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SAFETY DATA SHEET		Revision Date: 05/21/2015
		Print Date: 6/15/2015
		SDS Number: R0391323
Hetron™ FR 992 epoxy vinyl ester resin ™ Trademark, Ashland or its subsidiaries, registered in various countries 31602		Version: 1.0

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Hetron™ FR 992
epoxy vinyl ester resin
™ Trademark, Ashland or its subsidiaries, registered in
various countries

Recommended use of the chemical and restrictions on use

Details of the supplier of the safety data sheet Ashland P.O. Box 2219 Columbus, OH 43216 United States of America EHS Customer Requests@ashland.com	Emergency telephone number 1-800-ASHLAND (1-800-274-5263) Regulatory Information Number 1-800-325-3751 Product Information 614-790-3333
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SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Combustible Dust :

Skin irritation : Category 2

Eye irritation : Category 2A

Germ cell mutagenicity : Category 1B

Reproductive toxicity : Category 2

Specific target organ systemic toxicity - single exposure : Category 3 (Respiratory system)

Specific target organ systemic toxicity - repeated exposure (Inhalation) : Category 1 (Auditory system)

GHS Label element

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Hazard pictograms : 

Signal Word : Danger

Hazard Statements : Flammable liquid and vapor.
May form combustible dust concentrations in air.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May cause genetic defects.
Suspected of damaging fertility or the unborn child.
Causes damage to organs (Auditory system) through prolonged or repeated exposure if inhaled.

Precautionary Statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
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.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ protective clothing/ 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 IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

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Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Static Accumulating liquid

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
 Chemical nature : Static Accumulator
 Chemical nature : Defatter

Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
STYRENE	100-42-5	Flam. Liq. 3; H226 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335 STOT RE 1; H372 Asp. Tox. 1; H304	39.52
DIMETHYL METHANEPHOSPHONATE	756-79-6	Acute Tox. 4; H332 Eye Irrit. 2A; H319 Muta. 1B; H340 Repr. 2; H361	0.30

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
 Call a POISON CENTRE or doctor/physician if exposed or

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you feel unwell.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

- If inhaled : Move to fresh air.
IF INHALED: Call a POISON CENTER or doctor/ physician if you feel unwell.
Keep patient warm and at rest.
If unconscious place in recovery position and seek medical advice.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
If on skin, rinse well with water.
Wash contaminated clothing before re-use.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
- If swallowed : Obtain medical attention.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
stomach or intestinal upset (nausea, vomiting, diarrhea)
irritation (nose, throat, airways)
confusion
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May cause genetic defects.
Suspected of damaging fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure if inhaled.
- Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

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Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Organic dusts at sufficient concentration can form explosive mixtures in air.
Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
Hydrocarbons

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Do not use a solid water stream as it may scatter and spread fire.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Use a water spray to cool fully closed containers.

Polymerization will take place under fire conditions. If polymerization occurs in a closed container, there is a possibility it will rupture violently. Cool storage container with water, if exposed to fire.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
Remove all sources of ignition.
Use personal protective equipment.
Ensure adequate ventilation.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform

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respective authorities.

Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Other information : Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Open drum carefully as content may be under pressure. Avoid formation of aerosol. Provide sufficient air exchange and/or exhaust in work rooms. Do not breathe vapours/dust. Do not smoke. Container hazardous when empty. Take precautionary measures against static discharges. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations. Secondary operations, such as grinding and sanding, may produce dust. Maintain good housekeeping. Do not permit dust layers to accumulate, for example, on floors, ledges, and equipment, in order to avoid any potential for dust explosion hazards.

For further guidance on prevention of dust explosions, refer to National Fire Protection Association (NFPA) 654: "Standard for the Prevention of Fire and Dust Explosions, from the Manufacturing, Processing and Handling of Combustible Particulate Solids".

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. No smoking. Electrical installations / working materials must comply with the technological safety standards.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
STYRENE	100-42-5	TWA	20 ppm	ACGIH
		STEL	40 ppm	ACGIH
		REL	50 ppm 215 mg/m3	NIOSH/GUID E
		STEL	100 ppm 425 mg/m3	NIOSH/GUID E
		TWA	100 ppm	OSHA/Z2
		Ceiling	200 ppm	OSHA/Z2
		MAX. CONC	600 ppm	OSHA/Z2

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
STYRENE	100-42-5	styrene	Venous blood	Sampling time: End of shift.	0.2 mg/l	
Remarks:	Semi-quantitative					
		Mandelic acid plus phenylglyoxylic acid	Creatinine in urine	Sampling time: End of shift.	400 mg/g	
Remarks:	Nonspecific					

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.
 Provide appropriate exhaust ventilation at places where dust is formed.

Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled

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release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

- Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.
- Skin and body protection : Wear as appropriate:
impervious clothing
Safety shoes
Flame-resistant clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Discard gloves that show tears, pinholes, or signs of wear.
Wear resistant gloves (consult your safety equipment supplier).
- Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : liquid
- Odour : pungent
- Odour Threshold : No data available
- pH : No data available
- : No data available
- Boiling point/boiling range : 293 °F / 145 °C
- Flash point : 84.9 °F / 29.4 °C
Method: Seta closed cup
- Evaporation rate : > 1
Ethyl Ether
- Flammability (solid, gas) :

May form combustible dust concentrations in air (during processing).
- Flammability (liquids) : Static Accumulating liquid

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Flammability (liquids) :
 Upper explosion limit : 6.1 %(V)
 Lower explosion limit : 1.1 %(V)
 Vapour pressure : 8.53248 hPa (25 °C)
 Calculated Vapor Pressure
 Relative vapour density : > 1AIR=1
 Relative density : No data available
 Density : 1.16 g/cm3 (25 °C)
 Solubility(ies)
 Water solubility : insoluble
 Solubility in other solvents : No data available
 Partition coefficient: n-
 octanol/water : No data available
 Thermal decomposition : No data available
 Viscosity
 Viscosity, dynamic : No data available
 Viscosity, kinematic : > 20.5 mm2/s (40 °C)
 Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.
 Chemical stability : Stable under recommended storage conditions.
 Possibility of hazardous
 reactions : Hazardous polymerisation may occur.
 Vapours may form explosive mixture with air.
 This product does not present a dust explosion hazard as
 delivered. However, fine dust dispersed in air in sufficient
 concentrations, and in the presence of an ignition source, is a
 potential dust explosion hazard.
 Conditions to avoid : Heat, flames and sparks.
 Exposure to air.
 Exposure to sunlight.

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Incompatible materials : Acids
aluminum
aluminum chloride
Bases
Copper
Copper alloys
halogens
iron chloride
metal salts
Strong oxidizing agents
Peroxides

Hazardous decomposition products : carbon dioxide and carbon monoxide
Hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity

Not classified based on available information.

Components:

STYRENE:

Acute oral toxicity : LD50 Oral (Rat): > 2,000 mg/kg

Acute inhalation toxicity : LC 50 (Rat): 11.8 mg/l, 2770 ppm
Exposure time: 4 h
Test atmosphere: vapour

No observed adverse effect level (Humans): 100 ppm
Exposure time: 7 h
Test atmosphere: vapour

Acute dermal toxicity : LD 50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

DIMETHYL METHANEPHOSPHONATE:

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 2.589 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD 50 (Rabbit): > 4,640 mg/kg

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Method: OECD Test Guideline 402
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks: May cause skin irritation and/or dermatitis.

Result: Repeated exposure may cause skin dryness or cracking.

Components:

STYRENE:

Species: Rabbit

Result: Irritating to skin

DIMETHYL METHANEPHOSPHONATE:

Result: Mildly irritating to skin

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes serious eye irritation.

Components:

STYRENE:

Result: Irritating to eyes

Remarks: Vapour during processing may be irritating to the respiratory tract and to the eyes.

DIMETHYL METHANEPHOSPHONATE:

Result: Irritating to eyes

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Components:

STYRENE:

Exposure routes: Skin contact

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

Result: negative

Exposure routes: inhalation (vapour)

Species: Humans

Assessment: Does not cause respiratory sensitisation.

Result: negative

DIMETHYL METHANEPHOSPHONATE:

Test Type: Maximisation Test (GPMT)

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

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Germ cell mutagenicity

May cause genetic defects.

Components:

DIMETHYL METHANEPHOSPHONATE:

Genotoxicity in vitro : Test Type: in vitro assay
Result: Positive results were obtained in some in vitro tests.

Genotoxicity in vivo : Test Type: dominant lethal test
Test species: Mouse
Result: positive

Germ cell mutagenicity-
Assessment : In vivo tests showed mutagenic effects

Carcinogenicity

Not classified based on available information.

Product:

Carcinogenicity -
Assessment : Styrene has been tested for carcinogenicity in rats and mice.
Styrene caused lung tumors in mice only. These tumors are
not considered to be relevant to humans.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Components:

DIMETHYL METHANEPHOSPHONATE:

Reproductive toxicity -
Assessment : Some evidence of adverse effects on sexual function and
fertility, based on animal experiments.

STOT - single exposure

May cause respiratory irritation.

Components:

STYRENE:

Assessment: May cause respiratory irritation.

STOT - repeated exposure

Causes damage to organs (Auditory system) through prolonged or repeated exposure if inhaled.

