

SAFETY DATA SHEET

1. Identification

Product identifier	HumiSeal 1A27LU	
Other means of identification		
Product code	HumiSeal 1A27LU	
Recommended use	Protective Coating for Printed Circuit Board	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	CHASE CORPORATION Zeta Drive Plant	
Address	201 Zeta Drive Pittsburgh, Pennsylvania 15238 United States	
Telephone	1-866-932-0800	
E-mail	Not available.	
Emergency phone number	1-800-424-9300 (+1)703-527-3887	Chemtrec, US Chemtrec, outside of US

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 3
Health hazards	Skin corrosion/irritation	Category 2
	Carcinogenicity	Category 2
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	
Label elements		
Hazard symbol	None.	
Signal word	None.	
Hazard statement	Not available.	
Precautionary statement		
Prevention	Not available.	
Response	Not available.	
Storage	Not available.	
Disposal	Not available.	

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
XYLENES		1330-20-7	30 - < 40
ETHYLBENZENE		100-41-4	5 - < 10
TOLUENE		108-88-3	1 - < 3

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Not available.
Skin contact Not available.
Eye contact Not available.
Ingestion Not available.
Most important symptoms/effects, acute and delayed Not available.

5. Fire-fighting measures

Suitable extinguishing media Not available.
Unsuitable extinguishing media Not available.
Specific hazards arising from the chemical Not applicable.
Special protective equipment and precautions for firefighters Not available.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Not available.
Methods and materials for containment and cleaning up Not available.
Environmental precautions Not available.

7. Handling and storage

Precautions for safe handling Not available.
Conditions for safe storage, including any incompatibilities Not available.

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
ETHYLBENZENE (CAS 100-41-4)	PEL	435 mg/m ³ 100 ppm
XYLENES (CAS 1330-20-7)	PEL	435 mg/m ³ 100 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
TOLUENE (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
ETHYLBENZENE (CAS 100-41-4)	TWA	20 ppm
TOLUENE (CAS 108-88-3)	TWA	20 ppm
XYLENES (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
ETHYLBENZENE (CAS 100-41-4)	STEL	545 mg/m3
		125 ppm
	TWA	435 mg/m3
TOLUENE (CAS 108-88-3)	STEL	560 mg/m3
		150 ppm
	TWA	375 mg/m3
XYLENES (CAS 1330-20-7)	STEL	655 mg/m3
		150 ppm
	TWA	435 mg/m3
		100 ppm

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
ETHYLBENZENE (CAS 100-41-4)	0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*
TOLUENE (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*
XYLENES (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines**US - California OELs: Skin designation**

TOLUENE (CAS 108-88-3) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

TOLUENE (CAS 108-88-3) Skin designation applies.

Appropriate engineering controls Not available.

Individual protection measures, such as personal protective equipment

Eye/face protection Not available.

Skin protection

Hand protection Not available.

Other	Not available.
Respiratory protection	Not available.
Thermal hazards	Not available.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Not available.
Color	Clear

Odor Aromatic

Odor threshold Not available.

pH Does not apply.

Melting point/freezing point -138.82 °F (-94.9 °C) estimated

Initial boiling point and boiling range 276.98 °F (136.1 °C) estimated

Flash point 80.6 °F (27.0 °C)

Evaporation rate 0.6 BuAc

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 0.9 %

Flammability limit - upper (%) 6.8 %

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 11.05 hPa estimated

Vapor density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Negligible

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature 810 °F (432.22 °C) estimated

Decomposition temperature Not available.

Viscosity 1500 - 1900 cP

Viscosity temperature 77 °F (25 °C)

Other information

Brookfield viscosity 1500 - 1900 cP

Density 0.96 g/cm³

Flammability class Flammable IB estimated

Miscible (water) Negligible

Percent volatile 49 - 55 % v/v

Specific gravity 0.96

VOC 489 g/l

10. Stability and reactivity

Reactivity Not available.

Chemical stability Not available.

Possibility of hazardous reactions Not available.

Conditions to avoid Not available.

Incompatible materials Not available.

Hazardous decomposition products Not available.

11. Toxicological information

Information on likely routes of exposure

Inhalation Not available.
Skin contact Not available.
Eye contact Not available.
Ingestion Not available.

