

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

**Product name** PERMAFAST FD HARDENER 3005 RAPID

**Product code** 37130056, 37730050

**Intended use of the substance/preparation**  
 Hardener for professional use

**Manufacturer, importer, supplier**

Producer/Supplier DuPont Australia Ltd ACN 000 716 469  
 Street/Box 7 Eden Park Drive  
 Nat.-Code/Postal code/City Macquarie Park NSW 2113

**Telephone**

Product information (02) 9923 6111  
 Transportation emergency (02) 9923 6275  
 Medical emergency 1800 674 415

**Manufacturer, importer, supplier**

Producer/Supplier DuPont (New Zealand) Ltd.  
 Street/Box 98 Kerrs Road  
 Nat.-Code/Postal code/City Wiri, Manukau City  
 Auckland, Zealand

**Telephone**

Product information (09) 268 5500  
 NZ Poisons Information Center 0800 764 766

**For further information, please also consult our Internet site**  
<http://www.spieshecker.com>

## 2. Hazards identification

Hazardous Substance. Dangerous Goods.

**Human health hazards**

Classification : Toxic to Reproduction Category 3; Harmful; Irritant; sensitizing; highly flammable; Highly flammable. Irritating to skin. May cause sensitization by inhalation and skin contact. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child.

**Special hazard instructions for humans and environment**

Keep away from sources of ignition - No smoking.  
 Do not breathe vapour.  
 Take precautionary measures against static discharges.  
 Wear suitable protective clothing and gloves.  
 In case of insufficient ventilation, wear suitable respiratory equipment.  
 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

## 3. Composition/information on ingredients

**Chemical characterization**

Mixture of synthetic resins and solvents

**Hazardous components**

| CAS-No.    | Chemical Name                         | Concentration     | Classification   |
|------------|---------------------------------------|-------------------|--|
| 108-88-3   | toluene                               | 45.00 - < 55.00 % | F; R11<br>Repr.Cat.3; R63<br>Xn; R48/20<br>R65<br>Xi; R38<br>R67 |
| 28182-81-2 | Hexamethylene diisocyanate, oligomers | 25.00 - < 35.00 % | Xi; R43  |

| CAS-No.   | Chemical Name                   | Concentration     | Classification                    |
|-----------|---------------------------------|-------------------|-----------------------------------|
| 123-86-4  | n-butyl acetate                 | 10.00 - < 12.50 % | R10<br>R66<br>R67                 |
| 1330-20-7 | xylene                          | 3.00 - < 5.00 %   | R10<br>Xn; R20/21<br>Xi; R38      |
| 108-65-6  | 2-methoxy-1-methylethyl acetate | 2.50 - < 3.00 %   | R10<br>Xi; R36                    |
| 822-06-0  | hexamethylene-di-isocyanate     | 0.20 - < 0.25 %   | R42/43<br>Xi; R36/37/38<br>T; R23 |

**Additional advice**

See full text of R-phrases in chapter 16.

**4. First aid measures**

**General advice**

When symptoms persist or in all cases of doubt seek medical advice. Never give anything by mouth to an unconscious person.

**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.

**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.

**Eye contact**

Remove contact lenses. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Seek medical advice.

**Ingestion**

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

**5. Fire-fighting measures**

**Hazardous combustion products**

Fire will produce dense black smoke containing hazardous combustion products (see heading 10). Exposure to decomposition products may be a hazard to health.

**Fire and Explosion Hazards**

Flammable liquid. Vapours may form explosive mixtures with air. Remove all sources of ignition.

**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

**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.

**Additional advice**

Cool closed containers exposed to fire with water spray.

**Additional information**

Hazchem : 3YE

## 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. The contaminated area should be cleaned up immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts), concentrated (d : 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts), water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in non-sealed container. Once this stage is reached, close container and dispose according to local regulations (see section 13).

## 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 preparation 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. For personal protection see section 8. Comply with the health and safety at work laws. If material is a coating, do not sand, flame cut, braze or weld dry coating without an appropriate respirator or appropriate ventilation, and gloves.

**Advice on protection against fire and explosion**

Solvent vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Never use pressure to empty container: container is not a pressure vessel. Always keep in containers of same material as the original one.

**Storage****Requirements for storage areas and containers**

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.

**Advice on common storage**

Store separately from oxidizing agents, strongly alkaline and strongly acidic materials, amines, alcohols and water. Precautions should be taken to avoid exposure to atmospheric humidity or water. Evolution of CO<sub>2</sub> in closed containers causes overpressure and produces a risk of bursting.

**Additional information on storage conditions**

Precautions should be taken to avoid exposure to atmospheric humidity or water. Humid air and/or water will produce carbon dioxide which will pressurize the container. Open drum carefully as content may be under pressure.

## 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 preparation is being used.

**Additional technical information on the plant**

Provide adequate ventilation. Air-fed protective respiratory equipment must be worn by spray operator even when good ventilation is provided.

