

SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

EPIKURE™ Curing Agent 3253

Section 1. Product and company identification

GHS product identifier : EPIKURE™ Curing Agent 3253

MSDS Number : K8161
Product type : Curing Agent
Material uses : Epoxy Resin Systems

Manufacturer/Supplier/Impor : Hexion Inc.

er 180 East Broad Street

Columbus, Ohio 43215 USA

Contact person : 4information@hexion.com

Telephone : For additional health and safety or regulatory information, call

1 888 443 9466.

Emergency telephone number : For Emergency Medical Assistance

Call Health & Safety Information Services

1-866-303-6949

For Emergency Transportation Information CHEMTREC US Domestic (800) 424-9300 CHEMTREC International (703) 527-3887 CANUTEC CA Domestic (613) 996-6666

Section 2. Hazards identification

Classification of the substance or

mixture

: ACUTE TOXICITY:dermal - Category 4

SKIN CORROSION/IRRITATION - Category 1B

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

SKIN SENSITIZATION - Category 1

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)

[skin, eyes] - Category 2

SPECIFIC TARGET ORGAN TOXICITY (REPEATED

EXPOSURE) [brain, spleen, liver] - Category 2

GHS label elements

Hazard pictograms

Signal word : Dange

Hazard statements : H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H371 May cause damage to organs. (skin, eyes)

H373 May cause damage to organs through prolonged or repeated

exposure. (brain, spleen, liver)

Precautionary statements

General : Not applicable.

Prevention : Wear protective gloves.

Wear eye or face protection. Wear protective clothing. Do not breathe vapor.

Do not eat, drink or smoke when using this product.

Wash hands thoroughly after handling.

Contaminated work clothing should not be allowed out of the

workplace.

Response : Get medical attention if you feel unwell.

IF exposed or if you feel unwell:

Call a POISON CENTER or physician.

IF INHALED:

Remove victim to fresh air and keep at rest in a position comfortable

for breathing.

Immediately call a POISON CENTER or physician.

IF SWALLOWED:

Immediately call a POISON CENTER or physician.

Rinse mouth.

Do NOT induce vomiting.

IF ON SKIN (or hair):

Take off immediately all contaminated clothing.

Rinse skin with water or shower.

Wash contaminated clothing before reuse.

Immediately call a POISON CENTER or physician.

IF ON SKIN:

Wash with plenty of soap and water.

Call a POISON CENTER or physician if you feel unwell.

If skin irritation or rash occurs:

Get medical attention.

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 or physician.

Storage : Store locked up.

Disposal: Dispose of contents and container in accordance with all local,

regional, national and international regulations.

Other hazards which do not result

in classification

None known.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

CAS number/other identifiers

CAS number : 90-72-2 **EC number** : 202-013-9

Ingredient name	% by weight	CAS
		number
Phenol, 2,4,6-Tris((dimethylamino)methyl)-	100	90-72-2

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section

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

Section 4. First aid measures

Description of necessary first aid measures

Ingestion

Eye contact
: Get medical attention immediately. Call a poison center or physician.
Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses.
Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician.

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical

surveillance for 48 hours.

Skin contact : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing

and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing

before reuse. Clean shoes thoroughly before reuse.

: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed

to do so by medical personnel. If vomiting occurs, the head should be

kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments

Protection of first aid personnel

: No specific treatment.

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Unsuitable extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

: None known.

Specific hazards arising from the chemical

Hazardous thermal decomposition products

: In a fire or if heated, a pressure increase will occur and the container may burst.

 Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides

Special protective actions for firefighters Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See

also the information in "For non-emergency personnel".

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Estop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13 of SDS). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see section 8 of SDS). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be

approved by a specialist before handling this product.

Other skin protection Appropriate footwear and any additional skin protection measures

should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this

Use a properly fitted, air-purifying or air-fed respirator complying with **Respiratory protection**

an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the

selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state Liquid

Color Reddish-brown

Odor amine.

Not available **Odor threshold** Not available Melting point/ Freezing point Not available 316 °C (601 °F) **Boiling point**

Flash point 157 °C (315 °F)

Burning time Not available **Burning rate** Not available **Evaporation rate** Not available Flammability (solid, gas) Not available

Lower and upper explosive Lower: Not available (flammable) limits **Upper:** Not available 1 Pa @ 20 °C (68 °F) Vapor pressure

Vapor density 1 [Air = 1]

Relative density Not available 970 kg/m3 **Density**

Not available **Solubility** Solubility in water Moderate

Partition coefficient: n-

octanol/water

Auto-ignition temperature Not available **Decomposition temperature** Not available **SADT** Not available

Viscosity **Dynamic:** Not available

Kinematic: Not available

0.77

Other information

No additional information.

Section 10. Stability and reactivity

04/25/2016 Date of previous issue: 03/14/2015 Version: 6.1 Date of issue/Date of revision:

Reactivity : Stable under normal conditions.

Chemical stability : The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will

not occur.

Conditions to avoid : Exposure to water vapour. Keep away from heat, sparks, flame and

other ignition sources.

Incompatible materials : strong oxidizing agents,

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition

products should not be produced.

Other hazards Heating this substance above 300 deg. F in the presence of air may

cause slow oxidative decomposition; above 500 deg. F polymerization

may occur.

