



PRODUCT SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

NAME OF SUPPLIER
Catomance Technologies Ltd

Sheet 1 of 5
Last Revision Date: January, 03

ADDRESS
4 Caxton Place Stevenage, Herts, SG1 2UF.

Business Telephone No: 01438 360747 Fax No: 01438 360748

PRODUCT NAME: Emcol Primer PR
PRODUCT TYPE: Dark Brown Liquid Primer

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterisation : Polyisocyanate based diphenylmethane diisocyanate and thinners.

Hazardous Components :

Substances Presenting a Health Hazard :

4,-diphenylmethane - diisocyanate, isomers and mixtures.

CAS Number : 26447 - 40 - 5
Hazard Symbol Letters : Xn, F
R Phrases : 20 - 36 / 38 - 42
Concentration : 18%

Substances Presenting a Health Hazard :

1, 2, 4 trimethyl benzene

CAS Number : 95 - 63 - 6
Hazard Symbol Letters : Xn, F
R Phases : 20, 36 / 37 / 38
Concentration : 15 - 30%

Substances Presenting a Health Hazard :

Xylene Mixture of Isomers

CAS Number : 1330 - 20 - 7

PRODUCT NAME	Emcol Primer PR	Sheet 2 of 5 Last revision date: January, 03
2. COMPOSITION/INFORMATION ON INGREDIENTS contd.		
Hazard Symbol Letters :Xn, F		
R Phases : 20 / 21, 38		
Concentration : 0.5 - 2.5%		
Substances Presenting a Health Hazard :		
Solvent naphtha (petroleum), light aromatic		
CAS Number : 64742 - 95 - 6		
Hazard Symbol Letters : Xn, F		
R Phases : 65		
Concentration : 15 - 30%		
3. HAZARDS IDENTIFICATION		
FLAMMABLE		
Harmful :	May cause lung damage if swallowed. Harmful by inhalation. Irritating to eyes, respiratory systems and skin. May cause sensitisation on inhalation.	
Environmental Hazard :	Toxic to aquatic organisms, may, cause long term effects in the aquatic Environment.	
Moderate Hazard :	Liquid can release vapours that form flammable mixtures upon moderate heating to temperatures at or above the product's flash point.	
4. FIRST AID MEASURES		
Inhalation :	Remove the exposed person to fresh air at once. If unconscious turn into the recovery position. Get medical attention if symptoms persist.	
Skin Contact :	Wipe off mechanically and wash afflicted areas thoroughly with soap and plenty of water.	
Eye Contact :	Promptly wash eyes with lots of water whilst lifting the eyelid. Continue to rise for at least 15 minutes. Get medical attention.	
Ingestion :	In case of irritation of the respiratory tract or swallowing , get medical help. Do not induce Vomiting because of danger of aspiration. If patient vomits turn to recover position.	
5. FIRE FIGHTING MEASURES		
Fire-Fighting Procedures :	Fire can be extinguished using foam, carbon dioxide, dry chemicals, sand, etc. Do not put water on leaked materials.	
Special Fire Precautions :	In case of fire, formation of carbon monoxide, nitrogent oxide, isocyanate vapour and traces of hydrogen cyanide are possible. Self contained breathing apparatus should be worn.	
6. ACCIDENTAL RELEASE MEASURES		
General :	Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Avoid inhaling vapour, evacuate personnel from area.	
Land Spill :	Absorb with vermiculite, dry sand or earth and place in container and do not seal. Keep damp in a safe ventilated area/ Large spills can be recovered by pumping using an explosion proof or hand pump.	
Water Spill :	Contain Spillage. Do not wash spillage down drain.	

PRODUCT NAME Emcol Primer PR

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Last revision date: January, 03

7. HANDLING AND STORAGE

Keep away from heat, sparks and open flames. Avoid spilling, skin and eye contact. Keep in tightly closed, dry, clearly labelled containers. Ensure good ventilation. Avoid product temperature above 35°C and below 10°C.

