

## Safety Data Sheet

## Firestone Fibers and Textiles Company

## Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

## 1.1 Product identifier

**Product Name** • Polyester Dip: AP339

## 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Relevant identified use(s)** • Treatment of tire cord

## 1.3 Details of the supplier of the safety data sheet

**Manufacturer** • Firestone Fibers and Textiles Company  
100 Firestone Lane  
King's Mountain, NC 28086  
United States

FSFT-CustomerService@bfusa.com

## 1.4 Emergency telephone number

**Manufacturer** • 800-424-9300 - CHEMTREC

## Section 2: Hazards Identification

## EU/EEC

According to Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]  
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

## 2.1 Classification of the substance or mixture

**CLP** • Skin Sensitization 1 - H317  
Eye Irritation 2 - H319  
Carcinogenicity 2 - H351

**DSD/DPD** • Irritant (Xi)  
Carcinogenic Substances - Category 3  
R40, R43

## 2.2 Label Elements

CLP

## WARNING



**Hazard statements** • H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H351 - Suspected of causing cancer.

## Precautionary statements

**Prevention** • P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P261 - Avoid breathing mist/vapours/spray.  
P264 - Wash thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace.  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P281 - Use personal protective equipment as required.

- Response**
- P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
  - P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
  - P363 - Wash contaminated clothing before reuse.
  - P321 - Specific treatment, see supplemental first aid information.
  - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P337+P313 - If eye irritation persists: Get medical advice/attention.
  - P308+P313 - IF exposed or concerned: Get medical advice/attention.
- Storage/Disposal**
- P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

## DSD/DPD



- Risk phrases**
- R40 - Limited evidence of a carcinogenic effect.
  - R43 - May cause sensitisation by skin contact.
- Safety phrases**
- S24 - Avoid contact with skin.
  - S36 - Wear suitable protective clothing.
  - S37 - Wear suitable gloves.
  - S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
  - S53 - Avoid exposure - obtain special instructions before use.

## 2.3 Other Hazards

- CLP**
- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.
- DSD/DPD**
- According to European Directive 1999/45/EC this material is considered dangerous.

## United States (US)

According to OSHA 29 CFR 1910.1200 HCS

### 2.1 Classification of the substance or mixture

- OSHA HCS 2012**
- Skin Irritation 2 - H315
  - Skin Sensitization 1A - H317
  - Eye Irritation 2 - H319
  - Germ Cell Mutagenicity 1B - H340
  - Carcinogenicity 1A - H350
  - Reproductive Toxicity 2 - H361

### 2.2 Label elements

**OSHA HCS 2012**

#### DANGER



- Hazard statements**
- Causes skin irritation - H315
  - May cause an allergic skin reaction - H317
  - Causes serious eye irritation - H319
  - May cause genetic defects. - H340
  - May cause cancer. - H350
  - Suspected of damaging fertility or the unborn child. - H361

#### Precautionary statements

- Prevention**
- Obtain special instructions before use. - P201

Do not handle until all safety precautions have been read and understood. - P202  
 Avoid breathing mist/vapours/spray. - P261  
 Wash thoroughly after handling. - P264  
 Contaminated work clothing should not be allowed out of the workplace. - P272  
 Wear protective gloves/protective clothing/eye protection/face protection. - P280

- Response**
- If on skin: Wash with plenty of water .  
 Take off contaminated clothing and wash before reuse. - P362  
 If skin irritation or rash occurs: Get medical advice/attention. - P333+P313  
 Specific treatment, see supplemental first aid information. - P321  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338  
 If eye irritation persists: Get medical advice/attention. - P337+P313  
 IF exposed or concerned: Get medical advice/attention. - P308+P313

