



MATERIAL SAFETY DATA SHEET

POLYURETHANE VARNISH

Effective Date : March 2012

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Norski Holdings urges the customer receiving this Material Safety Data Sheet to study it carefully to become aware of hazards, if any, of the product involved. In the interests of safety, you should, (1) notify your employees, agents, and contractors, of the information on this sheet; (2) furnish a copy to each of your customers for the product; (3) request your customers to inform their employees and customers as well.

I. Identification

MANUFACTURER: Norski Holdings Ltd, 10 Northpoint Street, Plimmerton, 5024 New Zealand

PRODUCT NAME: Polyurethane Varnish

RECOMMENDED USE: Intermediate resin for surface coatings.

II. Hazard Classification

NEW ZEALAND: Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

HSNO CLASSIFICATIONS:

3.1C – Flammable liquids: medium hazard.

6.1E – Substance that is acutely toxic (aspiration hazard).

6.3B – Substance that is mildly irritating to the skin.

9.1B – Substance that is ecotoxic in the aquatic environment.

Classified as Dangerous Goods for transport, according to NZS 5433:2007 Transport of Goods on Land.

HAZARD STATEMENT CODES:

H226 – Flammable liquid and vapour.

H305 – May be harmful if swallowed and enters airways.

H316 – Causes mild skin irritation.

H411 – Toxic to aquatic life with long-lasting effects.

PRECAUTIONARY STATEMENT(S):

P102 – Keep out of reach of children. This statement applies only where the substance is available to the general public.

P103 – Read label before use. This statement applies only where the substance is available to the general public.

P104 – Read Safety Data Sheet before use.

P210 – Keep away from heat, sparks, open flames and hot surfaces. No smoking.

P233 – Keep container tightly closed.

P240 – Ground/bond container and receiving equipment.

P241 – Use explosion-proof electrical, ventilation and lighting equipment.

P242 – Use only non-sparking tools.

P243 – Take precautionary measures against static discharge.

P273 – Avoid release to the environment.

P280 – Wear protective gloves, and eye protection.

PRECAUTIONARY STATEMENT(S) RESPONSE:

General

P101 – If medical advice is needed, have product container or label at hand. This statement applies only where the substance is available to the general public.

P391 – Collect spillage.

Ingestion

P301+P310 – IF SWALLOWED – Immediately call a POISON CENTRE or doctor/physician.

P331 – Do NOT induce vomiting.

Skin

P303+P361+P353 – IF ON CLOTHING – Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

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P332+P313 – If skin irritation occurs: Get medical advice/attention.

PRECAUTIONARY STATEMENT(S) CODES

Storage

P403+P235 – Store in a well ventilated place. Keep cool.

P405 – Store locked up.

Disposal

P501 – In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Regulations 2001. This may also include any method of disposal that must be avoided.

RISK PHRASE(S)

R10 – Flammable

R38 – Irritating to skin

R65 Harmful: may cause lung damage if swallowed.

R66 – Repeated exposure may cause skin dryness or cracking.

R67 – Vapours may cause drowsiness and dizziness.

R51/53 – Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SAFETY PHRASES

S2 – Keep out of the reach of children.

S23 – Do not breathe gas/fumes/vapour/spray.

S61 – Avoid release to the environment. Refer to special instructions/safety data sheets.

S62 – If swallowed, do not induce vomiting: seek medical advice immediately and show the container or label.

S24/25 – Avoid contact with skin and eyes.

S36/37 – Wear suitable protective clothing and gloves.

III. Composition/Information on Ingredients

Name	CAS	Proportion (%v/v)
(Mineral Turpentine)		
Kerosene	Various	>60
1,2,4-Trimethylbenzene	95-63-6	<20
Propylbenzene and Isopropylbenzene (Cumene)	98-82-8	<10
Mesitylene	108-67-8	<10
Xylene, mixed isomers	1330-207	<5
Polyurethane resin (oil modified)	Proprietary	30-60%
Other ingredients determined not to be hazardous		To 100%

IV. First Aid Measures

INHALATION: If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms persist, seek medical attention.

INGESTION: Do NOT induce vomiting. Wash out mouth and lips with water. Where vomiting occurs naturally, have affected person place

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head below hip level in order to reduce risk of aspiration. Seek immediate medical attention.

SKIN: Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

EYE: If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing for several minutes until all contaminants are washed out completely. Seek medical attention.

FIRST AID FACILITIES: Eye wash and normal washroom facilities.

ADVICE TO DOCTOR: Treat symptomatically.

EMERGENCY: 0800 POISON (764 766)

V. Fire-fighting Measures

SUITABLE EXTINGUISHING MEDIA: Extinguish fire with foam, dry chemical powder, carbon dioxide, water spray or water fog.

HAZARDS FROM COMBUSTION PRODUCTS: Under fire conditions, this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide and carbon dioxide.

