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MATERIAL SAFETY DATA SHEET

MSDS 325/B

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1. Product and Company Identification

- 1.1 PRODUCT NAME:** VULKEM 345 CATALYST
- 1.2 USE OF PRODUCT** Unit B component for Vulkem 345
- 1.3 SUPPLIER:** Equus Industries Ltd
Sheffield Street
Riverlands Industrial Estate
Blenheim, Marlborough, New Zealand
Telephone: +64 3 578 0214
Fax: +64 3 578 0919
- 1.4 EMERGENCY CONTACT:** **National Poison Centre**
Telephone: 0800 764 766

Information about Safety Data Sheet: Telephone: +64 3 578 0214 8:00am – 6:00pm Mon - Fri

2. Hazards Identification

- 2.1 Classification:**
Dangerous Goods – classification according to New Zealand Dangerous Goods Code.
- 2.2 Risk & Safety Phrases:**
R10,20,21,36,37,38,51,53,65
S23,24,62

The full text of each R & S phrases are listed in Section 16.

3. Composition/Information on Ingredients

- 3.1 Chemical Characterization (Preparation):**
Curing agent.
- 3.2 Hazardous Ingredients:**

CAS NO.	COMPONENT	CONCENTRATION %	CLASSIFICATION
25723-16-4	Polyether Polyol	75.0 – 85.0%	-
64742-95-6	Aromatic Petroleum Distillates	10.0 – 20.0%	R10/20/21/36/37/38/ 51/53/65
95-63-6	1,2,4-Trimethyl benzene	1.0 – 5.0%	R10/20/36/37/38/51/53



- 3.3** Only ingredients, additives and impurities which are classified and contribute to the classification of the product are included in this section.

4. First Aid Measures

- 4.1 After Inhalation:**
Leave area to breathe fresh air. Avoid further over exposure. If symptoms persist, get medical attention immediately.
- 4.2 After Skin Contact:**
Wash area of contact thoroughly with hand cleaner followed by soap and water. If irritation, rash or other disorders develop, seek medical attention immediately.
- 4.3 After Eye Contact:**
Flush immediately with running water for 15 minutes, lifting the upper and lower lids occasionally. Get medical attention immediately.
- 4.4 After Ingestion:**
Get medical attention immediately.
- 4.5 Advice to Doctor:**
Treat symptomatically.

5. Fire Fighting Measures

- 5.1 Suitable Extinguishing Media:**
If water fog is ineffective, use carbon dioxide, dry chemical or foam.
- 5.2 Protective Equipment:**
Use accepted fire fighting techniques. Wear full fire fighting protective clothing, including self contained breathing apparatus (SCBA).
- 5.3 Specific Hazards:**
Vapours may migrate to sources of ignition.
- 5.4 Combustion Products:**
Carbon monoxide, carbon dioxide, fumes and smoke.

6. Accidental Release Measures

- 6.1 Preliminary Action and Precautions:**
- 6.1.1** Eliminate every possible source of ignition.
- 6.1.2** Avoid breathing vapour and contact with skin, eyes and clothing.
- 6.1.3** Wear recommended personal protective equipment.
- 6.1.4** Shut off leaks if possible without risk.



- 6.1.5 Dike in the spilled product as much as possible with inert material.
- 6.1.6 Prevent entry of product into sewers, storm water drains and open bodies of water.
- 6.1.7 Collect the spillage in closable, suitable disposal containers.
- 6.1.8 Clean up all spills as soon as possible, using an inert absorbent material (e.g. sand, earth) and dispose of as hazardous waste.

7. Handling and Storage

7.1 Handling:

- 7.1.1 Prevent inhalation of vapour, ingestion and contact with skin, eyes and clothing.
- 7.1.2 Keep container closed when not in use. Precautions also apply to emptied containers.
- 7.1.3 Change soiled work clothes frequently.
- 7.1.4 Clean hands thoroughly after handling.
- 7.1.5 Do not smoke, weld, generate sparks, or used flame near container. Vapours may migrate to sources of ignition.

7.2 Storage:

- 7.2.1 Store under dry warehouse conditions.
- 7.2.2 Store away from sources of ignition, (i.e. sparks, open flames, heat etc.)
- 7.2.3 Store away from amines, water, bases, oxidizers, alcohols.
- 7.2.4 Keep containers tightly closed at all times.