Product is flammable / combustible and should be kept away from oxidisers, heat and flame. Ground containers and transfer equipment to eliminate static electric sparks. Flammable liquid storage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Controls :

INGREDIENT NAME	STD	LT EXP (8 hrs)	ST EXP (15 min)
1, 2, 4, Trimethyl Benzene	OES	25 ppm	
Xylene Mixture of Isomers	OES	100 ppm (Sk)	150 ppm (Sk)
4, 4 – diphenylmethane diisocyanate	MEL	0.02 mg/m ³	0.07 mg/m ³
Solvent naphtha (petroleum) Light Aromatic		200 mg/m ³	

Ingredient Comments : Recommended 'in house' OEL for total hydrocarbon solvent using the reciprocal calculation EH40 is 150 mg/m³.

Respiratory : Respiratory protection require in insufficiently ventilated working areas. In case of hypersensitivity of the respiratory tract (e.g. asthmatics and those that suffer from chronic bronchitis). It is inadvisable to work with the product.

Hands and Skin : Wear suitable protective clothing, protective gloves (made of PVC or rubber). Wash promptly with soap and water if skin becomes contaminated.

Eyes : Wear splash-proof goggles to prevent any possibility of eye contact. Provide eye wash station.

General : Keep away from foodstuffs, drinks and tobacco. Wash hands before breaks and at the end of work.

Keep working clothes separate. Take off immediately all contaminated clothing. **DO NOT SMOKE IN WORK AREA !** No eating or drinking while working with this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Indicative Values Only :

Physical State :	Liquid
Form/Colour :	Dark Brown
Odour :	Earthy, musty, aromatic
Flash Point :	>41°C
Specific Gravity :	1.01 approximately at 15°C
Auto-ignition Temperature :	>450°C
Solubility in Water :	Insoluble

PLEASE NOTE THAT THESE PROPERTIES DO NOT CONSTITUTE A SPECIFICATION

10. STABILITY AND REACTIVITY

Stability : Normally stable

Materials and Conditions to Avoid : Reacts strongly with oxidizers. Exothermic reaction with amines and alcohols.

Reacts with water forming CO² (enclosed containers risk of bursting owing to pressure).

Hazardous Decomposition Products : None when stored and handled correctly.

PRODUCT NAME	Emcol Primer PR	Sheet 4 of 5 Last revision date: January, 03
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11. TOXICOLOGICAL INFORMATION

Aspiration Hazard :

Do not breathe vapour or spray. May cause lung damage if material gets into the lungs after accidental swallowing or vomiting of ingested material. Vapour concentrations above the recommended exposure levels are irritating to eyes and respiratory tract, may cause headaches, dizziness and have other CNS effects. Low order of toxicity on skin. Frequent

of prolonged contact may cause irritation and cause dermatitis. Irritating to eyes but does not cause tissue injury.

Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema. Over-exposure especially during spraying operations without the necessary

precautions entails the risk of concentration dependant irritating effects on eyes, nose, throat and respiratory tract.

Delayed appearance of the complaints and development of hyper-sensitivity (difficult breathing, coughing, asthma's) are possible. Hypersensitive persons may suffer from these effects even at low concentrations. In case of longer contact with skin irritation effects are possible.

12. ECOLOGICAL INFORMATION

Do not allow to escape into waters, wastewater or soil. The product reacts with water the interface forming CO₂ and a solid soluble product with high melting point (Polyurea). This reaction is accelerated by surfactants e.g. detergents or by water soluble solvents. Expected to be toxic to aquatic organisms.

13. DISPOSAL RECOMMENDATIONS

Confirm disposal procedures with environmental engineer and local regulations. Empty all containers of product residues. Residues on sides of containers may be converted into chemically inert water soluble polyurea by reaction with a reusable decontamination solution. The polyurea product is harmless. Once this has been done the container label should be removed and the container sent to a specialist disposal facility.

14. TRANSPORT INFORMATION

UK Carriage Classification :	FLAMMABLE LIQUID N.O.S. (Solvent naphtha (petroleum), light aromatic), (1, 2, 4 trimethyl benzene).
UN Class :	3
UN Packaging Group :	III
UN Number :	1993, FLAMMABLE LIQUID N.O.S. (solvent naphtha (Petroleum), light aromatic) (1, 2, 4 trimethyl benzene).
ADR :	3, 31c
IMO / IMDG :	Class 3, Group III
IATA :	Class 3, Group III

15. REGULATORY INFORMATION

Label according to UK Chemicals (hazard information packaging supply) Regulations 1994.