**National occupational exposure limits**

| CAS-No.    | Chemical Name                         | Values | Control Parameters   | Basis                                |
|------------|---------------------------------------|--------|----------------------|--------------------------------------|
| 108-88-3   | toluene                               | STEL   | 574 mg/m3<br>150 ppm | NOHSC:1003(2003)<br>NOHSC:1003(2003) |
|            |                                       | TWA    | 191 mg/m3<br>50 ppm  | NOHSC:1003(2003)<br>NOHSC:1003(2003) |
| 28182-81-2 | Hexamethylene diisocyanate, oligomers |        |                      | no exposure standard allocated       |
| 123-86-4   | n-butyl acetate                       | STEL   | 950 mg/m3<br>200 ppm | NOHSC:1003(2003)<br>NOHSC:1003(2003) |
|            |                                       | TWA    | 713 mg/m3<br>150 ppm | NOHSC:1003(2003)<br>NOHSC:1003(2003) |
| 1330-20-7  | xylene                                | STEL   | 655 mg/m3<br>150 ppm | NOHSC:1003(2003)<br>NOHSC:1003(2003) |
|            |                                       | TWA    | 350 mg/m3<br>80 ppm  | NOHSC:1003(2003)<br>NOHSC:1003(2003) |
| 108-65-6   | 2-methoxy-1-methylethyl acetate       | STEL   | 822 mg/m3<br>150 ppm | NOHSC:1003(2003)<br>NOHSC:1003(2003) |
|            |                                       | TWA    | 274 mg/m3<br>50 ppm  | NOHSC:1003(2003)<br>NOHSC:1003(2003) |
| 822-06-0   | hexamethylene-di-isocyanate           | STEL   | 0.07 mg/m3           | NOHSC:1003(2003)                     |
|            |                                       | TWA    | 0.02 mg/m3           | NOHSC:1003(2003)                     |

**Protective equipment**

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

**Respiratory protection**

For spraying: air-fed respirator. For operations other than spraying: in well ventilated areas, air-fed respirators could be replaced by a combination of charcoal filter and particulate filter mask.

**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 |
|-----------------|----------------|-----------------|--------------------|
| n-butyl acetate | Viton (R) ®    | 0.7 mm          | 10 min             |
|                 | Nitrile rubber | 0.33 mm         | 30 min             |
| 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.

**Eye protection**

Wear protective eyewear for protection against solvent spatter.

**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!

**Environmental exposure controls**

Do not let product enter drains. For ecological information refer to section 12.

**9. Physical and chemical properties**

**Appearance**

Form: liquid    Colour: clear

**Important physical and chemical information**

|  | Value                  | Method                            |
|--|------------------------|-----------------------------------|
| Flash point                                      | 10 °C                  | DIN 53213/ISO1523                 |
| Autoignition temperature                         | 400 – 535 °C           | DIN 51794                         |
| Boiling point/boiling range                      | 108 – 112 °C           |                                   |
| Lower explosion limit                            | 1.3 %                  |                                   |
| Upper explosion limit                            | 7 %                    |                                   |
| Vapour pressure                                  | 16.2 hPa               |                                   |
| Relative density                                 | 0.94 g/cm <sup>3</sup> | DIN 53217/ISO 2811                |
| Water solubility                                 | moderate               |                                   |
| Viscosity (23 °C)                                | <20 s                  | ISO 2431-1993 6 mm                |
| Solvent separation test                          | < 3%                   | ADR/RID                           |
| Content of volatile components (including water) | 67.7%                  | Basis Vapour pressure >= 0.01 kPa |
| pH   | Not applicable.        |                                   |

**10. Stability and reactivity**

**Stability**

Stable

**Conditions to avoid**

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

**Materials to avoid**

Keep away from oxidising agents and strongly acid or alkaline materials. Amines and alcohols cause exothermic reactions. Preparation reacts slowly with water resulting in evolution of CO<sub>2</sub>. Evolution of CO<sub>2</sub> in closed containers causes overpressure and produces a risk of bursting.

**Hazardous decomposition products**

When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen as well as hydrogen cyanide, amines, alcohols and water.

**11. Toxicological information**

**General observations**

There is no data available on the product. See sections 3 and 15 for details.

**Practical experience**

Based on the properties of the isocyanate components and considering toxicological data on similar products, the following applies: This formulation may cause acute irritation and/or sensitization of the respiratory system leading to an asthmatic condition, wheeziness and a tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. 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. 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. Components of the product may be absorbed into the body through the skin. Contains Hexamethylene diisocyanate, oligomers, hexamethylene-di-isocyanate. May produce an allergic reaction.

