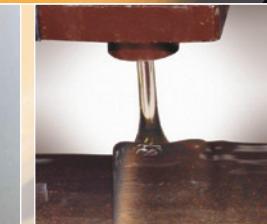


# ROLLERS

Polyurethanes for roller coating



## Introduction

Dow Formulated Systems, a global business unit of The Dow Chemical Company (Dow), is an industry leader in the development and formulation of fully-formulated polyurethane and epoxy systems, focused on providing its customers worldwide with innovative, tailor-made solutions through a global network of systems houses.

Dow Formulated Systems offers application development and processing support to help customers grow their business, with a range of innovative solutions for some of the most demanding industrial engineering applications.

With more than 40 years experience in the development of polyurethane elastomers our products are used internationally for wear and tear protection in automotive, mining, mineral extraction, material handling, offshore and industrial engineering applications.

Acting as interpreter between chemist and engineer, we adapt and use the versatility of chemistry to provide practical solutions to industrial applications. By working with Dow Formulated Systems, you'll have access to reliable service, creative polymer design, and the vast resources of one of the world's largest and most respected chemical companies.

Dow Formulated Systems has supplied DIPRANE™ and HYPERLAST™ polyurethane casting systems to the roller and materials handling industry for many years. Based on this experience and market knowledge, a range of rotational cast products - ROTAKOTE™ polyurethane elastomers, has been developed to complement the existing range of traditional cast products.

For a simple to use system, the MONOTHANE™ range of single component elastomers is offered.

The following information is provided as an overview on the products available and to assist you in product selection when considering your roller covering needs. This Product Selector Guide demonstrates the features and benefits of the available products, best suited for the manufacture of rollers.

Products available are:

**DIPRANE™**

MDI Polyester Systems

**DIPRANE™ T**

TDI Polyester Prepolymers

**HYPERLAST™**

MDI Polyether Systems

**HYPERLAST™ T**

TDI Polyether Prepolymers

**ROTAKOTE™**

Rotational Casting Polyurethanes

**MONOTHANE™**

Single Component Polyurethanes



## Castable Products

### Castable MDI Products

DIPRANE™ series	DIPRANE™ 530	DIPRANE™ 58	DIPRANE™ 300
Hardness Shore	45-95A	45-90A	55-95A
Process at ambient temperature	X	X	X
Hand Mix	•	•	•
Machine Process	•••	•••	•••
3 Component	•••	•••	•
Hydrolysis Resistance	•	•	•
Solvent Resistance	•	•	•••
Cold Flex Temperature	•	•	•
Abrasion Resistance	•••	•••	•
Dynamic Resilience	•••	•••	•
Tear Resistance	••	•••	•

HYPERLAST™ Series	HYPERLAST™ 101	HYPERLAST™ 151
Hardness Shore	60-95A	60A-55D
Process at ambient temperature	X	X
Hand Mix	••	••
Machine Process	•••	•••
3 Component	•••	•••
Hydrolysis Resistance	•••	•••
Solvent Resistance	X	X
Cold Flex Temperature	••	••
Abrasion Resistance	•	•••
Dynamic, resilience	•••	•••
Tear Resistance	••	••

### Castable TDI Products

	HYPERLAST™-T140	DIPRANE™-T240	MONOTHANE™
Shore Hardness	72A - 75D	57 - 90A	20 - 90°A
Hand Mix	•••	•••	•••
Hydrolysis Resistance	•••	••	••
Oil Resistance		••	••
Abrasion Resistance	•••	•••	••
Dynamic Resistance	•••	•••	••
Long Pot-Life	•	•	•••