Symptoms related to the physical, chemical and toxicological characteristics Not available.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
HumiSeal 1A27LU		
Acute		
Dermal		
LD50	Rabbit	653.8 ml/kg estimated 112.8 g/kg estimated
Inhalation		
LC50	Mouse	18550 ppm, 24 Hours estimated 10250 mg/l, 6 Hours estimated
	Rat	16660 mg/l, 4 Hours estimated
Oral		
LD50	Mouse	4172 mg/kg estimated
	Rat	7501 mg/kg estimated
Other		
LD50	Mouse	2474 mg/kg estimated
	Rat	9.968 mg/kg estimated
Components	Species	Test Results

ETHYLBENZENE (CAS 100-41-4)

Acute

Dermal

LD50 Rabbit 17800 mg/kg

Oral

LD50 Rat 3500 mg/kg

TOLUENE (CAS 108-88-3)

Acute

Dermal

LD50 Rabbit 12120 mg/kg

Oral

LD50 Rat 2.6 g/kg

XYLENES (CAS 1330-20-7)

Acute

Dermal

LD50 Rabbit > 43 g/kg

Inhalation

LC50 Rat 6350 mg/l, 4 Hours

Oral

LD50 Rat 3523 - 8600 mg/kg

Skin corrosion/irritation Not available.
Serious eye damage/eye irritation Not available.
Respiratory or skin sensitization
Respiratory sensitization Not available.
Skin sensitization Not available.
Germ cell mutagenicity Not available.

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

ETHYLBENZENE (CAS 100-41-4) 2B Possibly carcinogenic to humans.
 TOLUENE (CAS 108-88-3) 3 Not classifiable as to carcinogenicity to humans.
 XYLENES (CAS 1330-20-7) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Not available.
Specific target organ toxicity - single exposure Not available.
Specific target organ toxicity - repeated exposure Not available.
Aspiration hazard Not available.

12. Ecological information

Ecotoxicity

Product	Species		Test Results
HumiSeal 1A27LU			
Aquatic			
Crustacea	EC50	Daphnia	41.6141 mg/l, 48 hours estimated
Fish	LC50	Fish	102.5855 mg/l, 96 hours estimated
Components			
ETHYLBENZENE (CAS 100-41-4)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1.37 - 4.4 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	7.5 - 11 mg/l, 96 hours
TOLUENE (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon, silver salmon (Oncorhynchus kisutch)	8.11 mg/l, 96 hours
XYLENES (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	7.711 - 9.591 mg/l, 96 hours

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

ETHYLBENZENE 3.15
 TOLUENE 2.73
 XYLENES 3.12 - 3.2

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Not available.

Waste from residues / unused products Not available.

Contaminated packaging Not available.

14. Transport information

DOT

UN number	UN1263
UN proper shipping name	PAINT
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Special precautions for user	Not available.
Special provisions	B1, B52, IB3, T2, TP1, TP29
Packaging exceptions	150
Packaging non bulk	173
Packaging bulk	242

IATA

UN number	UN1263
UN proper shipping name	PAINT
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	No.
ERG Code	3L
Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1263
UN proper shipping name	PAINT
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
Special precautions for user	Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

DOT





15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

ETHYLBENZENE (CAS 100-41-4) Listed.
 TOLUENE (CAS 108-88-3) Listed.
 XYLENES (CAS 1330-20-7) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories
 Flammable (gases, aerosols, liquids, or solids)
 Skin corrosion or irritation
 Carcinogenicity
 Reproductive toxicity
 Specific target organ toxicity (single or repeated exposure)
 Aspiration hazard
 Hazard not otherwise classified (HNOC)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
ETHYLBENZENE	100-41-4	5 - < 10
TOLUENE	108-88-3	1 - < 3
XYLENES	1330-20-7	30 - < 40

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

ETHYLBENZENE (CAS 100-41-4)
 TOLUENE (CAS 108-88-3)
 XYLENES (CAS 1330-20-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

TOLUENE (CAS 108-88-3) 6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

TOLUENE (CAS 108-88-3) 35 %WV

DEA Exempt Chemical Mixtures Code Number

TOLUENE (CAS 108-88-3) 594

US state regulations

California Proposition 65



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

California Proposition 65 - CRT: Listed date/Carcinogenic substance

ETHYLBENZENE (CAS 100-41-4) Listed: June 11, 2004

California Proposition 65 - CRT: Listed date/Developmental toxin

TOLUENE (CAS 108-88-3) Listed: January 1, 1991

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

ETHYLBENZENE (CAS 100-41-4)

TOLUENE (CAS 108-88-3)

XYLENES (CAS 1330-20-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	05-17-2015
Revision date	08-10-2018
Version #	03
HMIS® ratings	Health: 3* Flammability: 3 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 3 Instability: 0
Disclaimer	Not available.
Revision information	This document has undergone significant changes and should be reviewed in its entirety.