

## 1. Identification of the substance/mixture and of the company/undertaking

|  |  |
|--|--|
| <b>Product name</b>                              | 4401 Hepox EP Hardener                                     |
| <b>Product code</b>                              | 37144010   |
| <b>Intended use of the substance/preparation</b> |  |
| Hardener for professional use                    |  |
| <b>Supplier</b>                                  | DuPont (New Zealand) Ltd.                                  |
| Street address                                   | 98 Kerrs Road, Wiri, Manukau City, Auckland<br>New Zealand |
| Telephone  | (64)-9268-5500   |
| Telefax  | (64)-9268-5490   |
| Emergency telephone                              | NZ Poisons Information Centre Ph: 0800 764 766             |
| Date of preparation                              | date   |

## 2. Hazards identification

Classified as a Dangerous Good according to NZS 5433  
 Classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2001

### HSNO Classification

|  |               |
|--|---------------|
| Acute oral toxicity                                | Category 6.1D |
| Acute dermal toxicity                              | Category 6.1E |
| Acute inhalation toxicity                          | Category 6.1C |
| Skin corrosion/irritation                          | Category 6.3A |
| Serious eye damage/eye irritation                  | Category 6.4A |
| Skin sensitization                                 | Category 6.5B |
| Carcinogenicity                                    | Category 6.7B |
| Toxicity for reproduction                          | Category 6.8A |
| Target Organ Systemic Toxicant - Single exposure   | Category 6.9A |
| Target Organ Systemic Toxicant - Repeated exposure | Category 6.9B |
| Flammable liquids                                  | Category 3.1C |
| Acute aquatic toxicity                             | Category 9.1B |
| Chronic aquatic toxicity                           | Category 9.1C |

Endpoints which are ""not classified"", ""cannot classified"" and ""not applicable"" are not shown

### GHS-Labeling



Hazard symbols

Signal word **Danger**

Hazard statements  
 Toxic if inhaled.  
 Harmful if swallowed.  
 May be harmful in contact with skin.  
 Causes skin irritation.  
 Causes serious eye irritation.  
 May damage fertility or the unborn child.  
 Causes damage to organs.  
 May cause an allergic skin reaction.  
 Suspected of causing cancer.  
 Toxic to aquatic life.  
 Harmful to aquatic life with long lasting effects.  
 Flammable liquid and vapour.

Precautionary statements  
 Contaminated work clothing should not be allowed out of the workplace.  
 Keep container tightly closed.  
 Do not breathe dust/fume/gas/mist/vapours/spray.  
 Do not eat, drink or smoke when using this product.

Ground/bond container and receiving equipment.  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 Obtain special instructions before use.  
 Take precautionary measures against static discharge.  
 Use explosion-proof electrical/ventilating/lighting equipment.  
 Use only non-sparking tools.  
 Use only outdoors or in a well-ventilated area.  
 Wash hands after handling.  
 Wear protective gloves and eye/face protection.  
 IF exposed: Call a POISON CENTER or doctor/physician.  
 IF eye irritation persists: Get medical advice/attention.  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 If skin irritation or rash occurs: Get medical advice/attention.  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
 Specific treatment (see supplemental first aid instructions on this label).  
 Store in a well-ventilated place. Keep container tightly closed.  
 Store in a well-ventilated place. Keep cool.  
 Store locked up.  
 Dispose of contents/container in accordance with local regulation.

**Other hazards which do not result in classification**

May produce an allergic reaction.

**3. Composition/information on ingredients**

**Pure substance/mixture**

Mixture

| CAS-No.   | Chemical Name                         | Concentration | GHS<br>ardous | Haz- |
|-----------|---------------------------------------|---------------|---------------|------|
| 107-98-2  | 1-methoxy-2-propanol                  | 20 - 30%      | ✓             |      |
| 1330-20-7 | xylene                                | 20 - 30%      | ✓             |      |
| 90-72-2   | 2,4,6-tris(dimethylaminomethyl)phenol | 5 - 10%       | ✓             |      |
| 100-51-6  | benzyl alcohol                        | 5 - 10%       | ✓             |      |
| 100-41-4  | ethylbenzene                          | 5 - 10%       | ✓             |      |
| 1477-55-0 | m-phenylenebis(methylamine)           | 1 - 3%        |               |      |
| 112-24-3  | 3,6-diazaoctanethylenediamin          | 1 - 3%        | ✓             |      |
| 1589-47-5 | 2-methoxy-1-propanol                  | 0.1 - 0.3%    | ✓             |      |
| 108-88-3  | toluene                               | 0.1 - 0.3%    | ✓             |      |

Non-regulated ingredients 20 - 30%

**4. First aid measures**

**Eye contact**

Remove contact lenses. Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Seek medical advice.

