



DIVERSE URETHANES

PRODUCT DATA SHEET

CC PG 0138 HT

1. **INTRODUCTION**

CC PG 0138 HT is a formulated polyol blend which, when combined with MR 200 under the correct processing conditions, yields a high temperature resistant machinable polyurethane elastomer of 85 Shore D hardness.

2. **APPLICATIONS**

CC PG 0138 HT is suitable for the production of moulding dies as well as castings requiring high hardness and high heat stability.

3. **CONSIDERATIONS**

As with all polyurethanes, the product should not be exposed to very strong acids or bases. The highest temperature at which the product should be used is 120°C in order to maintain the full physical properties. The material can tolerate short periods of exposure to temperatures up to approximately 140°C without permanently impairing any of the physical properties.

During processing, the material will experience around 1% volume shrinkage due to the heat of reaction. It is imperative to store CC PG 0138 HT in a sealed container in order to prevent the absorption of atmospheric moisture which would cause the mixed product to foam.

4. **POLYOL PHYSICAL PROPERTIES : CC PG 0138 HT**

Appearance : Yellow liquid

5. **ISOCYANATE PHYSICAL PROPERTIES : MR 200**

Appearance : Dark brown liquid
Viscosity at 20°C : 230

6. **PROCESSING**

Mix ratio	:	100 Parts CC PG 0138 HT : 130 parts MR 200. By mass
Pot life at 20°C	:	3.5 – 4.5 minutes (200g casting)
Density at 20°C	:	1,05 - 1,15 gcm ³
Hardness (Shore D)	:	84 - 87 53505 DIN
Abrasion loss	:	411 mm ³

- 6.1 Stir polyol well before use. This material contains a desiccant which may settle out. Always replace the lid after use to exclude atmospheric moisture.
- 6.2 Mix components together thoroughly without entraining air.
- 6.3 Pour the mixture into preheated moulds (30 - 35°C) treated with a suitable release agent.
- 6.4 Demoulding may be carried out after 30 - 45 minutes.
- 6.5 Optimum properties are obtained after a further 24 hours at room temperature.

7. **PACKAGING**

5kg and 25kg drums.

8. **STORAGE**

8.1 **CC PG 0138 HT**

Should be stored in a dry environment at ambient temperatures.

8.2 **MR 200**

Should be stored at 20 - 30°C. Crystallisation may occur after prolonged storage at temperatures below 0°C. Should this take place, heat the material to 70 - 80°C to melt out, then agitate thoroughly to ensure homogeneity.

9. **HANDLING / TOXICITY**

9.1 **CC PG 0138 HT**

CC PG 0138 HT does not present a significant health hazard to users under normal conditions of industrial exposure.

9.2 **MR 200**

MR 200 is an MDI type isocyanate and is considered hazardous by inhalation. Avoid skin contact.

10. **FIRST AID MEASURES**

10.1 **CC PG 0138 HT**

CC PG 0138 HT is believed to be non-dermatitic and to exhibit a low order of oral toxicity. However, since it is possible that certain individuals may be unusually sensitive to these materials, it is recommended that all users wash thoroughly and avoid prolonged and repeated skin contact with the material. Eye contamination will cause severe irritation and pain. Immediate rinsing with water must be initiated and continued for at least 10 minutes.

10.2 **MR 200**

In the case of skin contact with MR 200, the affected area must be washed with soap and water. Eye contamination should be treated by rinsing with running water for at least 10 minutes. Seek medical assistance.

11. **FIRE**

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

12. **SPILLAGES AND WASTE DISPOSAL**

MR 200

Decontamination can be affected by overnight contact with liberal amounts of a solution containing methanol (30 parts), water (70 parts), concentrated ammonia (1 part). Drums must not be resealed until decontamination is complete. (See attached data sheet on details for dealing with larger spills.)

MR 200 is an isocyanate containing material and is considered hazardous by inhalation.

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 use.

The information contained in this data sheet is correct and accurate to the best of our knowledge but without warranty or liability.