••• Excellent

•• Very Good

• Good

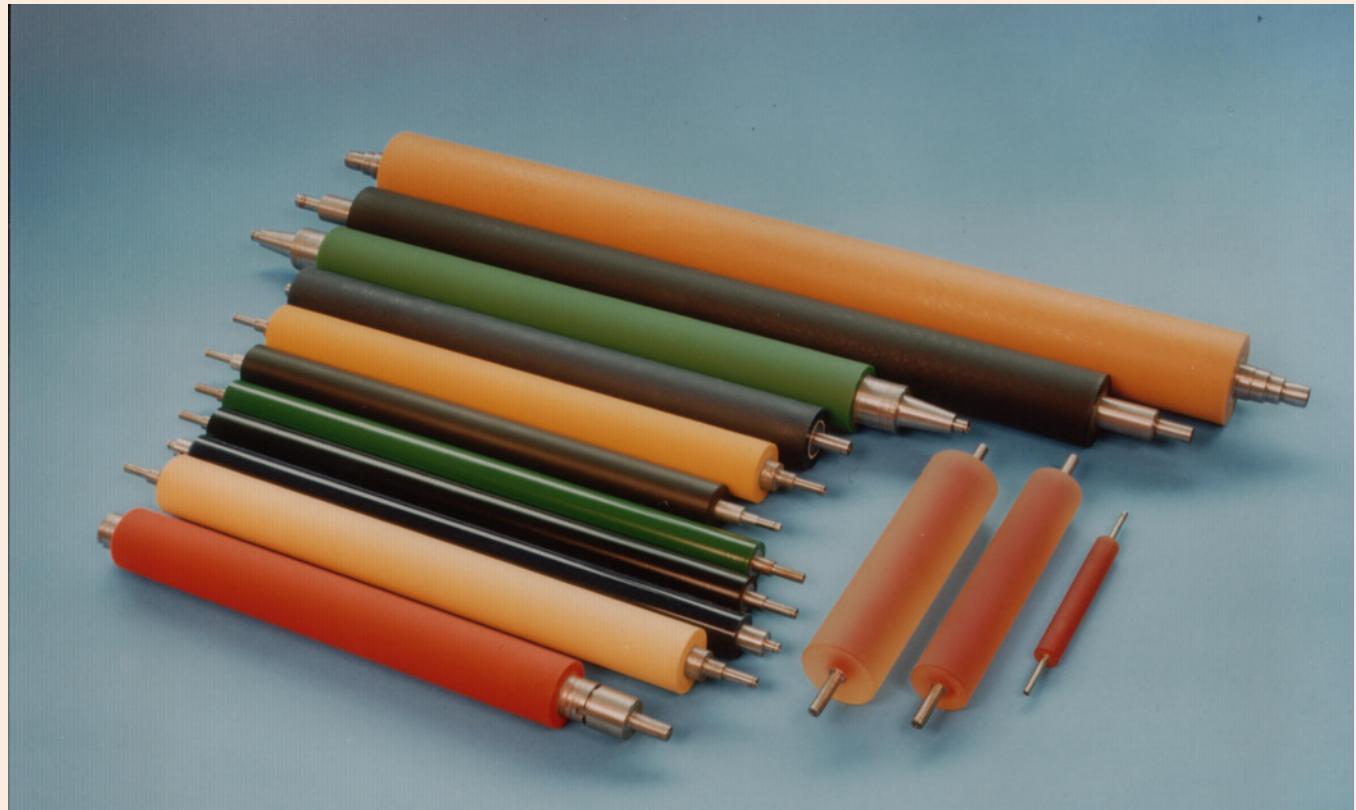
X not recommended

Refer to the Material Safety Data Sheet for Environmental, Health and Safety Information

## SINGLE COMPONENT SYSTEM

MONOTHANE™ single component polyurethanes offer the roller industry a product range that is simple to use - (Heat-Pour-Cure), and produces rollers that exhibit significant durability and performance in these demanding applications when compared to rubbers and other urethane systems.

One of the major problems in manufacturing vertically cast rollers is air entrapment. This can be addressed by using MONOTHANE™, which undergoes a low viscosity phase early on during the cure cycle, allowing air to escape.



Refer to the Material Safety Data Sheet for Environmental, Health and Safety Information

## ROTATIONAL CAST SYSTEM

### ROTAKOTE™ Range

Dow Formulated Systems has developed a range of rotational cast urethanes for the production of industrial material handling rollers such as used in the steel, paper, and timber industries.

The roll covers produced from ROTA KOTE™ polyurethane elastomers can give excellent dynamic and heat stability, while also offering excellent abrasion and hydrolysis resistance.