8. Exposure Controls and Personal Protection Equipment

8.1 Exposure Limits:

Solvent naphtha (petroleum)	Cas – 64742-95-6	TLV/TWA (ACGIH): 19ppm	(100mg/m ³)
1,2,4-trimethylbenzene	Cas – 95-63-6	TLV/TWA (ACGIH): 25ppm	(123mg/m ³)

8.2 Exposure Controls:

8.2.1 Exposure Controls in the Work Place:

Local exhaust when the general ventilation is not sufficient to keep the airborne contaminant concentration below the exposure limit.



8.2.2 Personal Protection Equipment

Respiratory Protection – Wear appropriate, properly fitted NIOSH/MSHA, approved respirator when airborne contaminant level(s) are expected to exceed exposure limits indicated on the MSDS. Select positive pressure supplied air respirator for isocyanates, (TC 19c or equivalent).

Hand Protection – Use suitable impervious nitrile or neoprene gloves and protective apparel to reduce exposure.

Eye Protection – Wear appropriate eye protection. Wear chemical safety goggles and/or face shield to prevent eye contact

Body Protection - Prevent contact with skin. Wear rubber apron and overshoes.

9. Physical and Chemical Properties

9.1 General Information:

Physical State/Form	Liquid
Colour	Light yellow
Odour	Solvent
pH	Not applicable
Boiling Point/Range	>120°C
Melting Point	Not applicable
Freezing Point	Not applicable
Vapour Pressure	Not established
Vapour Density	Heavier than air
Water Solubility/Miscibility	Partial
Specific Gravity	1.02
% Volatile Weight	20.0

10. Stability and Reaction

10.1 General Information:

This material is stable when properly handled and stored. No hazardous reactions are known.

10.2 Conditions to Avoid:

High temperatures, open flames, sparks.

10.3 Material to Avoid:

Water, amines, bases, oxidizers, alcohols.

10.4 Hazardous Decomposition Products:

None expected when material properly handled and stored. For thermal decomposition see Section 5.

11. Toxicological Information

11.1 Emergency Overview:

May cause skin, eye, nose, throat and respiratory tract irritation. Vapour harmful; may affect the brain or nervous system causing dizziness, headache or nausea.



- 11.2 Skin Contact:**
Can cause irritation.
- 11.3 Eye Contact:**
Can cause irritation.
- 11.4 Ingestion:**
May cause gastrointestinal irritation. Aspiration during swallowing or vomiting may cause lung damage and can be fatal.
- 11.5 Inhalation:**
Can cause headache, dizziness, nausea, drowsiness, stupor, irritation to respiratory system.
- 11.6 Aggravated Medical Conditions:**
Pre-existing eye, skin and respiratory disorders may be aggravated by exposure.
- 11.7 Chronic effects:**
Reports have associated repeated and prolonged occupational over exposure to solvents with permanent brain and nervous system damage. Intentional misuse be deliberately concentrating and inhaling contents may be harmful or fatal.

12. Ecological Information

- 12.1 Environment Protection:**
Prevent product from entering drains, sewers and waterways.
- 12.2 Ecotoxicity:**
Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
- 12.3 Persistence and degradability:**
Data not available.
- 12.4 Bioaccumulative Potential:**
Data not available.

13. Disposal Consideration

- 13.1 Material**
Dispose of according to regulations be incineration in a special waste incinerator or landfill at a permitted facility in accordance with local/national regulations.

14. Transport Information

- 14.1 Land Transport:**
- Road: Dangerous good (Class 3, Haz Chem 3Y, PG III)
- Rail: Dangerous good (Class 3, Haz Chem 3Y, PG III)
- 14.2 Sea Transport:** Dangerous good (Class 3.3, Haz Chem 3Y, PG III)



14.3 Air Transport: Dangerous good (Class 3, Haz Chem 3Y, PG III)

14.4 Postal and Courier Service: Can not be transported by courier.

15. Regulatory Information

This product is hazardous and flammable.

16. Other Information

16.1 Full Text of R-Phrases Contained in Section 2:

R10	Flammable
R20/21	Harmful by inhalation and in contact with skin.
R36/37/38	Irritating to the eyes, respiratory system and skin
R51/53	Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.

16.2 Full Text of S-Phrases Contained in Section 2:

S23	Do not breath gas/fumes/vapour/spray
S24	Avoid contact with skin
S62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

16.3 The information contained in this Data Sheet relates only to the specific material identified. Equus Industries Ltd believes the information to be accurate and reliable as at the date of this Data Sheet. No Warranty, Guarantee or representation is expressed or implied by the Company as to the absolute correctness or completeness of any representation contained in this Data and assumes no legal responsibility in connection therewith. It can not be assumed that all acceptable safety measures are contained in this Data Sheet, or that additional measures may not be required under particular or exceptional circumstances or conditions.