- Storage/Disposal**
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

## 2.3 Other hazards

### OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

## Canada

### According to WHMIS

## 2.1 Classification of the substance or mixture

### WHMIS

- Very Toxic - D1A  
 Other Toxic Effects - D2A  
 Other Toxic Effects - D2B

## 2.2 Label elements

### WHMIS



- Very Toxic - D1A  
 Other Toxic Effects - D2A  
 Other Toxic Effects - D2B

## 2.3 Other hazards

### WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

## Section 3 - Composition/Information on Ingredients

### 3.1 Substances

- Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

### 3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments

Hydrocarbon resin	NDA	0% TO 6.84%	NDA	<b>EU DSD/DPD:</b> Not Classified <b>EU CLP:</b> Not Classified <b>OSHA HCS 2012:</b> Not Classified	NDA
Butadiene/Styrene/2-Vinylpyridine copolymer	<b>CAS:</b> 25053-48-9	6.15% TO 6.56%	NDA	<b>EU DSD/DPD:</b> Not Classified <b>EU CLP:</b> Not Classified <b>OSHA HCS 2012:</b> Not Classified	NDA
Styrene polymer with 1,3-butadiene (Kraton)	<b>CAS:</b> 9003-55-8	5% TO 6%	NDA	<b>EU DSD/DPD:</b> Self Classified: Xi R36 <b>EU CLP:</b> Self Classified: Eye Irrit. 2, H319 <b>OSHA HCS 2012:</b> Eye Irrit. 2	NDA
Resorcinol	<b>CAS:</b> 108-46-3 <b>EC Number:</b> 203-585-2 <b>EU Index:</b> 604-010-00-1	0.78% TO 4.7%	Ingestion/Oral-Rat LD50 • 301 mg/kg Skin-Rabbit LD50 • 3360 mg/kg	<b>EU DSD/DPD:</b> Annex VI, Table 3.2: Xn R22 Xi R36/38 N R50 <b>EU CLP:</b> Annex VI, Table 3.1: Acute Tox. 3, H301; Eye Irrit. 2, H319; Skin Irrit. 2, H315; Aquatic Acute 1, H400 <b>OSHA HCS 2012:</b> Skin Irrit. 2; Eye Irrit. 2; Acute Tox. 3 (oral)	NDA
Formaldehyde	<b>CAS:</b> 50-00-0 <b>EC Number:</b> 200-001-8 <b>EU Index:</b> 605-001-00-5	0.3% TO 1%	Ingestion/Oral-Rat LD50 • 100 mg/kg Inhalation-Rat LC50 • 250 ppm 4 Hour(s) Skin-Rabbit LD50 • 270 µL/kg	<b>EU DSD/DPD:</b> Annex VI, Table 3.2: T R23/24/25 C R34 Carc.Cat.3 R40 R43 <b>EU CLP:</b> Annex VI, Table 3.1: Carc. 2, H351; Acute Tox. 2, H331; Acute Tox. 3, H301; Acute Tox. 3, H311; Skin Corr. 1B, H314; Skin Sens. 1, H317 <b>OSHA HCS 2012:</b> Skin Corr. 1C; Eye Dam. 1; Acute Tox. 3 (oral, skn); Carc 1A; Skin Sens. 1A; Muta. 1B; Acute Tox. 2 (inhl)	NDA
Ammonium hydroxide	<b>CAS:</b> 1336-21-6 <b>EC Number:</b> 215-647-6 <b>EU Index:</b> 007-001-01-2	0.16% TO 0.95%	Ingestion/Oral-Rat LD50 • 350 mg/kg	<b>EU DSD/DPD:</b> Annex VI, Table 3.2: C; R34 N R50 <b>EU CLP:</b> Annex VI, Table 3.1: Skin Corr. 1B, H318; Aquatic Acute 1, H400 <b>OSHA HCS 2012:</b> Skin Corr. 1C; Eye Dam. 1; Acute Tox. 4 (oral)	NDA
Methanol	<b>CAS:</b> 67-56-1 <b>EC Number:</b> 200-659-6 <b>EU Index:</b> 603-001-00-X	0.05% TO 0.1%	Inhalation-Rat LC50 • 64000 ppm 4 Hour(s) Skin-Rabbit LD50 • 15800 mg/kg Ingestion/Oral-Rat LD50 • 5600 mg/kg	<b>EU DSD/DPD:</b> Annex VI, Table 3.2: F R11 T R23/24/25-39/23/24/25 <b>EU CLP:</b> Annex VI, Table 3.1: Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE 1, H370 <b>OSHA HCS 2012:</b> Flam. Liq. 2; Eye Irrit. 2A; Skin Irrit. 2, STOT SE 1 (Eyes); STOT SE 3: Narc.; STOT RE 1 (Eyes); Repr. 2	NDA
Ethynylbenzene	<b>CAS:</b> 100-42-5 <b>EC Number:</b> 202-851-5 <b>EU Index:</b> 601-026-00-0	< 0.064%	Ingestion/Oral-Rat LD50 • 2650 mg/kg Inhalation-Rat LC50 • 2770 ppm 4 Hour(s)	<b>EU CLP:</b> Community workplace exposure limit <b>OSHA HCS 2012:</b> Exposure limit(s)	NDA

See Section 16 for full text of H-statements and R-phrases.

## Section 4 - First Aid Measures

### 4.1 Description of first aid measures

#### Inhalation

- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

#### Skin

- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. If irritation develops and persists, get medical attention.

- Eye**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.
- Ingestion**
- Obtain medical attention immediately if ingested.

#### 4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

#### 4.3 Indication of any immediate medical attention and special treatment needed

##### Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

## Section 5 - Firefighting Measures

### 5.1 Extinguishing media

- Suitable Extinguishing Media**
- LARGE FIRE: Water spray, fog or regular foam.  
SMALL FIRES: Dry chemical, CO2, water spray or regular foam.

- Unsuitable Extinguishing Media**
- No data available.

### 5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- Containers may explode when heated.

- Hazardous Combustion Products**
- Containers exposed to fire conditions may release nitrogen and carbon oxides, formaldehyde, resorcinol, ammonia and acrid smoke and fumes.

### 5.3 Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA). Cool fire exposed containers with water.

## Section 6 - Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- Do not walk through spilled material. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

- Emergency Procedures**
- Keep unauthorized personnel away. Stay upwind.

### 6.2 Environmental precautions

- Avoid run off to waterways and sewers.

### 6.3 Methods and material for containment and cleaning up

- Containment/Clean-up Measures**
- Stop leak if you can do it without risk.  
SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.  
LARGE SPILLS: Dike far ahead of liquid spill for later disposal.