MR 200**SAFETY DATA SHEET**

Chemical Family	:	Isocyanate
Product Type	:	Polymeric MDI
Major Components	:	4,4 Diisocyanate diphenyl methane
Appearance	:	Dark brown liquid
Boiling Point	:	>200°C
Vapour Pressure	:	<2,5 x 10 ⁻⁵ mm Hg at 25°C
Specific Gravity	:	1,24
Flash Point	:	>200°C
Flammability Limits	:	-
Auto-ignition	:	>200°C

HEALTH HAZARD INFORMATION

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

SAFETY DATA SHEET**CC PG 0138 HT****IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING**

Product Name : CC PG 0138 HT

COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT DESCRIPTION	POLYOL BLEND			
HAZARDOUS INGREDIENTS	CAS NO.	% (W/W)	SYMBOL	R PHRASES
POLYISOCYANATE POLYADDITION POLYOL	-	>50	Xi	R43

HAZARDS IDENTIFICATION

May cause sensitisation by skin contact.

FIRST AID MEASURES:

Inhalation : Remove patient from exposure

Skin contact : Wash immediately with water followed by soap and water. If symptoms (irritation or blistering) persist, obtain medical attention. Contaminated clothing should be laundered before re-issue.

Eye Contact : Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 10 minutes. Obtain medical attention.

Ingestion : Provided the patient is conscious, wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Do not induce vomiting.

Further Medical Treatment:

Symptomatic treatment and supportive therapy as indicated.

FIRE-FIGHTING MEASURES:

Not classed as flammable.
If involved in a fire, it may emit noxious and toxic fumes.

Extinguishing Media : Normal
Fire Fighting Protective Equipment : Full protective equipment including suitable respiratory protection.

ACCIDENTAL RELEASE MEASURES:

Ensure full personal protection during removal of spillages.
Absorb spillages onto sand, earth or any suitable absorbent material.
Transfer to a container for disposal.
Wash the spillage area clean with water and detergent.

HANDLING AND STORAGE

Handling : Avoid contact with skin
Storage : This material is hygroscopic. Avoid ingress of moisture by keeping containers properly sealed when not in use.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Wear suitable gloves and eye/face protection

Occupational Exposure Limits		LTEL 8 hr TWA		STEL	Time
Hazardous ingredients	ppm	mg/m ³	ppm	mg/m ³	mins.
No Occupational Exposure Limit Assigned.					

PHYSICAL AND CHEMICAL PROPERTIES:

Form : Liquid
Flash Point : > 100
(Deg C)

STABILITY AND REACTIVITY:

Hazardous Reactions : None
Hazardous Decomposition Products : None at ambient temperature

TOXICOLOGICAL INFORMATION:

This health hazard assessment is based on a consideration of the composition of this product:

Inhalation	:	Unlikely to be hazardous by inhalation because of the low vapour pressure of the material at ambient temperature.
Skin Contact	:	Slight/mild irritant. May cause sensitisation by skin contact.
Eye Contact	:	Slight-mild irritant
Ingestion	:	Low oral toxicity.

ECOLOGICAL INFORMATION:

No information available.

DISPOSAL CONSIDERATIONS:

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

Disposal should be in accordance with local, state or national legislation. Bury on an authorised landfill site or incinerate under approved controlled conditions using incinerators suitable for the disposal of noxious chemical waste.

TRANSPORT INFORMATION:

UN no.	:	--
UN Pack Group	:	--
AIR		
ICAO/IATA Class		
Primary	:	--
SEA		
IMDG Class		
Primary	:	--
ROAD/RAIL		
ADR/RID Class	:	--
ADR/RID Item No.	:	--
ADR SIN	:	--

REGULATORY INFORMATION:

EEC Classification	:	Irritant
Hazard Symbol	:	Xi
Risk Phrases	:	R43 : May cause sensitisation by skin contact.
Safety Phrases	:	S24 : Avoid contact with skin.