**Skin contact**

Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser. If skin irritation persists, call a physician.

**Inhalation**

Avoid inhalation of vapour or mist. Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

**Ingestion**

If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting. Keep at rest.

**Most Important Symptoms/effects, acute and delayed****Inhalation**

May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

**Ingestion**

May result in gastrointestinal distress.

**Skin or eye contact:**

May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

**Notes to physician**

No data available on the product. See section 3 and 11 for hazardous ingredients found in the product.

## 5. Fire-fighting measures

**Suitable extinguishing media**

Universal aqueous film-forming foam, Carbon dioxide (CO<sub>2</sub>), Dry chemical, Water spray.

**Extinguishing media which shall not be used for safety reasons**

High volume water jet

**Specific hazards**

Flammable liquid. Vapours may form explosive mixtures with air. Remove all sources of ignition. Do not allow run-off from fire fighting to enter drains or water courses. Solvent vapours are heavier than air and may spread along floors. Never use pressure to empty container: container is not a pressure vessel. Always keep in containers of same material as the original one.

**Special Protective Equipment and Fire Fighting Procedures**

Wear as appropriate: Full protective flameproof clothing. Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire, cool tanks with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

**Hazchem Code**

3Y

## 6. Accidental release measures

**Personal precautions**

Keep in a well-ventilated place. Keep away from sources of ignition. Comply with safety directives (see chapters 7 and 8). Do not inhale vapours.

**Environmental precautions**

Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.

**Methods for cleaning up**

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations. Clean preferably with a detergent; avoid use of solvents.

## 7. Handling and storage

**Handling**

Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

**Safe handling advice**

Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Preparation may charge electrostatically: always use grounded leads when transferring from one container to another. Operators should wear antistatic footwear and clothing. No sparking tools should be used. Avoid skin and eye contact. Do not breathe vapours or spray mist. Smoking, eating and drinking should be prohibited in the application area.

**Storage**

**Suitable storage conditions**

Observe label precautions. Store between 5 and 25 °C in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**Suitable container and packaging materials for safe storage**

Always keep in containers made of the same material as the supply container.

**8. Exposure controls/personal protection**

Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

**National occupational exposure limits  
 Workplace Exposure Standards (WESs) 2002**

| Chemical Name               |      |           |
|-----------------------------|------|-----------|
| 1-methoxy-2-propanol        | TWA  | 100 ppm   |
|                             | TWA  | 369 mg/m3 |
|                             | STEL | 150 ppm   |
|                             | STEL | 553 mg/m3 |
| xylene                      | TWA  | 50 ppm    |
|                             | TWA  | 217 mg/m3 |
| ethylbenzene                | TWA  | 100 ppm   |
|                             | TWA  | 434 mg/m3 |
|                             | STEL | 125 ppm   |
|                             | STEL | 543 mg/m3 |
| m-phenylenebis(methylamine) | CEIL | 0.1 mg/m3 |
| toluene                     | TWA  | 50 ppm    |
|                             | TWA  | 188 mg/m3 |

**Engineering measures**

Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

**Protective equipment**

Personal protective equipment should be worn to prevent contact with eyes, skin or clothing.

**Respiratory protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**Eye protection**

Wear protective eyewear for protection against solvent spatter.

**Hand protection**

The breakthrough time of gloves is unknown for the product itself. The glove material given is recommended on basis of the substances in the preparation.

| Chemical Name | Glove material | Glove thickness | Break through time |
|---------------|----------------|-----------------|--------------------|
| xylene        | Nitrile rubber | 0.33 mm         | 30 min             |
|               | Viton (R) ®    | 0.7 mm          | 480 min            |

The protective glove should be checked in each case for their work specific suitability (e.g. mechanical stability, product compatibility, and anti-static properties). When the intended use is for spray application a nitrile glove of the chemical resistance group 3 (e.g. Dermatril® glove) is to be used. After contamination, the glove has to be changed. If immersing the hands into the product is not avoidable (e.g. maintenance work) a butyl or fluorocarbon rubber glove should be used. When skin exposure may occur to materials specified in section 3 of this SDS, advice should be sought from the glove supplier as to appropriate type to use with this product and the permeation breakthrough times. Care should be taken when working with sharp edged articles as these can easily damage the gloves and make them ineffective. The instructions and information provided by the glove supplier on use, storage, maintenance and replacement must be followed. Damaged gloves or those showing signs of wear should be replaced immediately.

