1. Identification

Product Name & Synonyms: **ProCell S4 Part B**
Product Supplier: Mouldlife Ltd.
Miro House
Western Way (West)
Bury St Edmunds
Suffolk
IP33 3SP
Telephone Contact No.: 01638 750 679

2. Composition and Ingredients

Chemical Nature: Aromatic Di-isocyanate

Name	Content	CAS #	Classification
Modified Diphenylmethane diisocyanate (MDI), mixture of isomers,	>25%	000101-68-8	R20 - Harmful by inhalation R36/37/38 - Irritating to eyes, respiratory system, and skin. R42 - May cause sensitisation by inhalation.
Modified MDI	5-25%	005873-54-1	

3. Hazards Identification

Harmful by inhalation
Irritating to eyes, respiratory system, and skin.
May cause sensitisation by inhalation.

Other Information:
Vapour hazard is low at room temperature. If heated or sprayed high concentrations can be attained that could be hazardous on single exposure and may cause irritation of upper respiratory tract and lungs. Exposure to vapour may cause sensitisation in susceptible individuals. Contact with eyes may cause irritation with corneal injury. Prolonged or repeated skin contact may cause irritation and sensitisation. Oral LD50 is low however ingestion may cause severe burns of mouth and throatp

4. First Aid Measures

General Measures: Soiled, soaked clothing and shoes must be immediately removed, decontaminated and disposed of.
Inhalation: Remove to fresh air and allow to rest. If not breathing give artificial respiration. Obtain medical attention and keep under observation for up to 48 hours as effects can be delayed
Skin Contact: Wash contaminated area with soap and water. Use skin cream to prevent dryness. Launder contaminated clothing. If symptoms develop obtain medical attention.
Eye Contact: Flush immediately with water for 10-15 minutes prising eyelids open with fingers. Seek medical attention immediately.
Ingestion: If patient is conscious, wash out mouth with water and give 500mL (half a pint) of water to drink. Do not induce vomiting. Seek immediate medical attention.

5. Fire Fighting Measures

Extinguishing Media:-

Suitable: Foam, carbon dioxide or dry powder. Larger fires: Water spray, fog or mist.
Extinguishing media which must not be used: Water as jet.
Special protective equipment for Wear self-contained breathing apparatus and protective suit.

fire-fighters:

Specific Hazards: If heated, volume and pressure increases strongly, resulting in explosion of container. Prolonged exposure to heat may lead to formation of toxic gases. Do not allow contaminated extinguishing water to enter the soil, ground-water or surface waters.

6. Accidental Release Measures

Personal Precautions: Put on protective equipment (see chapter 8). Ensure adequate ventilation/exhaust extraction. Keep unauthorized persons away.

Environmental Precautions: Do not allow to enter drains or watercourses. Collect and dispose of spillages as indicated in section 13.

Clean-Up Procedures: Remove mechanically; cover the remainder with wet, absorbent material (e.g. sawdust, chemical binder based on calcium silicate hydrate, sand). After approx one hour transfer to waste container and do not seal (evolution of CO2!). Keep damp in a safe ventilated area for several days.

7. Handling and Storage

Handling Precautions: Provide sufficient air exchange and/or exhaust in work rooms. Exhaust ventilation necessary if product is sprayed. In all areas where isocyanate aerosols and/or vapor concentrations are produced in elevated concentrations, exhaust ventilation must be provided in such a way that the workplace exposure limits (WEL) is not exceeded. The air should be drawn away from the personnel handling the product The personal protective measures described in Chapter 8 must be observed.

The precautions required in the handling of isocyanates must be taken. Avoid contact with skin and eyes and the inhalation of vapor.

Storage Precautions: Keep away from food, drink and animal feeding stuffs. Keep container tightly closed. Keep at temperatures between 2 and 40°c.

Storage Hazard Class: Keep container dry and tightly closed in a cool and well ventilated place. Further information on the storage conditions which must be observed to preserve quality can be found in our product information sheet.
VCI storage class (VCI = German Association of the Chemical Industry): 6.1AL

8. Exposure Controls

Name	Basis	Type	Value	Ceiling Limit Value	Remarks
dicyclohexylmethane-4,4'-diisocyanate	EH40 WEL	TWA	0.02 mg/m3		Measured as NCO
dicyclohexylmethane-4,4'-diisocyanate	EH40 WEL	STEL	0.07 mg/m3		Measured as NCO

Engineering Measures: All handling to take place in well-ventilated area. Provide adequate general and local exhaust ventilation.