Advantages of Rotational cast rollers:

- Fast material preparation
- No mould preparation
- No heated post-cure
- Higher dynamic properties

### Handling Rollers : ROTA KOTE™ K3

This is a rapid reacting, three-component elastomer system which has been designed to be applied as a poured material onto a rotating core, to help produce a tough elastomeric roller covering suitable for material handling rollers.

### Applications:

Rollers coated with ROTA KOTE™ K3 are used in the material handling roller marketplace; steel mills, paper industry, wood industry.

The typical properties of the material, together with its relatively good temperature stability can make the product a good choice for this market segment and applications.

### Paper Industry:

To help meet the demanding challenges presented by the paper industry, Dow Formulated Systems has developed a series of materials across a range of P and J hardness to better suit various applications within the paper making process. These materials are detailed below.

ROTA KOTE™ Grade	ROTA KOTE™ K3	ROTA KOTE™ 5286	ROTA KOTE™ 5279
P and J	21	10	5
Application	Reel Spool	(Suction) Press	(Suction) Press
Hydrolysis resistant	•••	••	•••

*For further technical information on any of the products contained in this product selector guide, including details on standard test methods used, please contact your sales representative at the address overleaf.*

*For Environmental Health and Safety information please refer to the Material Safety Data Sheet.*

••• Excellent

•• Very Good

• Good

# Dow Formulated Systems

## Reliable support and experience to help address your needs

At Dow Formulated Systems it's all about you – the customer. We aim to be your material technology provider of choice, offering application development and processing support to help customers grow their business, streamline operations and increase efficiency. Through our vast portfolio of polyurethane and epoxy technology, we can create innovative solutions for some of the most demanding industrial engineering applications. We offer over 40 years of experience, reliable service, and creative polymer design, as well as the vast resources of one of the world's most respected chemical companies.

## Providing you with global reach, local support

As one of our customers, you can benefit from our global experience and local technical support provided through a network of systems houses around the world. Our customers don't work with us just for the high-performance products we offer – they work with us because of the excellent service and support we deliver to them at a local level, from the early stages of conducting trials and sampling through full-scale production and commercialization, we work hand in hand with our customers in their locations to help ensure optimum performance. Having localized systems houses allows us to leverage our global knowledge quickly and smoothly – providing you with fast response times and technical support.

## Supply and quality you may count on

At Dow Formulated Systems, we offer a reliable supply of products and strive to deliver on time and in full to help meet your deadlines to keep your projects on track. Our global supply and logistics capabilities are used to address your needs, regardless of location.

## About Dow Formulated Systems

Dow Formulated Systems, a global business unit of The Dow Chemical Company (Dow) is a global industry leader in the development and formulation of fully-formulated polyurethane and epoxy systems, focused on providing its customers world-wide with innovative tailor-made solutions through its Energy Efficiency, Alternative Energy & Composites, Industrial Castings and Adhesives, Infrastructure Life Preservation and Leisure & Lifestyle businesses.

Dow Formulated Systems manufactures and markets custom formulated rigid and semi-rigid, flexible, integral skin, and microcellular polyurethane foams and fully-formulated systems as well as coatings, adhesives, sealants, elastomers and binders used in applications ranging from residential and commercial construction, infrastructure repair, wind energy solutions, oil and gas, automotive, appliance, furniture, and shoe soles to decorative molding and athletic equipment. Striving to address the specific needs of its customers in their local geographic regions, Dow Formulated Systems operates a global network of Systems Houses.



## Dow Formulated Systems Locations



Global reach, local support



E: [help@dowhyperlast.com](mailto:help@dowhyperlast.com)

W: [www.dowhyperlast.com](http://www.dowhyperlast.com)

United States or Canada: Toll Free Call  
+ 1 800 441 4369 or 1 989 832 1426

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or: +31 11567 2626

Latin America: call  
+55 11 5188 9000

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\*International toll-free from Austria, Belgium, Denmark, Finland (prefix 990), France, Germany, Hungary, Ireland, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

\*\*Toll-free from all Pacific countries except Indonesia and Vietnam

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