SAFETY DATA SHEET



Date of issue/Date of revision28 December 2017Version 9

Section 1. Identification		
Product name	: EPOXY HARDENER	
Product code	: 274909SP	
Other means of identification	: Not available.	
Product type	: Liquid.	
Relevant identified uses of	f the substance or mixture and uses advised against	
Product use	: Industrial applications.	
Use of the substance/ mixture	: Coating. Paints. Painting-related materials.	
Uses advised against	: Not applicable.	
Manufacturer	: PPG Industries, Inc. One PPG Place, Pittsburgh, PA 15272	
Emergency telephone number	 (412) 434-4515 (U.S.) (514) 645-1320 (Canada) 01-800-00-21-400 or + 52 55 5559 1588 (Mexico) 	
Technical Phone Number	: 1-800-647-6050	

Section 2. Hazards identification

OSHA/HCS status	 This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	 MAMABLE LIQUIDS - Category 3 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (central nervous system (CNS), hearing organs, kidneys, liver) - Category 2 Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 37.1% (Oral), 37.1% (Dermal), 83% (Inhalation)

GHS label elements

Product name EPOXY HARDENER

Section 2. Hazards identification

Hazard pictograms	
Signal word	: Danger
Hazard statements	 Flammable liquid and vapor. Harmful in contact with skin or if inhaled. Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. May cause cancer. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure. (central nervous system (CNS), hearing organs, kidneys, liver)
Precautionary statements	
Prevention	: Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.
Response	: Set medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Wash contaminated clothing before reuse. 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. If eye irritation persists: Get medical attention.
Storage	: Store locked up. Store in a well-ventilated place. Keep cool.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated.
Hazards not otherwise classified	: Prolonged or repeated contact may dry skin and cause irritation.

Product name EPOXY HARDENER

Section 3. Composition/information on ingredients

Substance/mixture

Product name

: Mixture

: EPOXY HARDENER

Ingredient name	%	CAS number
Solvent naphtha (petroleum), heavy arom.	≥20 - ≤44	64742-94-5
xylene	≥5.0 - ≤10	1330-20-7
naphthalene	≥1.0 - ≤5.0	91-20-3
ethylbenzene	≥1.0 - ≤3.6	100-41-4
p-xylene	≥1.0 - ≤3.6	106-42-3
2,4,6-tris(dimethylaminomethyl)phenol	≥1.0 - <3.0	90-72-2

SUB codes represent substances without registered CAS Numbers.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Description of necessary first aid measures

Eye contact	 Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
Inhalation	 Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
Skin contact	 Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion	: If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Most important symptoms/effects, acute and delayed

Potential acute health effects	<u>8</u>
Eye contact	: Causes serious eye irritation.
Inhalation	: Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact	: Farmful in contact with skin. Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
Ingestion	: Can cause central nervous system (CNS) depression.
Over-exposure signs/sympto	oms

Product name EPOXY HARDENER

Section 4. First aid measures

Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: Adverse symptoms may include the following: irritation redness dryness cracking
Ingestion	: No specific data.

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	: No specific treatment.
Protection of first-aiders	: 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	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.
Specific hazards arising from the chemical	: Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon oxides nitrogen oxides

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Section 5. Fire-fighting measures

Special protective actions for fire-fighters	: 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialized 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 materials for containment and cleaning up

Small spill	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Product name EPOXY HARDENER

Section 7. Handling and storage

Precautions for safe handling

Protective measures	: Fut on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Special precautions	: Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Vapors are heavier than air and may spread along floors. If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
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	: Do not store above the following temperature: 35°C (95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. 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

Ingredient name	Exposure limits
Solvent naphtha (petroleum), heavy arom.	None.
xylene	ACGIH TLV (United States, 3/2017).
	STEL: 651 mg/m ³ 15 minutes.
	STEL: 150 ppm 15 minutes.
	TWA: 434 mg/m ³ 8 hours.
	TWA: 100 ppm 8 hours.
	OSHA PEL (United States, 6/2016).
	TWA: 435 mg/m ³ 8 hours.
	TWA: 100 ppm 8 hours.
naphthalene	ACGIH TLV (United States, 3/2017).
	Absorbed through skin.
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Section 8. Exposure controls/personal protection