Indication of Hazard : Harmful, Flammable.

- R10 :** Flammable.
- R36 / 38 :** Irritating to eyes and skin.
- R43 :** May cause sensitisation by skin contact.
- R51 / 53 :** Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
- R65 :** Harmful : may cause lung damage if swallowed.
- S23 :** Do not breath vapour or spray.
- S24 :** Avoid contact with skin.
- S26 :** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S28 :** After contact with skin wash immediately with plenty of soap and water.
- S37 / 39 :** Wear suitable gloves and eye / face protection.
- S43 :** In case of fire use sand, earth, chemical powder or foam.
- S57 :** Use appropriate containment to avoid environmental containment
- S60 :** This material and its container must be disposed of as hazardous waste.
- S62 :** If swallowed do not induce vomiting. Seek medical advice.

PRODUCT NAME Emcol Primer PR

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Last revision date: January, 03

16. OTHER INFORMATION

The data and advice given apply when the product is sold for the stated application or applications. The product is not sold as suitable for any other application. Use of the product for other applications other than stated in this sheet may give rise to risks not mentioned in this sheet. You should not use the product other than for the stated application or applications without seeking advice from us.

If you have purchased the product for supply to a third party for a use at work, it is your duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet.

If you are an employer, it is your duty to tell your employees and others who may be affected of any hazards described in this sheet and any precautions which should be taken.



PRODUCT SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

NAME OF MANUFACTURER/SUPPLIER

Catomance Technologies Ltd

Sheet 1 of 4

Last Revision Date: January, 03

ADDRESS

4 Caxton Place, Stevenage, Herts, SG1 2UF

Business Telephone No: 01438 360747

Fax No: 01438 360748

PRODUCT NAME: Emcol Primer S.P.**PRODUCT TYPE:** Solvent based liquid polyurethane primer**APPLICATION:**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterisation: Solvent based polyurethane (single pack) incorporating MDI based prepolymer and trimethylbenzene isomers with aluminium flake phthalocyanine blue pigment.

Substances presenting a health hazard	Diphenylmethane 4,4' diisocyanate CAS Number 009016-87-9	15 - 20%
	Trimethyl benzene isomers CAS Number 0000-95-63-6	27 - 32%

3. HAZARDS IDENTIFICATION

Physical and Chemical Hazards / Fire and Explosion Hazards:**Main Hazards:** Harmful. Respiratory sensitizer. Flammable.**Eyes:** Liquid and vapour may irritate the eyes.**Skin:** Material may cause irritation. Repeated and/or prolonged contact may lead to dermatitis and possible long-term effects. May be absorbed through the skin.**Inhalation:** Inhalation of vapour may cause irritation to nose, throat and respiratory tract. Possible long-term effects.**Ingestion:** Swallowing may cause irritation to mouth, throat and digestive tract.

4. FIRST AID MEASURES

- Inhalation:** Remove to fresh air. If breathing is irregular seek medical attention.
- Skin Contact:** Remove any contaminated clothing, flush area with water, wash affected area thoroughly with soap and water. Do not use solvents.
- Eye Contact:** Irrigate thoroughly with plenty of water for at least 10 minutes. Seek medical attention if soreness or redness persists.
- Ingestion:** Wash out mouth with water. Do not induce vomiting. Seek medical advice.

5. FIRE FIGHTING MEASURES

- Fire-Fighting Procedures:** Suitable extinguishing media are water spray, dry powder, foam, carbon dioxide. **DO NOT USE WATER JET.**
- Special Fire Precautions:** In event of fire, fire fighters to use chemical cartridge respirator / self contained breathing apparatus.
- Hazardous Combustion Products:** Possible products of thermal degradation include carbon dioxide, peroxides, carbon monoxide, hydrocarbons, acrolein, amine, nitrogen oxides, hydrogen cyanide. Respiratory protection is required for fire fighting personnel.