### 6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

## Section 7 - Handling and Storage

### 7.1 Precautions for safe handling

- Handling**
- Use only with adequate ventilation. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing mist, vapours, spray. Avoid contact with skin,

eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

## 7.2 Conditions for safe storage, including any incompatibilities

### Storage

- Store in a tightly closed container. Store in a cool, dry, well-ventilated place.

### 7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

## Section 8 - Exposure Controls/Personal Protection

### 8.1 Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Australia	Belgium	Canada Alberta	Canada British Columbia
Methanol (67-56-1)	STELs	250 ppm STEL	250 ppm STEL; 328 mg/m3 STEL	250 ppm STEL; 333 mg/m3 STEL	250 ppm STEL; 328 mg/m3 STEL	250 ppm STEL
	TWAs	200 ppm TWA	200 ppm TWA; 262 mg/m3 TWA	200 ppm TWA; 266 mg/m3 TWA	200 ppm TWA; 262 mg/m3 TWA	200 ppm TWA
Ethenylbenzene (100-42-5)	STELs	40 ppm STEL	100 ppm STEL; 426 mg/m3 STEL	100 ppm STEL; 432 mg/m3 STEL	40 ppm STEL; 170 mg/m3 STEL	75 ppm STEL
	TWAs	20 ppm TWA	50 ppm TWA; 213 mg/m3 TWA	50 ppm TWA; 216 mg/m3 TWA	20 ppm TWA; 85 mg/m3 TWA	50 ppm TWA
Formaldehyde (50-00-0)	STELs	Not established	2 ppm STEL; 2.5 mg/m3 STEL	Not established	Not established	Not established
	TWAs	Not established	1 ppm TWA; 1.2 mg/m3 TWA	Not established	0.75 ppm TWA; 0.9 mg/m3 TWA	0.3 ppm TWA
	Ceilings	0.3 ppm Ceiling	Not established	Not established	1 ppm Ceiling; 1.3 mg/m3 Ceiling	1 ppm Ceiling
Resorcinol (108-46-3)	STELs	20 ppm STEL	20 ppm STEL; 90 mg/m3 STEL	20 ppm STEL; 91 mg/m3 STEL	20 ppm STEL; 90 mg/m3 STEL	20 ppm STEL
	TWAs	10 ppm TWA	10 ppm TWA; 45 mg/m3 TWA	10 ppm TWA; 46 mg/m3 TWA	10 ppm TWA; 45 mg/m3 TWA	10 ppm TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Manitoba	Canada New Brunswick	Canada Northwest Territories	Canada Nova Scotia	Canada Nunavut
Methanol (67-56-1)	STELs	250 ppm STEL	250 ppm STEL; 328 mg/m3 STEL	250 ppm STEL; 328 mg/m3 STEL	250 ppm STEL	250 ppm STEL; 328 mg/m3 STEL
	TWAs	200 ppm TWA	200 ppm TWA; 262 mg/m3 TWA	200 ppm TWA; 262 mg/m3 TWA	200 ppm TWA	200 ppm TWA; 262 mg/m3 TWA
Ethenylbenzene (100-42-5)	STELs	40 ppm STEL	40 ppm STEL; 170 mg/m3 STEL	100 ppm STEL; 426 mg/m3 STEL	40 ppm STEL	100 ppm STEL; 426 mg/m3 STEL
	TWAs	20 ppm TWA	20 ppm TWA; 85 mg/m3 TWA	50 ppm TWA; 213 mg/m3 TWA	20 ppm TWA	50 ppm TWA; 213 mg/m3 TWA
Formaldehyde (50-00-0)	Ceilings	0.3 ppm Ceiling	Not established	2 ppm Ceiling; 2.4 mg/m3 Ceiling	0.3 ppm Ceiling	2 ppm Ceiling; 2.4 mg/m3 Ceiling
	STELs	Not established	1.5 ppm STEL	Not established	Not established	Not established
	TWAs	Not established	0.5 ppm TWA	Not established	Not established	Not established
Resorcinol	STELs	20 ppm STEL	20 ppm STEL; 90 mg/m3 STEL	20 ppm STEL; 90 mg/m3 STEL	20 ppm STEL	20 ppm STEL; 90 mg/m3 STEL