**Skin and body protection**

Wear suitable protective clothing. Personnel should wear antistatic clothings made of natural fiber or of high temperature resistant synthetic fiber.

**Hygiene measures**

Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use organic solvents!

**9. Physical and chemical properties**

**Appearance**

Form : liquid    Colour: red    Odor Threshold : no data available

|  |                        |                    |
|--|------------------------|--------------------|
| pH                                     | Not applicable.        |                    |
| Freezing point                         | -97 – -35 °C           |                    |
| Boiling point                          | 117 °C                 |                    |
| Flash point                            | 23 °C                  | DIN 53213/ISO1523  |
| Evaporation rate                       | Slower than Ether      |                    |
| Flammability                           |                        |                    |
| Upper explosion limit                  | 13.7 %                 |                    |
| Lower explosion limit                  | 1 %                    |                    |
| Vapour pressure                        | 6.0 hPa                |                    |
| Solubility                             | appreciable            |                    |
| Vapour density                         | no data available      |                    |
| Density                                | 0.93 g/cm <sup>3</sup> | DIN 53217/ISO 2811 |
| Partition coefficient: n-octanol/water | no data available      |                    |
| Ignition temperature                   | 270 °C                 | DIN 51794          |
| Decomposition temperature              |                        |                    |
| Viscosity (23 °C)                      | <20 s                  | ISO 2431-1993 6 mm |

**10. Stability and reactivity**

**Stability**

Stable

**Hazardous polymerisation**

Will not occur.

**Conditions to avoid**

Stable under recommended storage and handling conditions (see section 7).

**Materials to avoid**

Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

**Hazardous decomposition products**

The product contains ingredients which, under certain conditions, also may release formaldehyde. If necessary, the precise concentration has to be determined. When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

**11. Toxicological information**

**Information on the likely routes of exposure**

**Inhalation**

May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

**Ingestion**

May result in gastrointestinal distress.

**Skin or eye contact:**

May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

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

**Acute oral toxicity**

|                                       |            |
|---------------------------------------|------------|
| xylene                                | Category 5 |
| 2,4,6-tris(dimethylaminomethyl)phenol | Category 4 |
| benzyl alcohol                        | Category 4 |
| ethylbenzene                          | Category 5 |
| 3,6-diazaoctanethylenediamin          | Category 4 |
| toluene                               | Category 4 |

**Acute dermal toxicity**

|                                       |            |
|---------------------------------------|------------|
| 2,4,6-tris(dimethylaminomethyl)phenol | Category 4 |
| benzyl alcohol                        | Category 5 |
| ethylbenzene                          | Category 4 |
| 3,6-diazaoctanethylenediamin          | Category 3 |
| toluene                               | Category 4 |

**Acute inhalation toxicity**

|                                       |            |
|---------------------------------------|------------|
| 1-methoxy-2-propanol                  | Category 3 |
| 2,4,6-tris(dimethylaminomethyl)phenol | Category 4 |
| benzyl alcohol                        | Category 4 |
| ethylbenzene                          | Category 4 |
| toluene                               | Category 4 |

% of unknown composition 24.7 %

**Skin corrosion/irritation**

|                                       |            |
|---------------------------------------|------------|
| 1-methoxy-2-propanol                  | Category 3 |
| xylene                                | Category 2 |
| 2,4,6-tris(dimethylaminomethyl)phenol | Category 2 |
| benzyl alcohol                        | Category 3 |
| ethylbenzene                          | Category 3 |

|                              |             |
|------------------------------|-------------|
| 3,6-diazaoctanethylenediamin | Category 1C |
| toluene                      | Category 2  |

**Serious eye damage/eye irritation**

|                                       |             |
|---------------------------------------|-------------|
| 1-methoxy-2-propanol                  | Category 2A |
| xylene                                | Category 2B |
| 2,4,6-tris(dimethylaminomethyl)phenol | Category 2A |
| benzyl alcohol                        | Category 2A |
| ethylbenzene                          | Category 2B |
| 3,6-diazaoctanethylenediamin          | Category 1  |
| 2-methoxy-1-propanol                  | Category 1  |
| toluene                               | Category 2A |

**Skin sensitization**

|                              |            |
|------------------------------|------------|
| benzyl alcohol               | Category 1 |
| 3,6-diazaoctanethylenediamin | Category 1 |

**Carcinogenicity**

|              |            |
|--------------|------------|
| ethylbenzene | Category 2 |
|--------------|------------|

**Toxicity for reproduction**

|                              |             |
|------------------------------|-------------|
| ethylbenzene                 | Category 2  |
| 3,6-diazaoctanethylenediamin | Category 2  |
| 2-methoxy-1-propanol         | Category 1B |

**Target Organ Systemic Toxicant - Single exposure**

- **Skin Absorption**

**Central nervous system** xylene

**Target Organ Systemic Toxicant - Repeated exposure**

No data available.