6. ACCIDENTAL RELEASE MEASURES

- Land Spill:** Absorb or contain spilled liquid using sand, earth or suitable absorbent material and remove to safe place for subsequent disposal.
- Water Spill:** Avoid discharge to drains or watercourses.
- General:** Avoid contact with eyes and skin and inhalation of vapours. Eliminate all sources of ignition. Shut off leaks **IF WITHOUT RISK.**

7. HANDLING AND STORAGE

- Handling:** The application of solvent based polyurethane materials presents a potential health risk. This risk may be controlled to an acceptable level by the application of suitable control measures and working practices (refer to section 8). These will vary in their magnitude and complexity, dependant upon the method of application and the time the operator is in contact with the materials. When spraying it is essential that operators are properly trained (to reduce over - spraying and ricochet, for example) and are aware of the potential risks of this activity.

Material is flammable - keep away from sources of ignition.

Avoid contact with eyes and skin.

Areas should be well ventilated. Consideration should be given to local exhaust ventilation (LEV) and suitable respiratory protective equipment.

Isolate area. Use a spray booth whenever possible. This guidance extends only to the application of the material. Surface preparation, burning off, chemical stripping finishing operations and cleaning implements may also present significant health risks.
- Sanding/Grinding Of Cured Material:** Use suitable respiratory dust protection.
- Storage:** Store away from naked flames/sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits: MEL Isocyanates (asNCO) 0.02mg/m³ (8hr TWA) 0.07mg/m³ (15 min STEL)
 OES Trimethyl Benzene 123mg/m³ (8hr TWA)

Personal Protection:

Respiratory : Suitable respiratory protective equipment should be used, especially in enclosed areas.

Skin: Operators handling the material must wear protective gloves. The application of a suitable barrier cream to exposed area of skin prior to commencement of the work may be useful.

Eye: Operators should wear suitable eye protection (ie, goggles or eye shields) to protect the eyes from splashes of liquid, spray etc.

Other : Practice good standards of personal hygiene. Avoid the use of harsh solvents to wash hands, use normal soap and water.

Operators should report promptly any adverse or unusual skin conditions or any breathing difficulties.

Potentially exposed employees require health surveillance (medical assessments).

9. PHYSICAL AND CHEMICAL PROPERTIES

Indicative Values Only:

Physical State: Low viscosity liquid

Form/Colour: Blue tint aluminium

Odour: Solvent

pH: N/A

Freeze/Melt/Point: >0°C

Boiling Point Range: Approx 155°C

Flashpoint: Approx 40°C

Autoignition Temperature: >400°C

Explosive Limits: Approx 1-10% (v/v) in air

Density: Approx 1.1

Solubility in Water: Insoluble

Flammability: Flammable

Vapour Pressure: 0.194 KPa (C6 hydrocarbon)

Oxidising Properties: May form peroxides

PLEASE NOTE THAT THESE PROPERTIES DO NOT CONSTITUTE A SPECIFICATION

10. STABILITY AND REACTIVITY

Hazardous Polymerisation: None.

Stability: Stable.

Materials to Conditions to Avoid: Sources of heat/ignition. Naked flames, water contamination will produce pressure build-up in closed containers.

Hazardous Decomposition to Avoid: None.

11. TOXICOLOGICAL INFORMATION

This material contains isocyanates. The nature of the effects of exposure to isocyanates will depend upon the degree of exposure and on the individual concerned. Some individuals will experience only relatively mild symptoms, ie, irritation or hay-fever like symptoms, others may develop asthma. Common symptoms include irritation, dry throat, cough, wheezing and shortness of breath. This may occur immediately on exposure or, more commonly several hours later. Some individuals may become sensitized; once sensitized exposure to even low levels (even levels below MEL) can result in the onset of the above symptoms.

12. ECOLOGICAL INFORMATION

Do not allow to escape into waters, waste water or soil. The material reacts with water at the interface forming CO₂ and a solid insoluble product.

13. DISPOSAL RECOMMENDATIONS

Consult an expert on disposal and ensure conformity with local regulations. Treat as 'special' waste.

14. TRANSPORT INFORMATION

Classification: Flammable liquid
UN 1263; IMDG Class 3.3; Packing Group III

Land:

Sea:

Air:

Tremcard (Road):

15. REGULATORY INFORMATION

Label according to UK Chemicals (Hazard Information and Packaging Supply) Regulations 1994.

Indication of Hazard: HARMFUL, FLAMMABLE

R10: Flammable

R20: Harmful by inhalation

R36/37/38: Irritating to eyes, respiratory system and skin.

R42: May cause sensitization by inhalation.