(108-46-3)	TWAs	10 ppm TWA	10 ppm TWA; 45 mg/m3 TWA	10 ppm TWA; 45 mg/m3 TWA	10 ppm TWA	10 ppm TWA; 45 mg/m3 TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Canada Ontario	Canada Quebec	Canada Saskatchewan	Canada Yukon	China
Methanol (67-56-1)	STELs	250 ppm STEL	250 ppm STEV; 328 mg/m3 STEV	Not established	250 ppm STEL; 310 mg/m3 STEL	50 mg/m3 STEL
	TWAs	200 ppm TWA	200 ppm TWAEV; 262 mg/m3 TWAEV	200 ppm TWA	200 ppm TWA; 260 mg/m3 TWA	25 mg/m3 TWA
Ethenylbenzene (100-42-5)	STELs	100 ppm STEL	100 ppm STEV; 426 mg/m3 STEV	Not established	125 ppm STEL; 525 mg/m3 STEL	100 mg/m3 STEL
	TWAs	35 ppm TWA	50 ppm TWAEV; 213 mg/m3 TWAEV	20 ppm TWA	100 ppm TWA; 420 mg/m3 TWA	50 mg/m3 TWA
Formaldehyde (50-00-0)	Ceilings	1.5 ppm Ceiling	2 ppm Ceiling; 3 mg/m3 Ceiling	Not established	2 ppm Ceiling; 3 mg/m3 Ceiling	0.5 mg/m3 Ceiling [MAC]
	STELs	1.0 ppm STEL	Not established	Not established	Not established	Not established
Resorcinol (108-46-3)	STELs	20 ppm STEL	20 ppm STEV; 90 mg/m3 STEV	Not established	20 ppm STEL; 90 mg/m3 STEL	40 mg/m3 STEL
	TWAs	10 ppm TWA	10 ppm TWAEV; 45 mg/m3 TWAEV	10 ppm TWA	10 ppm TWA; 45 mg/m3 TWA	20 mg/m3 TWA
Exposure Limits/Guidelines (Con't.)						
	Result	Cyprus	Denmark	Europe	Germany DFG	Germany TRGS
Methanol (67-56-1)	TWAs	200 ppm TWA; 260 mg/m3 TWA	200 ppm TWA; 260 mg/m3 TWA	200 ppm TWA; 260 mg/m3 TWA	Not established	200 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 4); 270 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 4)
	Ceilings	Not established	Not established	Not established	800 ppm Peak; 1080 mg/m3 Peak	Not established
	MAKs	Not established	Not established	Not established	200 ppm TWA MAK; 270 mg/m3 TWA MAK	Not established
Ethenylbenzene (100-42-5)	Ceilings	Not established	25 ppm Ceiling; 105 mg/m3 Ceiling	Not established	40 ppm Peak; 172 mg/m3 Peak	Not established
	TWAs	Not established	Not established	Not established	Not established	20 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 86 mg/m3 TWA AGW (The risk of damage to the

						embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2)
	MAKs	Not established	Not established	Not established	20 ppm TWA MAK; 86 mg/m <sup>3</sup> TWA MAK	Not established
Formaldehyde (50-00-0)	Ceilings	Not established	0.3 ppm Ceiling; 0.4 mg/m <sup>3</sup> Ceiling	Not established	0.6 ppm Peak (no irritation should occur during mixed exposure); 0.74 mg/m <sup>3</sup> Peak (no irritation should occur during mixed exposure)	Not established
	MAKs	Not established	Not established	Not established	0.3 ppm TWA MAK; 0.37 mg/m <sup>3</sup> TWA MAK (no irritation should occur during mixed exposure)	Not established
Resorcinol (108-46-3)	TWAs	10 ppm TWA; 45 mg/m <sup>3</sup> TWA	10 ppm TWA; 45 mg/m <sup>3</sup> TWA	10 ppm TWA; 45 mg/m <sup>3</sup> TWA	Not established	4 ppm TWA AGW (inhalable fraction, exposure factor 1); 20 mg/m <sup>3</sup> TWA AGW (inhalable fraction, exposure factor 1)

### Exposure Limits/Guidelines (Con't.)

	Result	NIOSH	OSHA
Methanol (67-56-1)	TWAs	200 ppm TWA; 260 mg/m <sup>3</sup> TWA	200 ppm TWA; 260 mg/m <sup>3</sup> TWA
	STELs	250 ppm STEL; 325 mg/m <sup>3</sup> STEL	Not established
Ethenylbenzene (100-42-5)	Ceilings	Not established	200 ppm Ceiling
	TWAs	50 ppm TWA; 215 mg/m <sup>3</sup> TWA	100 ppm TWA
	STELs	100 ppm STEL; 425 mg/m <sup>3</sup> STEL	Not established
Formaldehyde (50-00-0)	STELs	Not established	2 ppm STEL (see 29 CFR 1910.1048)
	TWAs	0.016 ppm TWA	0.75 ppm TWA
	Ceilings	0.1 ppm Ceiling (15 min)	Not established
Resorcinol (108-46-3)	STELs	20 ppm STEL; 90 mg/m <sup>3</sup> STEL	Not established
	TWAs	10 ppm TWA; 45 mg/m <sup>3</sup> TWA	Not established

### Exposure Control Notations

#### Cyprus

- Methanol (67-56-1): **Skin:** (Skin-potential for cutaneous absorption)
- Resorcinol (108-46-3): **Skin:** (Skin-potential for cutaneous absorption)

#### Germany TRGS

- Methanol (67-56-1): **Skin:** (skin notation)



•Resorcinol (108-46-3): **Skin:** (skin notation)

#### Germany DFG

•Ethenylbenzene (100-42-5): **Carcinogens:** (Category 5 (low carcinogenic potency)) | **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)

•Formaldehyde (50-00-0): **Carcinogens:** (Category 4 (no significant contribution to human cancer)) | **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to) | **Sensitizers:** (skin sensitizer)

•Methanol (67-56-1): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to) | **Skin:** (skin notation)

•Resorcinol (108-46-3): **Sensitizers:** (skin sensitizer)

## 8.2 Exposure controls

### Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Personal Protective Equipment

#### Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

#### Eye/Face

- Wear splash resistant safety goggles with a faceshield.

