If swallowed: Call a poison center/doctor if you feel unwell.
Specific treatment (see on this label).
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If swallowed: Rinse mouth. Do NOT induce vomiting.
In case of fire: Use for extinction: CO2, powder or water spray.
Collect spillage.
Store locked up.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

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• State Right to Know		
CAS: 84852-15-3	4-nonylphenol, branched ⚠ Repr. 2, H361; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	25-50%
CAS: 1330-20-7 RTECS: ZE 2100000	xylene ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	15-35%
CAS: 694-83-7	cyclohex-1,2-ylenediamine ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318; ⚠ Skin Sens. 1, H317; H227	5-10%
CAS: 90-72-2	2,4,6-tris(dimethylaminomethyl)phenol ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	5-10%
CAS: 100-51-6 RTECS: DN 3150000	Benzyl alcohol ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	5-10%
All ingredients are listed.		

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

• **Date of preparation / last revision 09/22/2017/ 1**

• **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 3: Flammable liquids, Hazard Category 3

: Flammable liquids, Hazard Category 4

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Repr. 2: Reproductive toxicity, Hazard Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

• *** Data compared to the previous version altered.**