DIVERSE URETHANES

PRODUCT DATA SHEET

CC PG 40
POLYOL BLEND FOR COLD CURE ELASTOMER CASTING

1. INTRODUCTION

CC PG 40 is a polyether based polyol which, when reacted with MDI 30, yields a medium performance elastomer of 30 - 40 Shore A hardness with good hydrolytic stability.

CC PG 40 contains various additives which aid the processing of the material, and contribute to the physical properties of the cured elastomer.

2. APPLICATIONS

CC PG 40 is suitable for use in hand-mixing applications where a relatively soft, flexible elastomer is required for a non-arduous application.

3. CONSIDERATIONS

As with all polyurethane products, the product should not be exposed to very strong acids or bases. The highest temperature at which the product should be used is 80 - 85°C in order to maintain the full physical properties. The material can tolerate short period temperature increases up to approximately 120°C without permanently impairing any of the physical properties.

During processing, the material will experience up to 2% shrinkage due to the heat of the reaction.

4. CC PG 40 PHYSICAL PROPERTIES

Appearance	:	Clear liquid	
Viscosity at 25°C (cps)	:	800 - 1100	ASTM D1638
Specific gravity at 25°C	:	1.1 - 1.2	

5. MDI 30 PHYSICAL PROPERTIES

Appearance	:	Dark brown liquid
Viscosity at 25°C	:	150 - 250
Specific gravity at 25°C	:	1,22

6. ELASTOMERS

The following range of physical properties will be obtained from CC PG 40 when reacted with MDI 30 at 95% stoichiometry and subjected to the correct post curing cycle.

CC PG 40 at ˜25°C	:	100 parts
MDI 30 at ˜25°C	:	22 parts

The mix ratio is calculated by weight.

Pot Life (minutes) at 23°C	:	3 - 5
Demould (minutes)	:	16 - 15 minutes
Hardness Shore A	:	30 - 40
Gel Time (minutes)	:	3 - 4 for 100g mix
Elongation (%)	:	180
100% Modulus (Mpa)	:	1.06
Tensile Strength (MPa)	:	1.2
Tear Strength (N/mm)	:	4.5

7. PROCESSING

7.1 Weigh out the components in the correct ratio and mix together thoroughly without entraining air.

7.2 Pour the mixture into moulds which have been located with a suitable release agent. The temperature of the moulds prior to costing should be ˜30°C.

7.3 Allow the mixture to gel and partially cure in the mould. The time required for this operation will vary according to mould design and size, but will be in the region of 10 - 15 minutes.

7.4 Demould the finished piece and post cure at ambient temperature overnight. Optimum properties are attained after a further seven days at room temperature.

8. PACKAGING

Standard packs consist of 25 kg Plastic drums. Larger packs are available on request.

9. SHELF LIFE

Six months minimum in sealed undamaged drums stored at ambient temperatures. Prolonged or repeated heating of the material will accelerate decomposition. Partly used containers should be resealed immediately after use.

10. HANDLING

10.1 CC PG 40

CC PG 40 does not represent a significant health hazard to users under normal conditions of industrial exposure.

10.2 MDI 30

MDI 30 is an isocyanate containing material and normal standards of industrial hygiene should be observed during its handling. Safety goggles, gloves and overalls should be worn, and the material should preferably be used in a well ventilated area. Inhalation of its vapours should be avoided.

11. FIRST AID MEASURES

11.1 CC PG 40

In the case of skin contact with CC PG 40, the affected area must be washed with soap and water. Eye contamination should be treat ed by rinsing with running water for at least 10 minutes. Seek medical assistance.

11.2 MDI 30

MDI 30 may be dermatitic and exhibit a low order of oral toxicity, however, since it is possible that certain individuals may be unusually sensitive to this material, it is recommended that all users wash thoroughly and avoid prolonged and repeated contact. Eye contamination, will cause severe irritation and pain. Immediate rinsing with water must be initiated and continued for at least 10 minutes. (See attached Safety Data Sheet). Seek medical assistance.

12. **FIRE**

Keep drums cool by spraying them with water if they are exposed to fire. Extinguish with dry chemical, foam, sand or water spray.

13. **SPILLAGES AND WASTE DISPOSAL**

13.1 **CC PG 40**

Drum as much as possible of the spill, and wash away the remains with copious amounts of water.

13.2 **MDI 30**

Decontamination can be affected by overnight contact with liberal amounts of a solution containing methanol (30 parts), water (70 parts), concentrated ammonia (1 part) and detergent (1 part). Drums should not be resealed until decontamination is complete. (See attached Safety Data Sheet on Details for Dealing with Larger Spills.)

13.3 **Waste Disposal**

Customers are advised to check their local, provincial or national legislation governing the disposal of waste material.

The information provided in this data sheet and otherwise supplied to users, is based on our general experience and upon tests which are believed to be reliable. However, because we have no control over the exact manner in which the information is used, we cannot guarantee the results to be obtained. Furthermore we make no express or implied warranty of merchantability or fitness of the product for a particular purpose.

MDI 30

SAFETY DATA SHEET

Chemical Family	:	Isocyanate
Product Type	:	Modified Polymeric MDI
Major Components	:	4,4 Diisocyanate diphenyl methane
Appearance	:	Dark Brown liquid
Boiling Point	:	>200°C
Vapour Pressure	:	$2{,}55 \times 10^{-5}$ mm Hg at 25°C
Specific Gravity	:	1,22
Flash Point	:	>205°C
Flammability Limits	:	-
Auto-ignition	:	>200°C

HEALTH HAZARD INFORMATION

Eyes	:	Irritation, causes watering and discomfort
Skin	:	Slight to mild irritation of the skin and in rare cases, dermatitis. Temporary brown skin discolouration may also occur. It may cause sensitisation.
Ingestion	:	Irritation and pain

FIRST AID

Eyes	:	Flush immediately with flowing water for at least 15 minutes and consult a physician.
Skin	:	Wash with flowing water.
Ingestion	:	Give large amounts of water and consult a physician. If vomiting occurs, follow with more water.

REACTIVITY DATA

Stability	:	Stable
Conditions to avoid	:	Water ingress

Hazardous Decomposition Products : Carbon Dioxide

SPILLAGES

Treat spillage with wet earth or sand. Leave material to react for 15 minutes. Shovel into bags.

WASTE DISPOSAL

Land tipping after consultation with local authority

PROTECTIVE EQUIPMENT

Eyes	:	Goggles
Gloves	:	PVC/Rubber
Overalls	:	Cotton