#### Skin/Body

- Neoprene, nitrile, butyl, natural rubber, PVC or viton chemical resistant gloves.

### Environmental Exposure Controls

- In case of spills, keep product clear of sewers, waterways or land areas. Dispose of waste product in accordance with national and local laws and regulations.

#### Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures

STEV = Short Term Exposure Value

TWAEV = Time-Weighted Average Exposure Value

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

## Section 9 - Physical and Chemical Properties

### 9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Gray or pink liquid with an ammonia odor.
Color	Gray or pink.	Odor	Ammonia
Odor Threshold	Data lacking		
General Properties			
Boiling Point	212 F(100 C)	Melting Point	Data lacking
Decomposition Temperature	Data lacking	pH	9 to 10 (undiluted product)
Specific Gravity/Relative Density	1.2 Water=1	Water Solubility	100 %
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	1 Water = 1	Volatiles (Vol.)	70 to 80 %
Flammability			

Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Not relevant.		
<b>Environmental</b>			
Octanol/Water Partition coefficient	Data lacking		

## 9.2 Other Information

- No additional physical and chemical parameters noted.

## Section 10: Stability and Reactivity

### 10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

- Stable

### 10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

### 10.4 Conditions to avoid

- No data available.

### 10.5 Incompatible materials

- Avoid contact with acids, alkalis, and strong oxidizers. Ammonia may form explosive compounds in the presence of silver or mercury.

### 10.6 Hazardous decomposition products

- No data available.

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

		Components
Ammonium hydroxide (0.16% TO 0.95%)	1336-21-6	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 350 mg/kg; <b>Gastrointestinal:Other changes; Liver:Other changes; Kidney, Ureter, and Bladder:Other changes;</b> <b>Irritation:</b> Eye-Rabbit • 44 µg • Severe irritation
Ethenylbenzene (< 0.064%)	100-42-5	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 2650 mg/kg; <b>Behavioral:Somnolence (general depressed activity); Liver:Other changes;</b> Inhalation-Rat LC50 • 2770 ppm 4 Hour(s); <b>Irritation:</b> Eye-Rabbit • 100 mg • Severe irritation; Skin-Rabbit • 100 % • Moderate irritation; <b>Mutagen:</b> DNA damage • Inhalation-Human • 36.8 ppm 8.5 Year(s)-Intermittent; <b>Reproductive:</b> Inhalation-Rat TClO • 1500 µg/m <sup>3</sup> 24 Hour(s)(1-22D preg); <b>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects:Effects on Embryo or Fetus:Fetal death;</b> <b>Tumorigen / Carcinogen:</b> Inhalation-Mouse TClO • 40 ppm 6 Hour(s) 104 Week(s)-Intermittent; <b>Tumorigenic:Neoplastic by RTECS criteria; Lungs, Thorax, or Respiration:Tumors</b>
Formaldehyde (0.3% TO 1%)	50-00-0	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 100 mg/kg; Inhalation-Rat LC50 • 203 mg/m <sup>3</sup> ; <b>Peripheral Nerve and Sensation:Spastic paralysis with or without sensory change; Behavioral:Convulsions or effect on seizure threshold; Behavioral:Excitement;</b> Inhalation-Rat LC50 • 250 ppm 4 Hour(s); Skin-Rabbit LD50 • 270 µL/kg; <b>Irritation:</b> Eye-Rabbit • 10 mg • Severe irritation
		<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 5600 mg/kg; Ingestion/Oral-Human LDLo • 143 mg/kg; <b>Sense Organs and Special Senses:Eye:Optic nerve neuropathy; Lungs, Thorax, or Respiration:Dyspnea;</b> <b>Gastrointestinal:Nausea or vomiting;</b> Inhalation-Rat LC50 • 64000 ppm 4 Hour(s); Skin-Rabbit LD50 • 15800

Methanol (0.05% TO 0.1%)	67-56-1	mg/kg; <b>Irritation:</b> Eye-Rabbit • 40 mg • Moderate irritation; Skin-Rabbit • 20 mg 24 Hour(s) • Moderate irritation; <b>Multi-dose Toxicity:</b> Inhalation-Rat TClO • 6.5 mg/m <sup>3</sup> 6 Hour(s) 4 Week(s)-Intermittent; <i>Sense Organs and Special Senses:Eye:Conjunctive irritation;</i> <b>Mutagen:</b> Cytogenetic analysis • Intraperitoneal-Mouse • 75 mg/kg; <b>Reproductive:</b> Inhalation-Rat TClO • 10000 ppm 7 Hour(s)(7-15D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i>
Resorcinol (0.78% TO 4.7%)	108-46-3	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 202 mg/kg; Skin-Rabbit LD50 • 3360 mg/kg; <b>Irritation:</b> Eye-Rabbit • 100 mg • Severe irritation; Skin-Rabbit • 500 mg; <b>Multi-dose Toxicity:</b> Ingestion/Oral-Rat TDL0 • 150 mg/kg 30 Day(s)-Intermittent; <i>Endocrine:Thyroid weight (goiter); Endocrine:Evidence of thyroid hypofunction</i>