S23: Do not breathe vapour or spray.

S24/25: Avoid contact with skin and eyes.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S38: In case of insufficient ventilation, wear suitable respiratory equipment.

16. OTHER INFORMATION

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If you are an employer, it is your duty to tell your employees and others who may be affected of any hazards described in this sheet and any precautions which should be taken.



PRODUCT SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY	
NAME OF SUPPLIER Catomance Technologies Ltd	Sheet 1 of 4 Last Revision Date: January, 03
ADDRESS 4 Caxton Place, Stevenage, Herts, SG1 2UF.	
Business Telephone No: 01438 360747	Fax No: 01438 360748
PRODUCT NAME: Emcol Skid Resist Pack A	
PRODUCT TYPE: Light Brown Liquid	
APPLICATION:	
2. COMPOSITION/INFORMATION ON INGREDIENTS	
Diisocyanato diphenylmethane (MDI) based composition	
EEC No: 202-966-0	
Hazard Symbol: Xn	
R-Phrases: 20, 36/37/38,42	
S-Phrases: 22, 26, 28, 38, 45	
3. HAZARDS IDENTIFICATION	
Physical and Chemical Hazards / Fire and Explosion Hazards:	
Harmful by Inhalation This product is a respiratory irritant and potential respiratory sensitiser; repeated inhalation of vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitisation. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentration of MDI may develop in sensitised person.	
4. FIRST AID MEASURES	
Inhalation:	Remove patient from exposure, keep warm and at rest. Obtain medical attention. Treatment is symptomatic for primary irritation or bronchospasm.
Skin Contact:	Wash immediately with water, followed by soap and water. If symptoms persist obtain medical attention. Contaminated clothing should be thoroughly cleaned.
Eye Contact:	Irrigate immediately with eyewash solution or clean water holding the eyelids apart for at least ten minutes. Obtain medical attention.
Ingestion:	Provided the patient is conscious, wash our mouth with water and give 200 to 300ml (half a pint) of water to drink. Do not induce vomiting. Obtain medical attention.
Further Medical Treatment:	Symptomatic treatment and supportive therapy as indicated

5. FIRE FIGHTING MEASURES

Fire-Fighting Procedures: Suitable respiratory protection with full face piece and positive air supply. PVC boots, gloves and protective clothing should be worn. Foam, CO2, Dry Powder to be used. Water may be used if no other extinguishing medium is available and then in copious quantities. (Reaction between water and hot isocyanate may be vigorous.)

Special Fire Precautions: Not classed as flammable.
If involved in a fire it may emit noxious and toxic fumes.

Due to reaction of water producing CO2 gas a hazardous build up of pressure could result if contaminated containers are re-sealed.

6. ACCIDENTAL RELEASE MEASURES

Land Spill: Clean up should only be performed by trained personnel. People dealing with major spillages should wear full protective clothing including respiratory protection. The area should be evacuated. Further leakage or spillage should be prevented. Large spillages should be contained and absorbed onto an inert non-flammable absorbent carrier. This material should then be shovelled into an open topped drums or plastic bags for further decontamination. The contaminated area should be cleaned with liquid decontaminant, residues removed and disposed of in accordance with local regulations.

Water Spill: As above (as appropriate). Every measure to be taken to avoid entry into drains.

7. HANDLING AND STORAGE

Handling: Provide adequate ventilation, including appropriate local extraction to ensure that the defined occupational exposure limit is not exceeded. The efficiency of the ventilation must be monitored regularly because of the possibility of blockage. Keep stocks of decontaminant readily available.

Storage: Keep containers properly sealed and store indoors in a well ventilated area. Keep away from moisture.

Due to a reaction with water producing CO2 gas a hazardous build up of pressure could result if contaminated containers are re-sealed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal Protection: Suitable respiratory equipment with positive air supply should be used in cases of insufficient ventilation or where operational procedures demand. Protective goggles to be worn (full face shield if possibility of splashing) Neoprene or butyl rubber gloves and overalls (preferably heavy cotton) to be worn.

