



# **Polyurethane Product Portfolio**

- **Aromatic Isocyantes**
- **❖** Polyester Polyols
- **❖** Polyether Polyols
- **Eco & Recycled Polyols**

- Silicone Surfactants
- Catalysts
- Flame Retardants
- Blowing Agents

Isochem Supplies a wide range of Polyurethane raw materials, offering what we call our 'Total Raw Material Solutions' to Polyurethane manufacturers in all industrial applications;

- Flexible Foam Manufacturing
- Rigid Foam Block, Panel and Spray Insulation
- **CASE:** Coatings, Adhesives, Sealants and Elastomers.

Outside of the Polyurethane Industry, we also supply Hydrocarbon Blowing agents such as pentanes to EPS (Expandable Polystyrene) Resin Manufacturers, as well as having distribution and trading activities in numerous Commodity Chemicals for general industrial applications.





# **Aromatic Isocyantes**

- Methylene diphenyl diisocyanate (MDI)
  - Polymeric MDI (ISG MDI-200)
  - High Functionality MDI (ISG MDI-600)
- **Toluene Diisocyanate (TDI)** 
  - TDI 80/20 (ISG TDI80)
  - TDI 100 (ISG TDI100)

Isochem works closely with leading producers of Isocyantes to provide our local customers with just in time deliveries and local storage and handling of Isocyantes.

With access to a large network of warehouses and distribution points, we also assist our customers in filling supply chain gaps during period of product shortages and manufacturer Force Majeures.

Our logistics teams have expertise in handling and transloading of Isocyantes, and as such we have the ability to supply in a range of packaging options; Bulk, Drum and IBC.

For supply into the European markets, all products are supplied with REACH compliant labelling and SDS available in English, Dutch, Italian, German and Spanish.





# **Polyether Polyols**

## Rigid Polyols

- Sucrose Based
- Sorbitol Based
- Amine Based
- Pentaerythritol Based

# **CASE Polyol**

# **Flexible Polyols**

- Conventional Polyols
- HR Polyols
- Polymer Polyols

Isochem works closely with the R&D and product development teams of our customers to offer new and innovative Polyols across a range of applications.

We work only with the best Polyols producers, ones that have established global standards for quality manufacturing processes and we use our local market presence to connect these producers to regional markets.

Our value add to our customers Polyol supply chain includes the just in time deliveries of bulk and package cargo from local storage and supply of stock material during product shortage or manufacturer Force Majeures.



# **Polyester Polyols**

- Polyols of Reactive Hot Melts (RIM)
  - Crystalline
  - Amorphous
  - Liquid
- CASE Polyol
  - One and two component adhesives
  - TPU
  - Cast Elastomers
  - Leather Coatings
  - Artificial Leather
- Rigid Foam Polyol
  - PET Scrap
  - Phthalic anhydride (PA)
  - AGS Acids mixture
- Flexible Foam Polyols
  - Low Fogging
  - Polymeric Polyesters
- Shoe Sole Polyols

Polyester Polyols are essentially produced from saturated diacids and diols and often custom made according to a range of property requirements.

Isochem supplies a range of commodity or standard grade Polyester Polyols.

Our manufacturing partners also have the capability to custom make any polyol according to the exact requirements of our customers.

#### **Applications:**

- Continuous and discontinuous block foam
- Continuous and discontinuous panels
- Spray Foam
- OCF



# **Silicone Surfactants**

## Silicone Surfactants for PU Foam

- Rigid Foam
- Flexible Foam
- HR Flexible Foam
- Shoe Sole
- Cell Opener

## **Silicone Surfactants for Phenolic Foam**

Silicone Surfactants play a crucial role in Cell structure of Flexible and Rigid Foam and stabilization of PU formulations.

As the authorized distributor for Momentive Performance Material for the Australia/NZ market, Isochem has deep knowledge and expertise in Silicone technology.

As well as keeping our customers up to date with the latest innovation and technologies offered by our manufacturing partners, we supply a wide range of Silicone Surfactants for all Polyurethane Applications. We continuously monitor market driven and regulatory driven trends such as Low VOC requirements for Flexible Foam producers and advise our customers accordingly.

Please contact us to discuss your Silicone requirement.



