

SAFETY DATA SHEET



Date of issue : 27 June 2014

Version : 5

Section 1. Identification

Product code : 0178B

Product name : HS PRIMER SURFACER HARDENER 250ML

Recommended use of the chemical

Coating. Paint. Painting-related materials.

Restrictions on use

None identified.

Supplier's details : PPG INDUSTRIES NEW ZEALAND LTD
5 MONAHAN ROAD, MT WELLINGTON,
AUCKLAND
www.ppgnz.co.nz

Telephone Numbers:
09 573 1620, 0800 659378
021 940 920 (24 Hours)

Emergency telephone number (with hours of operation) : POISON CENTRE: 0800 764766 (24 hours)

e-mail address of person responsible for this SDS : ehsnz@ppg.com

Section 2. Hazards identification

HSNO Classification : 3.1 - FLAMMABLE LIQUIDS - Category B
6.1 - ACUTE TOXICITY (oral) - Category E
6.3 - SKIN IRRITATION - Category A
6.4 - EYE IRRITATION - Category A (Irritant)
6.5 - SENSITIZATION - Category A (Respiratory)
6.5 - SENSITIZATION - Category B (Skin)
6.7 - CARCINOGENICITY - Category B
6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY (Fertility) - Category B
6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY (Unborn child) - Category B
6.9 - SPECIFIC TARGET ORGAN TOXICITY (SINGLE OR REPEATED EXPOSURE) - Category B

Classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2001.

GHS label elements

Signal word : Danger

Hazard statements : Highly flammable liquid and vapour.
May be harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause damage to organs.

Precautionary statements

Section 2. Hazards identification

- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. In case of inadequate ventilation wear respiratory protection. Keep away from ignition sources such as heat/sparks/open flame. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Do not breathe vapour. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
- Response** : IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Take off contaminated clothing and wash before reuse. Rinse skin with water/shower. Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Wash hands after handling. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned: IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. Get medical advice/attention. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- Storage** : Store locked up. Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Other hazards which do not result in classification** : Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

CAS number/other identifiers

Product code : 0178B

Hazardous ingredients	%	CAS number
Toluene diisocyanate, oligomeric reaction products with 2,2'-oxydiethanol and propylidenetriethanol	30 - 60	53317-61-6
ethyl acetate	10 - 30	141-78-6
xylene	10 - 30	1330-20-7
ethylbenzene	0 - 10	100-41-4
m-tolylidene diisocyanate	0 - 10	26471-62-5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

Section 4. First-aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : May be harmful if swallowed. Irritating to mouth, throat and stomach.

Skin contact : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.

Eye contact : Causes serious eye irritation.

Over-exposure signs/symptoms

Inhalation : Inhalation of vapour/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Inhalation of high concentrations of vapour may affect the central nervous system. Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability.

Ingestion : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin : Adverse symptoms may include the following:
irritation
redness
dryness
cracking
reduced foetal weight
increase in foetal deaths
skeletal malformations

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

Indication of immediate medical attention and special treatment needed, if necessary

Specific treatments : Not available.

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable : Use dry chemical, CO₂, water spray (fog) or foam.

Not suitable : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides

Hazchem code : Not available.

Special precautions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Special provisions : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close

Section 6. Accidental release measures

container and dispose of according to local regulations (see section 13). Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

Section 7. Handling and storage

Precautions for safe handling

: Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitisation problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Precautions should be taken to minimise exposure to atmospheric humidity or water. CO₂ will be formed, which, in closed containers, could result in pressurisation.

Section 8. Exposure controls/personal protection

Control parameters

Ingredient name	Exposure limits
ethyl acetate	NZ OSH (New Zealand, 2/2013). WES-TWA: 720 mg/m ³ 8 hours. WES-TWA: 200 ppm 8 hours.
xylene	NZ OSH (New Zealand, 2/2013). WES-TWA: 217 mg/m ³ 8 hours. WES-TWA: 50 ppm 8 hours.
ethylbenzene	NZ OSH (New Zealand, 2/2013). WES-STEL: 543 mg/m ³ 15 minutes. WES-STEL: 125 ppm 15 minutes. WES-TWA: 434 mg/m ³ 8 hours. WES-TWA: 100 ppm 8 hours.
m-tolylidene diisocyanate	NZ OSH (New Zealand, 2/2013). Skin sensitiser. WES-STEL: 0.07 mg/m ³ , (measured as - NCO) 15 minutes. WES-TWA: 0.02 mg/m ³ , (measured as -

Section 8. Exposure controls/personal protection

NCO) 8 hours.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Eye protection** : Chemical splash goggles.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Gloves** : butyl rubber
- Respiratory protection** : By spraying: air-fed respirator. By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Restrictions on use** : Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.