| Toxicity Test Type | Value       | Time | Species |
|--------------------|-------------|------|---------|
| toluene            |             |      |         |
| Oral LD50          | 3,000 mg/kg |      | rat     |
| Dermal LD50        | 4,000 mg/kg |      | rabbit  |
| Inhalation LC50    | 5,300 ppm   |      | Mouse   |

|                                       |                       |     |            |
|---------------------------------------|-----------------------|-----|------------|
| Hexamethylene diisocyanate, oligomers |                       |     |            |
| Oral LD50                             | 1,000 mg/kg           |     | rat        |
| Dermal LD50                           | 5,000 mg/kg           |     | rabbit     |
| Inhalation LC50                       | 137 mg/m <sup>3</sup> | 4 h | rat        |
| n-butyl acetate                       |                       |     |            |
| Oral LD50                             | > 5,000 ml/kg         |     | rat        |
| Dermal LD50                           | > 5,000 ml/kg         |     | rabbit     |
| Inhalation LC50                       | > 6,335 ppm           | 4 h | rat        |
| xylene                                |                       |     |            |
| Oral LD50                             | 4,300 mg/kg           |     | rat        |
| Dermal LD50                           | > 1,700 mg/kg         |     | rabbit     |
| Inhalation LC50                       | 5,000 ppm             | 4 h | rat        |
| 2-methoxy-1-methylethyl acetate       |                       |     |            |
| Oral LD50                             | 8.5 g/kg              |     | Female Rat |
| Dermal LD50                           | > 5 g/kg              |     | rabbit     |
| Inhalation LC50                       | > 4,345 ppm           | 6 h | Male Rat   |
| hexamethylene-di-isocyanate           |                       |     |            |
| Oral LD50                             | 5,000 mg/kg           |     | rat        |
| Oral LD50                             | 350 mg/kg             |     | Mouse      |
| Dermal LD50                           | 2,000 mg/kg           |     | rabbit     |
| Dermal LD50                           | 600 mg/kg             |     | rabbit     |
| Inhalation LC50                       | 2.18 mg/l             |     | rat        |
| Inhalation LC50                       | 310 mg/kg             | 4 h | rat        |

## 12. Ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses. Product does not contain any organic halogens.

### Mobility

No information available.

### Persistence and degradability

No information available.

### Bioaccumulative potential

No information available.

## 13. Disposal considerations

Incinerate or otherwise dispose of waste material in accordance with local regulations. The product should not be allowed to enter drains, water courses or the soil. Do not incinerate in closed containers.

## 14. Transport information

Transport in accordance with the requirements of the Carriage of Dangerous Goods by Road and Rail (Classifications, Packaging and Labeling), ADG for road, IMDG for sea and ICAO/IATA for air transport.

### ADG (Land transport)

Proper shipping name: PAINT RELATED MATERIAL

UN-Number: 1263  
 Hazard Class: 3  
 Subsidiary Hazard Class: Not applicable.  
 Packing group: II  
 Hazchem: 3YE

### IMDG (Sea transport)

Proper shipping name: PAINT RELATED MATERIAL

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

## 15. Regulatory information

### Symbol and indicating of hazard

|                     |  |
|---------------------|--|
| F<br>Xn<br>Contains | Highly flammable<br>Harmful<br>toluene 45.00 - < 55.00 %; Hexamethylene diisocyanate, oligomers 25.00 - < 35.00 %. |
|---------------------|--|

### R-phrase(s)

|                                       |  |
|---------------------------------------|--|
| R11<br>R38<br>R42/43<br>R48/20<br>R63 | Highly flammable.<br>Irritating to skin.<br>May cause sensitization by inhalation and skin contact.<br>Harmful: danger of serious damage to health by prolonged exposure through inhalation.<br>Possible risk of harm to the unborn child. |
|---------------------------------------|--|

### S-phrase(s)

|   |   |
|---|---|
| S16<br>S23<br>S33<br>S36/37<br>S38<br>S45 | Keep away from sources of ignition - No smoking.<br>Do not breathe vapour.<br>Take precautionary measures against static discharges.<br>Wear suitable protective clothing and gloves.<br>In case of insufficient ventilation, wear suitable respiratory equipment.<br>In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). |
|---|---|

Contains isocyanates. See information supplied by the manufacturer.

**SUSDP Poison Schedule:** Poison Schedule 6

**New Zealand Poison Schedule:** Poison Schedule 3

## 16. Other information

Full text of R phrases with no. appearing in section 3

|   |  |
|---|--|
| R10<br>R11<br>R20<br>R20/21<br>R23<br>R36<br>R36/37/38<br>R38<br>R42/43<br>R48/20<br>R63<br>R65<br>R66<br>R67 | Flammable.<br>Highly flammable.<br>Harmful by inhalation.<br>Harmful by inhalation and in contact with skin.<br>Toxic by inhalation.<br>Irritating to eyes.<br>Irritating to eyes, respiratory system and skin.<br>Irritating to skin.<br>May cause sensitization by inhalation and skin contact.<br>Harmful: danger of serious damage to health by prolonged exposure through inhalation.<br>Possible risk of harm to the unborn child.<br>Harmful: may cause lung damage if swallowed.<br>Repeated exposure may cause skin dryness or cracking.<br>Vapours may cause drowsiness and dizziness. |
|---|--|

Sources of key data used to compile the datasheet:

1. National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition (NOHSC:2011(2003))
2. Approved Criteria for Classifying Hazardous Substances (NOHSC:1008(1999))
3. List of Designated Hazardous Substances (NOHSC:10005(1999))
4. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment (NOHSC:1003(1995))
5. Australian Dangerous Goods Code, No. 6 (National Road Transport Commission)
6. Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP)
7. National Code of Practice for the Labelling of Workplace Substances ((NOHSC:2012 (1994))

#### Further information

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 information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

#### Report version

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1.0

Revision Date: 2008-05-06