•	• •		
			A: 52 mg/m³ 8 hours.
		TWA	A: 10 ppm 8 hours.
		OSH/	A PEL (United States, 6/2016).
		TWA	A: 50 mg/m ³ 8 hours.
			A: 10 ppm 8 hours.
ethylbenzene			H TLV (United States, 3/2017).
,			A: 20 ppm 8 hours.
			A PEL (United States, 6/2016).
			A: 435 mg/m ³ 8 hours.
			A: 100 ppm 8 hours.
p-xylene			A PEL (United States, 6/2016).
			A: 435 mg/m ³ 8 hours.
			A: 100 ppm 8 hours.
			H TLV (United States, 3/2017).
			A: 100 ppm 8 hours.
			A: 434 mg/m ³ 8 hours.
			EL: 150 ppm 15 minutes.
			$EL: 651 \text{ mg/m}^3 15 \text{ minutes}.$
2,4,6-tris(dimethylaminometh	vl)nhenol	None	•
	yiphenor	None	
	Key to abbreviation		
A = Acceptable Maximum Pea		S	 Potential skin absorption
ACGIH = American Conference of C = Ceiling Limit	Governmental Industrial Hygienists.	SR SS	Respiratory sensitizationSkin sensitization
F = Fume		STEL	 Short term Exposure limit values
IPEL = Internal Permissible Expo	osure Limit	TD	= Total dust
OSHA = Occupational Safety and		TLV	= Threshold Limit Value
R = Respirable		TWA	 Time Weighted Average
	0 Subpart Z - Toxic and Hazardous Substance	s	
Consult local authorities for a	cceptable exposure limits.		
Recommended monitoring	: If this product contains ingredient	s with exposu	re limits, personal, workplace
procedures		ng may be red	quired 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 : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- **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

Product name EPOXY HARDENER

Section 8. Exposure controls/personal protection

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 Skin protection	: Chemical splash goggles.
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.
Gloves	: øutyl rubber
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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
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 product.
Respiratory protection	: 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. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Section 9. Physical and chemical properties

Appearance	
Physical state	: Liquid.
Color	: Not available.
Odor	: Not available.
Odor threshold	: Not available.
рН	: Not available.
Melting point	: Not available.
Boiling point	: >37.78°C (>100°F)
Flash point	: Closed cup: 27.22°C (81°F)
Material supports combustion.	: Yes.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Lower: 0.9%

Product name EPOXY HARDENER

Section 9. Physical and chemical properties

Evaporation rate	: 0.21 (butyl acetate = 1)
Vapor pressure	: 0.31 kPa (2.3 mm Hg) [room temperature]
Vapor density	: Not available.
Relative density	: 0.92
Density(lbs / gal)	: 7.68
Solubility	: Insoluble in the following materials: cold water.
Partition coefficient: n- octanol/water	: Not available.
Viscosity	: Kinematic (40°C (104°F)): >0.21 cm ² /s (>21 cSt)
Volatility	: 62% (v/v), 59.81% (w/w)
% Solid. (w/w)	: 40.19

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
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	: When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.
Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
Hazardous decomposition products	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Solvent naphtha (petroleum),	LD50 Dermal	Rabbit	>1.693 g/kg	-
heavy arom.				
, ,	LD50 Oral	Rat	3.2 g/kg	-
xylene	LD50 Dermal	Rabbit	>1.7 g/kg	-
2	LD50 Oral	Rat	4.3 g/kg	-
naphthalene	LD50 Dermal	Rabbit	>20 g/kg	-
•	LD50 Oral	Rat	490 mg/kg	-
ethylbenzene	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
,	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
p-xylene	LC50 Inhalation Gas.	Rat	4550 ppm	4 hours
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ection 11. Toxico	logical ir	nforn	natio	n					
2,4,6-tris (dimethylaminomethyl)phenol	LC50 Inhalation Vap LD50 Oral LD50 Dermal		Rat			4740 3910 1.28 g		ng/kg	4 hours - -
anneuryiannioneuryiphenor	LD50 Derma LD50 Oral	I			Rat Rat		1280 mg/kg - 1200 mg/kg -		-
Conclusion/Summary rritation/Corrosion	: There are n	o data :	available	e on th	e mixture	itself.			
Product/ingredient name	Result			Spec	ies	Score		Exposure	Observation
xylene	Skin - Moder	ate irrita	ant	Rabb	it	-		24 hours 500	-
2,4,6-tris (dimethylaminomethyl)phenol	Skin - Visible	necros	sis	Rabb	it	-		mg 4 hours	7 days
Skin Eyes Respiratory <u>Sensitization</u>	There are nThere are nThere are n	o data	available	e on th	e mixture	itself.			
Product/ingredient name	Route of Species exposure		S		Result				
2 ,4,6-tris (dimethylaminomethyl)phenol	skin Guine		Guinea pig		Sensitizing				
<u>Conclusion/Summary</u> Skin Respiratory <u>Mutagenicity</u>	There are no data available on the mixture itself.There are no data available on the mixture itself.								
Conclusion/Summary Carcinogenicity	: There are n	o data :	available	e on th	e mixture	itself.			
Conclusion/Summary <u>Classification</u>	: There are n	o data :	available	e on th	e mixture	itself.			
Product/ingredient name	OSHA I/	ARC	NTP						
xylene naphthalene ethylbenzene p-xylene		B B	- Reaso -	onably	anticipat	ed to be	e a hur	man carcinoge	n.

IARC: 1, 2A, 2B, 3, 4 NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen OSHA: + Not listed/not regulated: -

Reproductive toxicity

Conclusion/Summary

: There are no data available on the mixture itself.

Teratogenicity

Product name EPOXY HARDENER

Section 11. Toxicological information

Conclusion/Summary : There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)

Name	Category
Solvent naphtha (petroleum), heavy arom.	Category 3
xylene	Category 3

Specific target organ toxicity (repeated exposure)

Name	Category
xylene naphthalene ethylbenzene	Category 2 Category 2 Category 2
p-xylene	Category 2

Target organs

: Contains material which causes damage to the following organs: brain.

Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, liver, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), ears, eye, lens or cornea.

Aspiration hazard

Name	Result
xylene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Potential acute health effects

Eye contact	: Causes serious eye irritation.
Inhalation	: Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact	: Farmful in contact with skin. Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
Ingestion	: Can cause central nervous system (CNS) depression.
Over-exposure signs/s	<u>ymptoms</u>
Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: Adverse symptoms may include the following: irritation redness dryness cracking

Product name EPOXY HARDENER

Section 11. Toxicological information

		0			
Ingestion		No specific data.			
Delayed and immediate effect	ts	and also chronic effects from short an	<u>id long term exposure</u>		
Conclusion/Summary	:	There are no data available on the mixture itself. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.			
<u>Short term exposure</u>					
Potential immediate effects	1	There are no data available on the mixture itself.			
Potential delayed effects	1	There are no data available on the mixture itself.			
<u>Long term exposure</u>					
Potential immediate effects	:	There are no data available on the mixture itself.			
Potential delayed effects	1	There are no data available on the mixtu	ure itself.		
Potential chronic health effe	cts	2			
General	:	repeated contact can defat the skin and	rolonged or repeated exposure. Prolonged or lead to irritation, cracking and/or dermatitis. ion may occur when subsequently exposed to		
Carcinogenicity	1	: May cause cancer. Risk of cancer depends on duration and level of exposure.			
Mutagenicity	1	: No known significant effects or critical hazards.			
Teratogenicity	1	: No known significant effects or critical hazards.			
Developmental effects		: No known significant effects or critical hazards.			
Fertility effects					
Numerical measures of toxic	ity				
Acute toxicity estimates					
Route			ATE value		

Noute	
Oral	2308.2 mg/kg
Dermal	1283.7 mg/kg
Inhalation (gases)	4819.8 ppm
Inhalation (vapors)	12.73 mg/l
Inhalation (dusts and mists)	1.603 mg/l

Product name EPOXY HARDENER

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Solvent naphtha (petroleum), heavy arom.	NOEL 0.48 mg/l Fresh water	Daphnia	21 days
5	Acute LC50 150 to 200 mg/l Fresh water	Fish - Lepomis macrochirus - Young of the year	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene ethylbenzene	-	-	Readily Readily

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
xylene naphthalene	3.16 3.3	7.4 to 18.5 85.11	low low
ethylbenzene	3.15	79.43	low
p-xylene	3.15	14.79	low

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

Product name EPOXY HARDENER

14. Transport information

	DOT	IMDG	ΙΑΤΑ	
UN number	UN1263	UN1263	UN1263	
UN proper shipping name	PAINT	PAINT	PAINT	
Transport hazard class (es)	3	3	3	
Packing group	Ш	Ш	Ш	
Environmental hazards	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.	
Marine pollutant substances	Not applicable.	(Solvent naphtha (petroleum), heavy aromatic, naphthalene)	Not applicable.	
Product RQ (lbs)	1049.3	Not applicable.	Not applicable.	
RQ substances	(xylene, naphthalene)	Not applicable.	Not applicable.	

Additional information

DOT	 Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
IMDG	: The marine pollutant mark is not required when transported in sizes of ≤ 5 L or ≤ 5 kg.
IATA	 The environmentally hazardous substance mark may appear if required by other transportation regulations.

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

United States inventory (TSCA 8b) : All components are listed or exempted.

U.S. Federal regulations SARA 302/304	:
SARA 304 RQ	: Not applicable.
Composition/information of	on ingredients
No products were found.	
SARA 311/312	
Classification	: Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
Composition/information of	on ingredients

Product name EPOXY HARDENER

Section 15. Regulatory information

Name	hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard	
Solvent naphtha (petroleum), heavy arom.	Yes.	No.	No.	Yes.	No.	1
xylene	Yes.	No.	No.	Yes.	Yes.	ł
naphthalene	Yes.	No.	No.	Yes.	Yes.	÷
ethylbenzene	Yes.	No.	No.	Yes.	Yes.	ł
p-xylene	Yes.	No.	No.	Yes.	Yes.	ł
2,4,6-tris(dimethylaminomethyl)phenol	No.	No.	No.	Yes.	No.	ł

<u>SARA 313</u>

	Chemical name	<u>CAS number</u>	Concentration
Supplier notification	: xylene	1330-20-7	5 - 10
	naphthalene	91-20-3	1 - 5
	ethylbenzene	100-41-4	1 - 5
	p-xylene	106-42-3	1 - 5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Section 16. Other information

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

Health : 3 * Flammability : 3 Physical hazards : 0

(*) - Chronic effects

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 and the associated label are not required on MSDSs or products leaving a facility 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 trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)Health : 3Flammability : 3Instability : 0Date of previous issue: 9/20/2017Organization that prepared: EHSthe MSDS

Product name EPOXY HARDENER

Section 16. Other information Key to abbreviations : ATE = Acute Toxicity Estimate 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 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.