Respiratory Equipment: Respiratory protection required in insufficiently ventilated working areas and during spraying. An air-fed mask, or for short periods of work, a combination of charcoal filter and particulate filter is recommended.

In case of hypersensitivity of the respiratory tract and skin (e.g. asthmatics and those who suffer from chronic bronchitis and chronic skin complaint) it is inadvisable to work with the product.

Hand Protection: Suitable materials for safety gloves; EN 374-3:
Butyl rubber - IIR: thickness >=0,5mm; breakthrough time >=480min.

	Fluorinated rubber - FKM: thickness >=0,4mm; breakthrough time >=480min. Nitrile rubber - NBR: thickness >=0,35mm; breakthrough time >=480min. Suitability of a glove is dependant on usage. Always seek advice from glove suppliers before using these materials.
Eye Protection:	Tightly fitting safety goggles/face-shield.
Other Protection:	Wear protective suit. Wear Safety shoes or boots.
Hygiene Measures:	Keep away from foodstuffs, drinks and tobacco. Wash hands before breaks and at the end of workday. Keep working clothes separately. Take off all contaminated clothing immediately.

9. Physical and Chemical Properties

Appearance:	Thin, Amber Liquid	**Colour:**	Amber
Odour:	Slight inherent odour		
Flash Point:	>200°c (Closed cup)		

10. Stability and Reactivity

Materials to avoid:	Exothermic reaction with amines and alcohols; reacts slowly with water forming CO2, in closed containers risk of bursting owing to increase of pressure.
Hazardous decomposition products:	No hazardous decomposition products when stored and handled correctly.

11. Toxicological Information

Acute Oral toxicity: LD50 Rat : Dose >5000mg/kg

12. Ecological Information

Reaction with water produces insoluble polyurea, which is estimated from static laboratory conditions to have a low level of biodegradation. This material is estimated to be practically non-toxic to fish, Daphnia and bacteria on a static acute basis.

13. Disposal Considerations

General Advice: Dispose in accordance with applicable international, national and local laws, ordinances and statutes. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used. After final product withdrawal, all residues must be removed from containers (drip-free, powder free or paste-free). Once the product residues adhering to the walls of the containers have been rendered harmless, the product and hazard labels must be invalidated. These containers can be returned for recycling to the appropriate centres set up within the framework of the existing take back scheme of the chemical industry. Containers must be recycled in compliance with national legislation and environmental regulations.

14. Transport Information

Proper Shipping Name: DIPHENYLMETHANE-4,4-DIISOCYANATE

15. Regulatory Information

Supply Label Information:

HARMFUL

Risk Phrases:	R20	Harmful by inhalation
	R36/37/38	Irritating to eyes, respiratory system and skin
	R42	May cause sensitisation by inhalation
Safety Phrases:	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 water and soap
	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 this label where possible).
Other:	Contains isocyanates. See information supplied by manufacturer.	

16. Other Information

Training advice:

Please read all datasheets carefully. If any point remains unclear or if further training is required please contact Atlas Polymers Limited.

Recommended uses and restrictions:

Isocyanate component for two-part polyurethane in conjunction with a polyol. No other use recommended.

Further information sources:

Please refer to the Safety Data Sheet for the accompanying polyol for further information.

Sources of key data used to compile this SDS:

Raw material data. Occupational Exposure Limits 1997. Guidance Note EH40/98. Approved Supply List (CHIP Regulations 1996).

This Safety Data Sheet has been prepared and supplied in accordance with the **Chemicals (Hazard Identification and Packaging) Regulations 1994** as amended for use by persons capable of understanding the information contained herein for the protection of the health and safety of users.

It is therefore important that this data sheet is passed to the appropriate person so that the information may be acted upon if necessary.

NOTE: This SDS has been prepared from information we believe to be reliable, however it is provided without warranty, expressed or implied, as to its correctness. Since the conditions of handling, storage, use and disposal of this material are beyond our control we accept no responsibility whatsoever for any loss, damage or expense which results from the handling, storage, use or disposal of this material.