GHS Properties	Classification
Acute toxicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Aspiration Hazard	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Carcinogenicity	EU/CLP • Carcinogenicity 2 OSHA HCS 2012 • Carcinogenicity 1A
Germ Cell Mutagenicity	EU/CLP • Data lacking OSHA HCS 2012 • Germ Cell Mutagenicity 1B
Skin corrosion/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Skin Irritation 2
Skin sensitization	EU/CLP • Skin Sensitizer 1 OSHA HCS 2012 • Skin Sensitizer 1A
STOT-RE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
STOT-SE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Toxicity for Reproduction	EU/CLP • Data lacking OSHA HCS 2012 • Toxic to Reproduction 2
Respiratory sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Serious eye damage/Irritation	EU/CLP • Eye Irritation 2 OSHA HCS 2012 • Eye Irritation 2

## Potential Health Effects

### Inhalation

- Acute (Immediate)
  - May cause irritation.
- Chronic (Delayed)
  - No data available.

### Skin

- Acute (Immediate)
  - Causes skin irritation. May cause skin sensitization. Symptoms include redness and skin rash.
- Chronic (Delayed)
  - No data available.

### Eye

- Acute (Immediate)
  - Causes serious eye irritation.
- Chronic (Delayed)
  - No data available.

**Ingestion****Acute (Immediate)**

- May cause irritation.

**Chronic (Delayed)**

- No data available.

**Mutagenic Effects**

- Repeated or prolonged exposure to Formaldehyde may cause genetic defects.

**Carcinogenic Effects**

- This material contains formaldehyde. Formaldehyde is listed as an International Agency for Research on Cancer(IARC) Group 1 carcinogen, a specifically regulated carcinogen by OSHA and as reasonably anticipated to be a carcinogen by the National Toxicology Program (NTP).

<b>Carcinogenic Effects</b>				
	<b>CAS</b>	<b>OSHA</b>	<b>IARC</b>	<b>NTP</b>
Ethenylbenzene	100-42-5	Not Listed	Group 2B-Possible Carcinogen	Reasonably Anticipated to be Human Carcinogen
Formaldehyde	50-00-0	Specifically Regulated Carcinogen	Group 1-Carcinogenic	Known Human Carcinogen

**Reproductive Effects**

- Suspected of damaging fertility or the unborn child.

**Key to abbreviations**

LC = Lethal Concentration

LD = Lethal Dose

TC = Toxic Concentration

TD = Toxic Dose

**Section 12 - Ecological Information****12.1 Toxicity**

- Material data lacking.

**12.2 Persistence and degradability**

- Material data lacking.

**12.3 Bioaccumulative potential**

- Material data lacking.

**12.4 Mobility in Soil**

- Material data lacking.

**12.5 Results of PBT and vPvB assessment**

- No PBT and vPvB assessment has been conducted.

**12.6 Other adverse effects**

- No studies have been found.

**Section 13 - Disposal Considerations****13.1 Waste treatment methods****Product waste**

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**Packaging waste**

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**Section 14 - Transport Information**

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NA3082	Other regulated substances, liquid, n.o.s. (Ammonium Hydroxide)	9	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
ADN	NDA	Not Regulated	NDA	NDA	NDA
ADR/RID	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special precautions for user ● None specified.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code ● Data lacking.

14.8 Other information

DOT ● The NA number and Shipping name only applies to bulk shipments >~2,450 gallon.

## Section 15 - Regulatory Information

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

SARA Hazard Classifications ● Acute, Chronic

State Right To Know				
Component	CAS	MA	NJ	PA
Ammonium hydroxide	1336-21-6	Yes	Yes	Yes
Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	No	No	No
Ethylbenzene	100-42-5	Yes	Yes	Yes
Formaldehyde	50-00-0	Yes	Yes	Yes
Methanol	67-56-1	Yes	Yes	Yes
Resorcinol	108-46-3	Yes	Yes	Yes
Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	No	No	No

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Ammonium hydroxide	1336-21-6	Yes	No	Yes	Yes	No
Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Yes	No	Yes	No	No
Ethylbenzene	100-42-5	Yes	No	Yes	Yes	No

Formaldehyde	50-00-0	Yes	No	Yes	Yes	No
Methanol	67-56-1	Yes	No	Yes	Yes	No
Resorcinol	108-46-3	Yes	No	Yes	Yes	No
Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Yes	No	Yes	No	No
Inventory (Con't.)						
Component	CAS	Japan ENCS	Korea KECL	TSCA		
Ammonium hydroxide	1336-21-6	Yes	Yes	Yes		
Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Yes	Yes	Yes		
Ethylbenzene	100-42-5	Yes	Yes	Yes		
Formaldehyde	50-00-0	Yes	Yes	Yes		
Methanol	67-56-1	Yes	Yes	Yes		
Resorcinol	108-46-3	Yes	Yes	Yes		
Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Yes	Yes	Yes		

## Australia

### Labor

#### Australia - Work Health and Safety Regulations - Hazardous Substances Requiring Health Monitoring

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

#### Australia - High Volume Industrial Chemicals List

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	
• Methanol	67-56-1	
• Ethylbenzene	100-42-5	
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