Components:

STYRENE:

Exposure routes: inhalation (vapour)

Target Organs: Auditory system

Assessment: Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

STYRENE:

Species: Human

85 mg/m³

Application Route: inhalation (vapour)

Species: Human

615 mg/kg

Application Route: Skin contact

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Aspiration toxicity

Not classified based on available information.

Components:

STYRENE:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: Solvents may degrease the skin.

Carcinogenicity:

IARC

Group 2B: Possibly carcinogenic to humans

STYRENE

100-42-5

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

Reasonably anticipated to be a human carcinogen

STYRENE

100-42-5

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

STYRENE:

Toxicity to fish : LC 50 (Pimephales promelas (fathead minnow)): 4.02 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (Daphnia magna)): 4.7 mg/l
Exposure time: 48 h

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 4.9 mg/l
Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Water flea (Daphnia magna)): 1.01 mg/l
Exposure time: 21 d

Toxicity to bacteria : EC 50 (activated sludge): ca. 500 mg/l
Exposure time: 0.5 h

Toxicity to soil dwelling organisms : NOEC (Eisenia fetida (earthworms)): 34 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 207

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Persistence and degradability

Components:

STYRENE:

Biodegradability : Result: Readily biodegradable
Biodegradation: > 60 %
Exposure time: 10 d

Bioaccumulative potential

Components:

STYRENE:

Bioaccumulation : Bioconcentration factor (BCF): < 100

Partition coefficient: n-octanol/water : log Pow: 2.96 (25 °C)

Mobility in soil

Components:

STYRENE:

Distribution among environmental compartments : Koc: 352

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life.

Components:

STYRENE:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice

: The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

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Contaminated packaging : Empty remaining contents.
 Dispose of as unused product.
 Empty containers should be taken to an approved waste
 handling site for recycling or disposal.
 Do not re-use empty containers.
 Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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U.S. DOT - ROAD

UN 1866	Resin solution	3		III	
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U.S. DOT - RAIL

UN 1866	Resin solution	3		III	
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U.S. DOT - INLAND WATERWAYS

UN 1866	Resin solution	3		III	
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TRANSPORT CANADA - ROAD

UN 1866	RESIN SOLUTION	3		III	
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TRANSPORT CANADA - RAIL

UN 1866	RESIN SOLUTION	3		III	
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TRANSPORT CANADA - INLAND WATERWAYS

UN 1866	RESIN SOLUTION	3		III	
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INTERNATIONAL MARITIME DANGEROUS GOODS

UN 1866	RESIN SOLUTION	3		III	MARINE POLLUTANT:(ALIPHATIC PETROLEUM DISTILLATES, COPPER NAPHTHENATE)
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1866	Resin solution	3	III
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1866	Resin solution	3	III
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MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	1866	RESINA, SOLUCIONES DE	3	III
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*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	yes
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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
STYRENE	100-42-5	1000	2529.769057

SARA 311/312 Hazards : Reactivity Hazard
Acute Health Hazard
Chronic Health Hazard
Fire Hazard

SARA 313 Component(s)

STYRENE	100-42-5	39.52 %
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California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.
BENZENE 71-43-2

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
BENZENE 71-43-2

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TOLUENE 108-88-3

The components of this product are reported in the following inventories:

- TSCA : On TSCA Inventory
- DSL : This product contains one or several components that are not on the Canadian DSL and have annual quantity limits.
- AUSTR : On the inventory, or in compliance with the inventory
- ENCS : On the inventory, or in compliance with the inventory
- KECL : On the inventory, or in compliance with the inventory
- PICCS : Not in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECL (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

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<p>NFPA:</p> <p style="text-align: center;">Special hazard.</p>	<p>HMIS III:</p> <table border="1" style="width: 100%;"> <tr> <td style="background-color: blue; color: white;">HEALTH</td> <td style="text-align: center;">2*</td> </tr> <tr> <td style="background-color: red; color: white;">FLAMMABILITY</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="background-color: yellow; color: black;">PHYSICAL HAZARD</td> <td style="text-align: center;">2</td> </tr> </table> <p>0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	2*	FLAMMABILITY	3	PHYSICAL HAZARD	2
HEALTH	2*						
FLAMMABILITY	3						
PHYSICAL HAZARD	2						

NFPA Flammable and Combustible Liquids Classification
Flammable Liquid Class IC

Full text of H-Statements referred to under sections 2 and 3.

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Hetron™ FR 992 epoxy vinyl ester resin ™ Trademark, Ashland or its subsidiaries, registered in various countries 31602		Version: 1.0

H226	Flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H340	May cause genetic defects.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.

Sources of key data used to compile the Safety Data Sheet
Ashland internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity

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TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System