# **Polyurethane Catalysts**

## **Flexible Foam Catalysts**

- TEDA Based
- ❖ TEDA33%
- ❖ TEDA EG
- ❖ A1
- Delayed Action Catalysts
- Gel Catalysts
- Blow Catalysts

#### **Rigid Foam Catalysts**

- BDMA
- ❖ DMCHA (PC8)
- DMEA
- ❖ PMDETA (PC5)
- ❖ DMDEE
- LA141 (PC41)
- Trimerization Catalysts
- PC9

#### **Metal Catalysts**

- Stannous Octoate T9
- ❖ DBTDL (T12)
- Potassium Octoate (K15)
- Potassium Acetate in MEG (PC46)
- Low Odor Catalysts
- Low Emissions Catalysts
- **❖** LA110 (Dabco T)

Whilst Isocyantes and Polyols determine the physical properties of Polyurethane Foams, the processing or manufacture of Polyurethane Foam is controlled by the Catalysts.

Isochem supplies Catalysts used in every Polyurethane manufacturing application from Blow and Gel catalysts in Flexible Polyurethane Foam production, to Amine and Trimerization catalysts used in Rigid PIR Insulation Foam.

Please contact us to discuss your Catalyst requirement.



# **Flame Retardants**

## **Phosphorous FR**

- TCPP
- TEP
- ❖ TDCPP
- **❖** TCEP
- FR V6
- **❖** BDP
- ♣ RDP
- ❖ TIPP35
- ❖ TIPP50
- ❖ TIPP65
- **❖** TIPP95

## **Brominated FR**

- ❖ TBPA Diol (PHT4 Diol)
- **❖** TBPA
- **❖** BDDP
- ♣ BPS
- **❖** DBDPE
- ❖ DBDPO
- BOS
- DBNPG

Isochem supplies a range of Phosphorous based, Brominated and Halogen Free flame retardants.

Isochem maintains strong trading positions in commodity FRs such as TCPP and TEP with local bulk and packaged stock in key regional ports around the world.

Please contact us to discuss your Flame Retardant Requirements.





## Polyurethane Foam Insulation

Pentanes are environmentally friendly chemicals used as blowing agent in Polyurethanes used in insulation material, household and commercial appliances and various thermal and cooling devices.

Isochem can supply a range of Pentane blends according to our customers requirements.

Since the Montreal Protocol there is a shift away from CFC(HCFC) into hydrocarbons such as Pentanes.

Polyurethane

n = 1 over

## EPS (Expandable Polystyrene)

EPS Manufacturing processes vary greatly between manufacturers, as such each resin producer has a preferred blowing agent.

Isochem can supply custom blended ratios of N-Pentane, Iso-Pentane and Cyclopentane according to the end users specific requirement.



# **Blowing Agents for PU Foam and EPS Resins (Cont..)**

Item	Contents (purity ratio)			A (1 (1	Flash	I,Boiling	Freezing	Vapor	000	OWD	**********
	CYC5 wt%	IC5 wt%	NC5 wt%	Application	point	point	point	pressure	ODP	GWP	Appearance
cyclopentane	Min, 95			General	-37°C	49℃	-94°C	318mmHg (25°C)	0	⟨20	Liquid, clear
iso pentane		Min, 95		PU foam	-51℃	29℃	−160°C	595mmHg (21°C)	0	⟨20	Liquid, clear
normal pentane			Min, 95	Solvent EPS	-40°C	36℃	-130℃	426mmHg (20°C)	0	⟨20	Liquid, clear

#### CP Series

This series is used as blowing agent for Polyurethane foaming of commercial and household appliances, reefer containers and Insulated Panels.

Blend	СР	N-Pentane
CP70	67~73	27~33
CP75	72~78	22~28
CP80	77~83	17~23
CP85	82~88	12~18

#### IP Series

Used in the production of EPS Resin. The below is a list of the common ratios.

Blend	IP	N-Pentane
IP15	13~17	Balance
IP20	18~22	Balance
IP30	28~32	Balance
IP40	38~42	Balance
IP45	43~47	Balance
IP50	48~52	Balance



# **Global Offices & Distribution**

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#### **BULK STORAGE**

#### **NORTH AMERICA**

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#### **EUROPE**

Rotterdam NL Le Havre FR Fos-Sur-Mer FR

#### **AUSTRALIA**

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