Section 9. Physical and chemical properties

Appearance

Physical state	: Liquid.
Boiling point	: 77°C (170.6°F)
Flash point	: Closed cup: -4°C (24.8°F)
Lower and upper explosive (flammable) limits	: Lower: 1% Upper: 11.5%
Relative density	: 1.09
Solubility	: Insoluble in the following materials: cold water.
Volatility	: 40.4772% (w/w)
Material supports combustion.	: Yes.

Section 10. Stability and reactivity

Stability	: Stable under recommended storage and handling conditions (see Section 7).
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Uncontrolled exothermic reactions occur with amines and alcohols. The product reacts slowly with water, resulting in the production of carbon dioxide. In closed containers, pressure build-up could result in distortion, expansion and, in extreme cases, bursting of the container.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials strong acids strong alkalis
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerisation	: Under normal conditions of storage and use, hazardous polymerisation will not occur.

Section 11. Toxicological information

Information on the likely routes of exposure

Inhalation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: May be harmful if swallowed. Irritating to mouth, throat and stomach.
Skin contact	: Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
Eye contact	: Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation of vapour/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Inhalation of high concentrations of vapour may affect the central nervous system. Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitisation of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability.

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

Acute toxicity

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
Toluene diisocyanate, oligomeric reaction products with 2,2'-oxydiethanol and propylidenetrimethanol	LD50 Oral	Rat	>5000 mg/kg	-
ethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	5620 mg/kg	-
xylene	LC50 Inhalation	Rat	6670 ppm	4 hours
	Gas.			
	LC50 Inhalation	Rat	5000 ppm	4 hours
	Vapour			
	LD50 Dermal	Rabbit	>1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
ethylbenzene	LC50 Inhalation	Rat	4000 ppm	4 hours
	Vapour			
	LD50 Dermal	Rabbit	17.8 g/kg	-
	LD50 Oral	Rat	3.5 g/kg	-
m-tolylidene diisocyanate	LD50 Oral	Rat	4130 mg/kg	-

Irritation/Corrosion

Not available.

Sensitisation

Not available.

Potential chronic health effects

- General** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Inhalation** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Skin contact** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Teratogenicity** : Suspected of damaging the unborn child.
- Fertility effects** : Suspected of damaging fertility.

Chronic toxicity

Not available.

Carcinogenicity

Not available.

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

Specific target organ toxicity

Name	Target organs
ethyl acetate	Not determined
xylene	Not determined
ethylbenzene	Not determined
m-tolylidene diisocyanate	Not determined

Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	2287.4 mg/kg
Dermal	6301.8 mg/kg
Inhalation (vapours)	355.4 mg/l

Section 12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
ethylbenzene	Acute LC50 150 to 200 mg/l Fresh water	Fish - Bluegill - Lepomis macrochirus - Young of the year	96 hours

Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Not available.				

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

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
ethyl acetate	0.73	-	low
xylene	3.16	7.4 to 18.5	low
ethylbenzene	3.15	79.43	low

Mobility : Not available.

Do not allow to enter drains or watercourses.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Not suitable: : Do not allow to enter drains or watercourses.

The classification of the product may meet the criteria for a hazardous waste. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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

14. Transport information

	NZ	ADG	IMDG	IATA
UN number	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3
Packing group	II	II	II	II
Environmental hazards	No.	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Additional information

NZ : None identified.
ADG : None identified.
Hazchem code : •3YE
IMDG : None identified.
IATA : None identified.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

New Zealand Inventory of Chemicals (NZIoC) : All components are listed or exempted.

HSNO Approval Number : HSR002669 Flammable, Toxic [6.7]

Emergency Management Regulations : Level 1: Labelling required when 1L is present in a workplace.

Level 2: MSDS required when any amount is present in a workplace. At least 2 x 4.5 kg powder fire extinguishers required when 250L is present in a workplace.

Level 3: Emergency Response Plans and Secondary Containment required when 1000L is stored.

Flammable Signage required when 250L is present in a workplace.

Classes 1 to 5 Control Regulations : Hazardous Atmosphere Zones required for quantities greater than: 100L (closed), 25L (decanting), 5L (open occasionally), 1L (open continuously). Hazardous Substances Location Certificate required for quantities greater than: 250L (containers up to 5L), 100L (containers >5L), 50L (open containers).

Approved Handler : Yes - For quantities greater than 500L in containers up to 5L; or 250 L in containers >5L.

Australia inventory (AICS) : All components are listed or exempted.

Section 16. Other information

Date of issue : 27 June 2014

Indicates information that has changed from previously issued version.

Key to abbreviations : STEL = Short Term Exposure Limit
TWA = Time-Weighted Average
WES = Work Exposure Standard

References : Not available.

Organisation that prepared the MSDS : EHS

Disclaimer

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