Occupational Exposure Limits: Isocyanates, all (as - NCO)
(Diphenylmethane 4,4: Diisocyanate)

L TEL 8hr TWA mg/m ³	STEL mg/m ³	Time mins
0.02	0.07	- MEL Sen

9. PHYSICAL AND CHEMICAL PROPERTIES

Indicative Values Only:

Physical State:	Liquid
Form / Colour:	Brown
Odour:	Earthy
pH:	N/A
Freeze / Melt / Point:	N/A
Boiling Point Range:	N/A
Flash Point:	200-250
Vapour Pressure (mm Hg):	< 0.0003 (at 25°C)
Auto-ignition Temperature:	
Explosive Limits:	
Density:	
Specific Gravity:	
Solubility in Water:	Reacts with water
Solubility in Others:	Most organic solvents: Soluble

PLEASE NOTE THAT THESE PROPERTIES DO NOT CONSTITUTE A SPECIFICATION

10. STABILITY AND REACTIVITY

Stability:	Stable at room temperature.
Materials and Conditions to Avoid:	Reaction with water (moisture) produces CO2 gas, exothermic reaction with materials containing active hydrogen groups, see Fire and Explosion Hazards.
Hazardous Decomposition Products:	Highly unlikely in normal industrial use.

11. TOXICOLOGICAL INFORMATION

This information is based on consideration of the composition of the product.

Skin Contact:	Moderate irritant. Repeated or prolonged contact may cause skin sensitisation. Animal studies have shown that respiratory sensitisation can be induced by skin contact with diisocyanates. These results emphasise the need for protective clothing including gloves to be worn at all times when handling these chemicals or in maintenance work.
Eye Contact:	The vapour and liquid are irritants.
Inhalation:	This product is a respiratory irritant and potential respiratory sensitiser; repeated inhalation of the vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitisation. Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty of breathing. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitised persons. Median Lethal Concentration (4 hrs) (aerosol) 370mg per m3 (rat).
Ingestion:	Low oral toxicity. Ingestion may cause irritation of the gastro-intestinal tract. Oral Median Lethal dose > 5000mg/kg (RAT).
Long Term Exposure:	There are reports that chronic exposure by inhalation may result in permanent decreases in lung function. Rats have been exposed for two years to an aerosol of polymer MDI which resulted in chronic pulmonary irritation at high concentration. Prolonged irritation leads to the formation of tumours in the lungs of a small proportion of the rats exposed to 6mg/m3. There are no tumours at 1mg/m3 and no effects at 0.2mg/m3. In the absence of prolonged high exposure leading to chronic irritation and lung damage, it is highly unlikely that tumours could occur, although these results reinforce the need to observe the recommended safety precautions and occupational exposure limit when working with MDI.

PRODUCT NAME Emcol Skid Resist Pack A

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12. ECOLOGICAL INFORMATION

It is unlikely that a significant environmental exposure in the air or water will arise. The product is immiscible water but will react with water to produce inert and non-biodegradable solids.

13. DISPOSAL RECOMMENDATIONS

The generation of waste should be avoided or minimised wherever possible.

Disposal should be in accordance with local, state or regional legislation. Untreated material is not suitable for disposal. Waste, even small quantities, should never be poured down drains, sewers or watercourses. Small quantities and empty drums, pre-treat with decontaminant or waste polyol to neutralise prior to disposal. Large quantities - destruction by controlled pyrolysis with scrubbing and neutralisation of the vapours, using incinerators specifically designed for the destruction of noxious chemical waste.

14. TRANSPORT INFORMATION

General: The UN committee of Experts on the Transport of Dangerous Goods. Deleted UN 2489. Diphenylmethane - 4,4 diisocyanate from class 6.1. at the 18th Session, 28 November - 7 December 1994.

It will take time for the various national and international authorities to implement this change in their regulations. Refer to transport documentation for the current situation.

Air Transport: IATA - Class 6.1, Group III.

15. REGULATORY INFORMATION

EEC Classification: HARMFUL

Hazard Symbol: Xn

Risk Phrases: R20: Harmful by inhalation
R36/37/38: Irritating to eyes, respiratory system and skin.
R42: May cause sensitisation by inhalation.

Safety Phrases: S22: Do not breath dust.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek Medical advice.
S28: After contact with skin wash immediately with plenty of warm soapy water.
S38: In case of insufficient ventilation, wear suitable respiratory equipment.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

16. OTHER INFORMATION

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PRODUCT SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

NAME OF SUPPLIER
Catomance Technologies Ld

Sheet 1 of 4
Last Revision Date: January, 03

ADDRESS
4 Caxton Place, Stevenage, Herts, SG1 2UF.