Some combinations of resins and curing agents can produce exothermic reactions which in large masses can cause runaway

polymerization and charring of the reactants

Fumes and vapors from the thermal and chemical decompositions

vary widely in composition and toxicity.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Phenol, 2,4,6-Tris((dimethylamino)methyl)-				
	LD50 Oral	Rat	1,200 mg/kg	-
	LD50 Oral	Rat	1,673 mg/kg	-
	LD50 Dermal	Rat	1,280 mg/kg	-

Conclusion/Summary : Not available

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Phenol, 2,4,6-	Skin -	Rat			-
Tris((dimethylamino)methyl)-	Severe				
	irritant				
	eyes -	Rabbit		24 hrs	-
	Severe				
	irritant				
	Skin - Mild	Rat			-
	irritant				

Conclusion/Summary

Skin:Not availableeyes:Not availableRespiratory:Not available

Sensitization

Conclusion/Summary

Skin : Not available Respiratory : Not available

Mutagenicity

Conclusion/Summary : Not available

Carcinogenicity

Conclusion/Summary : Not available

Reproductive toxicity

Conclusion/Summary : Not available

Teratogenicity

Conclusion/Summary : Not available

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Phenol, 2,4,6-	Category 3		Respiratory tract irritation
Tris((dimethylamino)methyl)-	Category 2		skin
			eyes

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Phenol, 2,4,6-	Category 2		spleen
Tris((dimethylamino)methyl)-			liver
			brain

Aspiration hazard

Not available

Information on the likely routes of

exposure

Not available

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May give off gas, vapour or dust that is very irritating or corrosive to

the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact: Causes severe burns. Harmful in contact with skin. May cause an

allergic skin reaction.

Ingestion : May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion : Adverse symptoms may include the following:

stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available **Potential delayed effects** : Not available

Long term exposure

Potential immediate effects : Not available
Potential delayed effects : Not available

Potential chronic health effects

Conclusion/Summary : Not available

General : May cause damage to organs through prolonged or repeated exposure.

Once sensitized, a severe allergic reaction may occur when

subsequently exposed to very low levels.

Carcinogenicity: No known significant effects or critical hazards.Mutagenicity: No known significant effects or critical hazards.Teratogenicity: No known significant effects or critical hazards.Developmental effects: No known significant effects or critical hazards.Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available

Section 12. Ecological information

Toxicity

Product/ingredient name Result		Species	Exposure
2,4,6-tris(dimethylaminomethyl)	phenol		
	Acute EC50 84 mg/l 201 Alga,	Aquatic plants - Green	72 h
	Growth Inhibition Test	algae	

Conclusion/Summary : Not available

Persistence/degradability

Conclusion/Summary : Not available

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Phenol, 2,4,6-Tris((dimethylamino)meth	nyl)-		
			Not readily
			biodegradable.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Phenol, 2,4,6-	0.219	-	low
Tris((dimethylamino)methyl)-			
EPIKURE™ Curing Agent 3253	0.77	-	low

Mobility in soil

Soil/water partition coefficient

(KOC)

: Not available

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

International transport regulations

Regulatory UN/NA Proper shipping name Classes/*PG Reportable information number Quantity (RQ)

CFR 2735 POLYAMINES, LIQUID, Class 8 II

CORROSIVE, N.O.S.

(2,4,6-

TRIS[DIMETHYLAMINOME

THYL] PHENOL)

IMO/IMDG 2735 POLYAMINES, LIQUID, Class 8 II

CORROSIVE, N.O.S.

(2,4,6-

TRIS[DIMETHYLAMINOME

THYL] PHENOL)

IATA (Cargo) 2735 POLYAMINES, LIQUID, Class 8 II

CORROSIVE, N.O.S.

(2,4,6-

TRIS[DIMETHYLAMINOME

THYL] PHENOL)

*PG: Packing group

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons

transporting the product know what to do in the event of an accident

or spillage.

Section 15. Regulatory information

United States

U.S. Federal regulations : United States - TSCA 12(b) - Chemical export notification: None

required.

United States - TSCA 5(a)2 - Final significant new use rules: Not listed United States - TSCA 5(a)2 - Proposed significant new use rules: Not

listed

United States - TSCA 5(e) - Substances consent order: Not listed SARA 311/312 Classification - Immediate (acute) health hazard

California Prop. 65: None required.

United States inventory (TSCA

8b)

All components are listed or exempted.

Canada

WHMIS (Canada) : Class D-2B: Material causing other toxic effects (Toxic).

Class E: Corrosive material

Canadian lists

Canadian NPRI : None required.

CEPA Toxic substances None required.

International regulations

International lists Australia inventory (AICS): All components are listed or exempted.

> **Canada inventory:** All components are listed or exempted. **Japan inventory:** All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Korea inventory: All components are listed or exempted.

New Zealand Inventory (NZIoC): All components are listed or exempted. **Philippines inventory (PICCS):** All components are listed or exempted. **United States inventory (TSCA 8b):** All components are listed or exempted.

Taiwan inventory (CSNN): All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System III (U.S.A.):

Health	*	3
Flammability		1
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Full text of abbreviated H Not applicable.

statements

History

Date of printing 08/21/2018 Date of issue/Date of revision 04/25/2016 Date of previous issue 03/14/2015 Version 6.1

Prepared by

Product Safety Stewardship ATE = Acute Toxicity Estimate Key to abbreviations BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) RID = The Regulations concerning the International Carriage of Dangerous Goods by

Rail UN = United Nations

References Not available

Notice to reader

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