SPECIFIC HAZARDS: Flammable liquid and vapour. Vapour/air mixtures may ignite explosively. Flashback along the vapour trail may occur. Runoff to sewer may create fire or explosion hazard.

HAZCHEM CODE: .3Y

PRECAUTIONS IN CONNECTION WITH FIRE: Fire fighters should wear self-contained breathing apparatus (SCBA) and full protective clothing to prevent exposure to vapours, fumes or products of combustion. Water spray may be used to cool down heat exposed containers.

UNSUITABLE EXTINGUISHING MEDIA: Do not use water jet.

VI. Accidental Release Measures

EMERGENCY PROCEDURES: Wear appropriate personal protective equipment and clothing to prevent exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unprotected personnel. If possible contain the spill. Place inert absorbent, non-combustible material onto spillage. Use clean non-sparking tools to collect the material and place into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water authorities and EPA in accordance with local regulations.

VII. Handling and Storage

PRECAUTIONS FOR SAFE HANDLING: Open containers cautiously as contents may be under pressure. Use only in a well ventilated area. DO NOT store or use in confined spaces. Do not enter these areas without respiratory protection or until the atmosphere has been checked. Keep tanks covered and containers sealed when not in use. Build up of mists or vapours in the atmosphere must be prevented. Avoid inhalation of vapour and mists. Do not use near welding or other ignition sources and avoid sparks. Do NOT pressurise, cut, heat or weld empty containers as they may contain hazardous residues. Maintain high standards of personal hygiene ie wash hands after handling and prior to eating, drinking, smoking or using toilet facilities.

CONDITIONS FOR SAFE STORAGE: Store in a cool, dry, well-ventilated area away from sources of ignition, oxidising agents, foodstuffs, and clothing and out of direct sunlight. Keep containers closed when not in use and security sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Always keep in containers made of the same material as the supply container. Have appropriate fire extinguishers available in and near the storage area. Take precautions against static electricity discharges. Use proper grounding procedures. Do not stack more than three pallets high. For information on the design of the storeroom, reference should be made to Australian Standard AS1940 – The storage and handling of flammable and combustible liquids. Reference should also be made to all State and Federal regulations.

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VIII. Exposure Controls/Personal Protection

EXPOSURE STANDARDS:

New Zealand Occupational Safety and Health Service (OSH) Workplace Exposure Standards:

Substance TWA STEL NOTICES

	ppm	mg/m ³	ppm	mg/m ³
Stoddart solvent	100	525	--	--
(mineral turpentine)				

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

BIOLOGICAL LIMIT VALUES: No biological limit allocated.

ENGINEERING CONTROLS: Ventilation adequate to maintain the concentration of airborne contaminants below exposure standard is required. The ventilation system must be suitable for use with flammable/combustible materials. The use of a local exhaust ventilation system, drawing vapours, fumes and mists away from workers breathing zone is recommended. If the engineering controls are not sufficient to maintain concentrations of particulates and fumes below the exposure standards, suitable respiratory protection must be worn.

RESPIRATORY PROTECTION: If engineering controls are not effective in controlling airborne exposure, then an approved respiratory with a replaceable organic vapour filter should be used. Reference approved respirator with a replaceable organic vapour filter should be used. Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

EYE PROTECTION: Safety glasses with side shields or chemical goggles should be worn. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform with Australian/New Zealand Standard AS/NZS 1337 – Eye Protectors for Industrial Applications.

HAND PROTECTION: Wear gloves of impervious material eg laminated film, nitrile or neoprene rubber gloves. Final choice of appropriate gloves will vary according to individual circumstances ie methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves – Selection, use and maintenance. The use of barrier cream is recommended.

BODY PROTECTION: Suitable protective workwear, eg cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled. Industrial clothing should conform to the specifications detailed in AS/NZS 2919: Industrial clothing.

IX. Physical and Chemical Properties

APPEARANCE: Clear amber liquid.

ODOUR: Low, not unpleasant.

MELTING POINT: Not available.

BOILING POINT: 147-199^oC (for mineral turpentine)

SOLUBILITY IN WATER: Insoluble.

SPECIFIC GRAVITY: 0.885.

pH VALUE: Not applicable.

VAPOUR PRESSURE: 0.8 kPa at 38^oC (for mineral turpentine).

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VAPOUR DENSITY: 0.429 kPa at 20°C
EVAPORATION RATE: 0.16 (n-Butyl acetate=1) (for white spirits)
VISCOSITY: Not available.
VOLATILE COMPONENT: 52% v/v
FLASH POINT: 31°C (Tag Closed Cup) (mineral turpentine)
FLAMMABILITY: Flammable liquid.
AUTOIGNITION TEMPERATURE: >200°C.
FLAMMABLE LIMITS – LOWER: 0.9% (for mineral turpentine).
FLAMMABLE LIMITS – UPPER: 7.0% (for mineral turpentine).