Business Telephone No: 01438 360747

Fax No: 01438 360748

PRODUCT NAME: Emcol Skid Resist Pack B
PRODUCT TYPE: White opaque Liquid
APPLICATION:

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance incorporating branched polyalcohol with ester and ether groups

3. HAZARDS IDENTIFICATION

Not hazardous.

PRODUCT NAME Emcol Skid Resist Pack B

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Last revision date: January, 03

4. FIRST AID MEASURES

Inhalation:

Skin Contact: Wash immediately with plenty of water and soap, remove contaminated clothing and shoes (and wash before re-use), grease skin, seek medical advice.

Eye Contact: Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice.

Ingestion: If swallowed seek medical advice immediately, induce vomiting (remove stomach contents by gastric suction as directed by medical personnel).

5. FIRE FIGHTING MEASURES

Fire-Fighting Procedures: Foam, CO₂, dry solvent, water or water haze to be used.

Special Fire Precautions: May generate carbon monoxide gas, toxic, irritating or flammable combustion products. Fire fighters should wear butile rubber boots, gloves and body suit and use self-contained breathing apparatus.

Retain residual materials from fire fighting for later disposal.

6. ACCIDENTAL RELEASE MEASURES

Land Spill: Spill to be contained and absorbed on to an inert non-flammable absorbent carrier. The material to be disposed of in accordance with local regulations.

Water Spill: Contamination to be removed by trained personnel. Every measure to be taken to avoid entry into drains, watercourses or water table.

7. HANDLING AND STORAGE

Masks and gloves to be worn when handling material.

Do not store in copper or copper alloy vessels.

Always store under dry conditions and away from direct sunlight.

Storage stable for 6 months.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Avoid contact with skin or eyes and wear mask and gloves and appropriate protective clothing.

PRODUCT NAME Emcol Skid Resist Pack B B

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9. PHYSICAL AND CHEMICAL PROPERTIES

Indicative Values Only:

Physical State: Liquid
Form / Colour: Opaque, White
Odour: Slight smell
pH:
Freeze / Melt / Point:
Boiling Point Range:
Flash Point:
Vapour Pressure (mn Hg):
Auto-ignition Temperature: < 200°C
Explosive Limits:
Density:
Specific Gravity:
Solubility in Water: Insoluble
Solubility in Others:

PLEASE NOTE THAT THESE PROPERTIES DO NOT CONSTITUTE A SPECIFICATION

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Decomposition Products: Non Known

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity (LD 50): > 5000mg/kg (rats)-14 days observation.
Skin and Mucous membrane tolerant
Rabbit skin 24 hours exposure: Without result.
Rabbit Eyes: Without result.

12. ECOLOGICAL INFORMATION

No data.

Comply with the requirements of section 6 (accidental relation measures)

13. DISPOSAL RECOMMENDATIONS

Dispose of in accordance with local authority regulations.

PRODUCT NAME Emcol Skid Resist Pack B

Sheet 4 of 4

Last revision date: January, 03

14. TRANSPORT INFORMATION

Land: Not Classified

Sea: Not Classified

UN No: Not applicable

15. REGULATORY INFORMATION

EEC Symbol: None, not labelled as dangerous according to rules and criteria and EC directives.

16. OTHER INFORMATION

The data and advice given apply when the product is sold for the stated application or applications. The product is not sold as suitable for any other application. Use of the product for other applications other than stated in this sheet may give rise to risks not mentioned in this sheet. You should not use the product other than for the stated application or applications without seeking advice from us.

If you have purchased the product for supply to a third party for a use at work, it is your duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet.

If you are an employer, it is your duty to tell your employees and others who may be affected of any hazards described in this sheet and any precautions which should be taken.