#### Australia - List of Designated Hazardous Substances - Classification

• Resorcinol	108-46-3	Xn, Xi, N R22, R36/38, R50
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	T, C Carc. Cat. 2 R49, R23/24/25, R34, R43
• Methanol	67-56-1	F, T R11, R23/24/25, R39/23/24/25
• Ethylbenzene	100-42-5	Xn, Xi R10, R20, R36/38
• Ammonium hydroxide	1336-21-6	C, N R34, R50
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Environment****Australia - National Pollutant Inventory (NPI) Substance List**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	10 tonne/yr Threshold category 1
• Methanol	67-56-1	10 tonne/yr Threshold category 1
• Ethenylbenzene	100-42-5	10 tonne/yr Threshold category 1
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Australia - Ozone Protection Act - Scheduled Substances**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Australia - Priority Existing Chemical Program**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Full assessment - report published December 2006
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Candidate chemical
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Belgium****Labor****Belgium - Substances and Preparations - Carcinogens and Mutagens**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Bulgaria****Environment****Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 24 Hour**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	0.05 mg/m3 MAHCL
• Methanol	67-56-1	0.5 mg/m3 MAHCL
• Ethenylbenzene	100-42-5	0.003 mg/m3 MAHCL
• Ammonium hydroxide	1336-21-6	Not Listed

• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed
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**Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - 30 Minute**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	0.1 mg/m3 MAHCL
• Methanol	67-56-1	1.0 mg/m3 MAHCL
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Bulgaria - Air Quality - Maximum Admissible Hazardous Contaminant Levels - Annual**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	0.01 mg/m3 MAHCL
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Canada****Labor****Canada - WHMIS - Classifications of Substances**

• Resorcinol	108-46-3	D1B, D2B
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Uncontrolled product according to WHMIS classification criteria
• Formaldehyde	50-00-0	A, B1, D1A, D2A, D2B; B3, D1A, D2A, D2B, E (regulated under Formol)
• Methanol	67-56-1	B2, D1B, D2A, D2B (including 28%)
• Ethenylbenzene	100-42-5	B2, D2A
• Ammonium hydroxide	1336-21-6	E
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Canada - WHMIS - Ingredient Disclosure List**

• Resorcinol	108-46-3	1 %
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	0.1 %
• Methanol	67-56-1	1 %
• Ethenylbenzene	100-42-5	0.1 %
• Ammonium hydroxide	1336-21-6	1 %
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Environment****Canada - CEPA - Priority Substances List**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Priority Substance List 2 (substance considered toxic)
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Priority Substance List 1 (substance not considered)



		toxic)
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

## China

### Other

#### China - Annex I & II - Controlled Chemicals Lists

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

## Denmark

### Environment

#### Denmark - List of Undesirable Substances - Product Groups/Function

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Raw materials; Preservatives
• Methanol	67-56-1	Solvents
• Ethenylbenzene	100-42-5	Solvents in a wide range of products including paints, coatings and cooling lubricants (listed under Organic solvents)
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

## Europe

### Other

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

• Resorcinol	108-46-3	Xn; R22 Xi; R36/38 N; R50
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	T; R23/24/25 C; R34 Carc.Cat.3; R40 R43
• Methanol	67-56-1	F; R11 T; R23/24/25-39/23/24/25
• Ethenylbenzene	100-42-5	R10 Xn; R20 Xi; R36/38
• Ammonium hydroxide	1336-21-6	C; R34 N; R50
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• Resorcinol	108-46-3	10%≤C: Xn; R:22
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	0.2%≤C: R:43 25%≤C: T; R:23/24/25 5%≤C<25%: Xn; R:20/21/22 25%≤C: C; R:34 5%≤C<25%: Xi; R:36/37/38 20%≤C: T; R:23/24/25 3% ≤C<20%: Xn; R:20/21/22 10% ≤C: T; R:39/23/24/25 3% ≤C<10%: Xn; R:68/20/21/22
• Methanol	67-56-1	

• Ethenylbenzene	100-42-5	12.5%<=C: Xn; R:20 12.5%<=C: Xi; R:36/38
• Ammonium hydroxide	1336-21-6	5%<=C<10%: Xi; R:36/37/38 10%<=C: C; R:34
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed
<b>EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling</b>		
• Resorcinol	108-46-3	Xn N R:22-36/38-50 S:(2)-26-61
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	T R:23/24/25-34-40-43 S:(1/2)-26-36/37/39-45-51
• Methanol	67-56-1	F T R:11-23/24/25-39/23/24/25 S:(1/2)-7-16-36/37-45
• Ethenylbenzene	100-42-5	Xn R:10-20-36/38 S:(2)-23
• Ammonium hydroxide	1336-21-6	C N R:34-50 S:(1/2)-26-36/37/39-45-61
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed
<b>EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations</b>		
• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	B, D
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	D
• Ammonium hydroxide	1336-21-6	B
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed
<b>EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases</b>		
• Resorcinol	108-46-3	S:(2)-26-61
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	S:(1/2)-26-36/37/39-45-51
• Methanol	67-56-1	S:(1/2)-7-16-36/37-45
• Ethenylbenzene	100-42-5	S:(2)-23
• Ammonium hydroxide	1336-21-6	S:(1/2)-26-36/37/39-45-61
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