X. Stability and Reactivity

CHEMICAL STABILITY: Stable under normal conditions of handling and storage.
CONDITIONS TO AVOID: Heat, direct sunlight, open flames or other sources of ignition.
INCOMPATIBLE MATERIALS: Strong oxidising agents, halogens and molten sulphur.
HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products include carbon monoxide and carbon dioxide.
HAZARDOUS REACTIONS: Reacts with halogens, molten sulphur and strong oxidising agents.
HAZARDOUS POLYMERIZATION: Will not occur.

XI. Toxicological Information

TOXICOLOGICAL INFORMATION: Not available.
INHALATION: Inhalation of product may cause lung damage if swallowed. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause severe pulmonary injury that may lead to death. May cause irritation to the mouth, throat, oesophagus and stomach with nausea, abdominal discomfort, vomiting and diarrhoea.
SKIN: Irritating to skin. May cause redness, itching and inflammation. Repeated exposure may cause skin dryness and cracking.
EYE: May cause eye irritation, tearing, stinging, blurred vision, and redness.
CHRONIC EFFECTS: Frequent or prolonged contact with skin may cause dermatitis. Repeated or prolonged inhalation may aggravate existing respiratory disorders and cause liver and kidney damage.

XII. Ecological Information

ECOTOXICITY: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
PERSISTENCE/DEGRADABILITY: Not available.
MOBILITY: Not available.
ENVIRONMENTAL PROTECTION: Do not allow product to enter drains, sewers or waterways.

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XIII. Disposal Considerations

DISPOSAL CONSIDERATIONS: Disposal of spilled or waste material must be carried out in accordance with the relevant local and national government regulations. Advise flammable nature. Empty containers may contain flammable residues. Do not puncture, cut or weld empty containers.

XIV. Transport Information

NEW ZEALAND: This material is classified as a Class 3 – Flammable Liquid according to NZS 5433:2007 Transport of Dangerous Goods on Land. Must not be loaded in the same freight container or on the same vehicle with:

- Class 1 – Explosives
- Class 2.1 – Flammable gases
- Class 2.3 – Toxic gases
- Class 4.2 – Spontaneously combustible substances
- Class 5.1 – Oxidising substances
- Class 5.2 – Organic peroxides or
- Class 7 – Radioactive materials unless specifically exempted.

Must not be loaded within the same freight container; and on the same vehicle must be separated horizontally by at least three metres unless all but one are packed in separate freight containers with:

- Class 4.3 – Dangerous when wet substances

Goods of packing group II or III may be loaded in the same freight container or on the same vehicle if transported in segregation devices with:

- Class 4.2 – Spontaneously combustible substances
- Class 4.3 – Dangerous when wet substances
- Class 5.1 – Oxidising substances

UN NUMBER: 1866

PROPER SHIPPING NAME: Resin Solution

DG CLASS: 3

PACKING GROUP: III

HAZCHEM CODE: .3Y

IERG NUMBER: 14

XV. Regulatory Information

NATIONAL AND/OR INTERNATIONAL REGULATORY INFORMATION: NEW ZEALAND – Classified as Hazardous according to the New Zealand Hazardous Substances (Minimum Degrees of Hazard) Regulations 20091. All components of this product are listed on the New Zealand Inventory of Chemicals (NZIoC).

GROUP STANDARD: Surface Coatings and Colourants (Flammable) Group Standard 2006.

HSNO APPROVAL NUMBER: HSR002662.

HAZARD CATEGORY: Harmful, Irritant, Dangerous for the Environment, Flammable.

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XVI. Other Information

REASONS FOR ISSUE: Amendments to the HSNO Classification / Hazard and Precautionary statements.

LITERACY REFERENCE:

- 1) 'Huntsman MDI-Based Compositions: Hazards and Safe-Handling Procedures'. No. PU 193-1E (4ed) 2001.
- 2) 'In Registry of Toxic Effects of Chemical Substances 1998' (Ed D Sweet), (US Dept of Health and Human Services: Cincinnati) 1998.
- 3) International Isocyanate Institute Inc. Scientific Office, Compendium of Technical Information, Volume 2 1990- (Ed. III) p 1.4, 1992.

LIQUID MDI DECONTAMINANTS:

Decontaminant 1:

- Water 90%
- Concentrated sodium hydroxide solution 8%
- Liquid detergent 2%

Decontaminant 2:

- Water 90-95%
- Sodium carbonate 5-10%
- Liquid detergent 0.2-0.5%

Note : Decontaminant 2 reacts slower with MDI but is more environmentally friendly than Decontaminant 1.

SOLID MDI DECONTAMINANTS

May use sand, sawdust, Newsorb.

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