PRODUCT SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

NAME OF SUPPLIER

Catomance Technologies Ltd

Sheet 1 of 4

Last Revision Date: January, 03

ADDRESS

4 Caxton Place, Stevenage, Herts, SG1 2UF.

Business Telephone No: 01438 360747

Fax No: 01438 360748

PRODUCT NAME: Emcol Skid Resist Pack C

PRODUCT TYPE: Mixture of Solid Powders

APPLICATION:

2. COMPOSITION/INFORMATION ON INGREDIENTS

A blend of fillers including Silica Sand. A typical analysis as follows:-

SiO ₂	69.60-82.50%
Fe ₂ O ₃	0.49-0.70%
Al ₂ O ₃	3.30-5.10%
K ₂ O/Na ₂ O	0.06-0.48%
CaO	0.02-0.12%
BaSO ₄	12.60-13.00%
CaCO ₃	Up to 0.1%
Ferric Oxide	Trace
Water Soluble Salts	Trace

In addition the following trace metal elements are present:-

<u>Chemical Name</u>	<u>av. (ppm)</u>	<u>max. (ppm)</u>
Lead	<2	<2
Cadmium	<1	<1
Chromium	<1	<1
Nickel	<1	<1
Copper	1	3
Manganese	2	5
Zinc	<1	<1
Barium	4	5
Arsenic	<2	<2
Selenium	<1	<1
Mercury	<1	<1
Antimony	<2	<2

The above figures represent the average and maximum recorded in the case of each element.

PRODUCT NAME	Emcol Skid Resist Pack C	Sheet 2 of 4 Last revision date: January, 03
3. HAZARDS IDENTIFICATION		
Physical and Chemical Hazards / Fire and Explosion Hazards:		
Small quantities of respirable Silicon may be produced when used. This constitutes a health hazard and great care should be exercised. Particular attention should be paid to the avoidance of inhaling dust. May cause minor eye and skin irritation. May cause a cough and mild respiratory irritation.		
4. FIRST AID MEASURES		
Inhalation:	Remove from Exposure	
Skin Contact:	Remove from skin by washing thoroughly with soap and water. If irritation persists seek medical advice.	
Eye Contact:	Wash eyes with copious quantities of water. If irritation persists seek medical advice.	
Ingestion:	Drink plenty of water and seek medical advice.	
5. FIRE FIGHTING MEASURES		
Fire-Fighting Procedures:	None	
Special Dire Precautions:	None	
Hazardous Combustion Products:	None	
6. ACCIDENTAL RELEASE MEASURES		
Land Spill:	Avoid dry sweeping and use water spray or ventilated vacuum systems to comply with critical Silica Concentrations.	
	Certain components can be classed as a nuisance particulates with no special hazard. Exposure should however be controlled to the minimum that is reasonably practical and should not exceed 10mg/m 8hr twa inhaleable dust.	
Water Spill:		
7. HANDLING AND STORAGE		
No special precautions other than keep product dry.		
8. EXPOSURE CONTROLS/PERSONAL PROTECTION		
General:	Avoid creating dust.	
Personal Protection:	Eye protection complying with BS2092 should be worn. Overalls and gloves advised to give protection against dust. Wash hands before breaks, at the end of work, before eating and smoking.	

PRODUCT NAME

Emcol Skid Resist Pack C

Sheet 3 of 4

Last revision date: January, 03

9. PHYSICAL AND CHEMICAL PROPERTIES

Indicative Values Only:

Physical State: Solid Powder / Granules
Form/Colour: Solid Cream to Light Brown
Odour: None
pH:
Freeze/Melt/Point:
Boiling Point Range: N/A
Flashpoint: N/A
Autoignition Temperature: N/A
Explosive Limits: N/A
Density:
Specific Gravity:
Solubility in Water: Insoluble

PLEASE NOTE THAT THESE PROPERTIES DO NOT CONSTITUTE A SPECIFICATION

10. STABILITY AND REACTIVITY

Hazardous Polymerisation: None
Stability: Good
Materials and Conditions to Avoid: Water
Hazardous Decomposition Products: None

11. TOXICOLOGICAL INFORMATION

N/A

12. ECOLOGICAL INFORMATION

N/A

13. DISPOSAL RECOMMENDATIONS

Inert, disposal in accordance with local regulations.

14. TRANSPORT INFORMATION

Land:

Sea: Not Classified

Air:

Tremcard (Road):

PRODUCT NAME

Emcol Skid Resist Pack C

Sheet 4 of 4

Last revision date: January, 03

15. REGULATORY INFORMATION

Not regulated.

16. OTHER INFORMATION

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