## Germany

### Labor

#### Germany - Immission Control - Qualifying Quantities for Major Accident Prevention

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	5000 kg (>=90% weight concentration)
• Methanol	67-56-1	500000 kg
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

#### Germany - Immission Control - Qualifying Quantities for Safety Reporting

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	50000 kg (>=90% weight concentration)

• Methanol	67-56-1	5000000 kg
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Germany - TRGS 505 - Specific Lead Regulations**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Germany - TRGS 511 - Specific Ammonium Nitrate Regulations**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Environment****Germany - TA Luft - Types and Classes**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	organic Substance: 5.2.5, Class I
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Germany - TA Luft - Emission Limits for Carcinogenic Substances**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Germany - TA Luft - Emission Limits for Fibers**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Germany - TA Luft - Emission Limits for Inorganic Dusts**

• Resorcinol	108-46-3	Not Listed
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• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Germany - TA Luft - Emission Limits for Inorganic Gases**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Germany - TA Luft - Emission Limits for Organic Substances**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	0.10 kg/h Mass flow (Class I); 20 mg/m <sup>3</sup> Mass concentration (Class I)
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Germany - Water Classification (VwVwS) - Annex 1**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes**

• Resorcinol	108-46-3	ID Number 1599, hazard class 1 - low hazard to waters
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	ID Number 112, hazard class 2 - hazard to waters
• Methanol	67-56-1	ID Number 145, hazard class 1 - low hazard to waters
• Ethenylbenzene	100-42-5	ID Number 187, hazard class 2 - hazard to waters
• Ammonium hydroxide	1336-21-6	ID Number 211, hazard class 2 - hazard to waters
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**Germany - Water Classification (VwVwS) - Annex 3**

• Resorcinol	108-46-3	ID Number 1599, hazard class 1 - low hazard to waters
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed

• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

## United States

### Labor

#### U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	1000 lb TQ
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

#### U.S. - OSHA - Specifically Regulated Chemicals

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	2 ppm STEL (See 29 CFR 1910.1048, 15 min); 0.5 ppm Action Level (See 29 CFR 1910.1048); 0.75 ppm TWA (See 29 CFR 1910.1048)
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

### Environment

#### U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	
• Methanol	67-56-1	
• Ethenylbenzene	100-42-5	
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

#### U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Resorcinol	108-46-3	5000 lb final RQ; 2270 kg final RQ
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	100 lb final RQ; 45.4 kg final RQ
• Methanol	67-56-1	5000 lb final RQ; 2270 kg final RQ
• Ethenylbenzene	100-42-5	1000 lb final RQ; 454 kg final RQ
• Ammonium hydroxide	1336-21-6	1000 lb final RQ; 454 kg final RQ
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

#### U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	100 lb EPCRA RQ
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	500 lb TPQ
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - CERCLA/SARA - Section 313 - Emission Reporting**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	0.1 % de minimis concentration
• Methanol	67-56-1	1.0 % de minimis concentration
• Ethenylbenzene	100-42-5	0.1 % de minimis concentration
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - EPA - Designated Generic Categories - Aqueous Ammonia**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	NH3 Equiv. Wt. % = 48.59
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Included in waste streams: K009, K010, K038, K040, K156, K157
• Methanol	67-56-1	Included in waste stream: F039
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261**

• Resorcinol	108-46-3	waste number U201
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	waste number U122
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	5.6 mg/L (wastewater); 0.75 mg/L TCLP (nonwastewater)
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed

• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics**

• Resorcinol	108-46-3	waste number U201
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	waste number U122
• Methanol	67-56-1	waste number U154 (Ignitable waste)
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

## United States - California

### Environment

**U.S. - California - Proposition 65 - Carcinogens List**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	carcinogen, initial date 1/1/88 (gas)
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - California - Proposition 65 - Developmental Toxicity**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	developmental toxicity, initial date 3/16/12
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

**U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)**

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	40 µg/day NSRL (gas)
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed



• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed
<b>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</b>		
• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed
<b>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</b>		
• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	Not Listed
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

## United States - Pennsylvania

### Labor

#### U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

• Resorcinol	108-46-3	
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	
• Methanol	67-56-1	
• Ethenylbenzene	100-42-5	
• Ammonium hydroxide	1336-21-6	
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

#### U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Resorcinol	108-46-3	Not Listed
• Styrene polymer with 1,3-butadiene (Kraton)	9003-55-8	Not Listed
• Formaldehyde	50-00-0	
• Methanol	67-56-1	Not Listed
• Ethenylbenzene	100-42-5	Not Listed
• Ammonium hydroxide	1336-21-6	Not Listed
• Butadiene/Styrene/2-Vinylpyridine copolymer	25053-48-9	Not Listed

## 15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

## 15.3 Other Information

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

## Section 16 - Other Information

**Last Revision Date** • 29/August/2014

**Preparation Date** • 02/March/2009

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## **Key to abbreviations**

NDA = No data available

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