**Numerical measures of toxicity (acute toxicity estimation (ATE),etc. )**

No information available.

**Symptoms related to the physical, chemical and toxicological characteristics**

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Through skin resorbtion, solvents can cause some of the effects described here. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

## 12. Ecological information

Product contains environmentally hazardous substances and product is classified per GHS.

**Ecotoxicity effects**

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses.

**Acute aquatic toxicity**

|                |            |
|----------------|------------|
| xylene         | Category 2 |
| benzyl alcohol | Category 3 |
| ethylbenzene   | Category 1 |
| toluene        | Category 3 |

**Chronic aquatic toxicity**

|                              |            |
|------------------------------|------------|
| xylene                       | Category 3 |
| ethylbenzene                 | Category 4 |
| 3,6-diazaoctanethylenediamin | Category 2 |
| toluene                      | Category 4 |

% of unknown composition 31%

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Mobility in soil**

No information available.

**Other adverse effects**

No information available.

**13. DISPOSAL CONSIDERATIONS**

**Waste disposal methods:**

Dispose of in accordance with local regulations.

**Disposal considerations:**

A disposal process that converts the waste into energy is recommended. If this is not possible the hazardous waste must be disposed of by incineration.

**14. Transport information**

**NZS5433**

Proper shipping name: PAINT RELATED MATERIAL

UN-Number: 1263  
 Hazard Class: 3  
 Packing group: III  
 Hazchem Code: 3Y

**IMDG (Sea transport)**

Proper shipping name: PAINT RELATED MATERIAL

UN-Number: 1263  
 Hazard Class: 3  
 Subsidiary Hazard Class: Not applicable.  
 Packing group: III  
 Marine Pollutant: N  
 EmS: F-E,S-E

**ICAO/IATA (Air transport)**

Proper shipping name: PAINT RELATED MATERIAL

UN-Number: 1263  
 Hazard Class: 3  
 Subsidiary Hazard Class: Not applicable.  
 Packing group: III

**Matters needing attention for transportation**

Confirm that there is no breakage, corrosion, or leakage from the container before shipping. Be sure to prevent damage to cargo by loading so as to avoid falling, dropping, or collapse. Ship in appropriate containers with denotation of the content in accordance with the relevant statutes and rules.

## 15. Regulatory information

### National regulatory information

|  |   |
|--|---|
| HSNO Approval Code                                 | To be determined  |
| HSNO Control A                                     | This product must be under the control of an approved handler during use. |
| HSNO Control T                                     | This product must be tracked.   |
| HSNO Classification                                |   |
| Acute oral toxicity                                | Category 6.1D   |
| Acute dermal toxicity                              | Category 6.1E   |
| Acute inhalation toxicity                          | Category 6.1C   |
| Skin corrosion/irritation                          | Category 6.3A   |
| Serious eye damage/eye irritation                  | Category 6.4A   |
| Skin sensitization                                 | Category 6.5B   |
| Carcinogenicity                                    | Category 6.7B   |
| Toxicity for reproduction                          | Category 6.8A   |
| Target Organ Systemic Toxicant - Single exposure   | Category 6.9A   |
| Target Organ Systemic Toxicant - Repeated exposure | Category 6.9B   |
| Flammable liquids                                  | Category 3.1C   |
| Acute aquatic toxicity                             | Category 9.1B   |
| Chronic aquatic toxicity                           | Category 9.1C   |

## 16. Other information

Sources of key data used to compile the Safety Data Sheet  
 Department

DuPont (New Zealand) Ltd.  
 98 Kerrs Road, Wiri, Manukau City, Auckland  
 New Zealand

Data Review Department  
 Issuing date

Regulatory Affairs  
 date

### Revision Note

| Version | Changes |
|---------|---------|
| 1.0     |         |

Revision Date: 2009-10-15

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.