CHEMFIL INDIA

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TECHNICAL DATA PU FOR GASKET APPLICATION

CHEMFIL 1213 is a formulated polyol premixed with blowing agent for manufacture of Gasket or Elastromeric Seals of air filters which finds its application in the Automotive and Industrial Filters. The resultant Seal is having excellent physical-mechanical properties.

AREA OF APPLICATION

CHEMFIL 1213 is meant for production of air filters in automotive and industrialfilters. It is available in Orange and Black color.

MIXING RATIO (pbw)

CHEMFIL 1213 (Resin) 100 parts be weight ; CHEMFIL 1028 (Hardener) 35 parts by weight

Density of Resin at 20°C(g/cc) : 1.1±0.1

Density of Hardener at 20°C(g/cc) :1.24±0.05

Viscosity of Resin at 20°C(m Pas) :3500±500

Viscosity of Hardener at20°C(m Pas) :150±30

FOAM PROPERTIES

Cream time at 20°C(Sec.) : 15-30

Demould time :5-10 Minutesat 40°C mould temperature (It also depend uponthe size of filters)

Free rise density(kg/m^3) : Approx.250

Moulded density(kg/m^3) : Approx.350

The following test values have been determinedwith specimens of a density of 350 kg/m^3

Shore hardness(A) : 30±5

Tensile strength(N/mm^2) : 1.0+0.1 ; Tear resistance(N/mm^2) :1.6±0.2

Breaking elongation(%) : 90±20Compression strain rest measured :5% after 30 min.Test condition:50% crushing during 22h.at 70°C

Thermal stability : 250 h/70°C-good-very slight discoloration 150h/100°C-good-very slight discoloration

Cold resistance : upto0 40°C-good

Oil resistance : Depends upon the type of Oil

Age resistance : Change of hardness ± 10 Shore-A

PROCESSING CONDITIONS

Component temperature (°C) :20-22Mould temperature (°C) :40-45

STORAGE

The material should be stored in cool and dry rooms for the stated period as long as they are hermetically sealed. Protect the material against moisture. Storing temperature : 25 - 30 degree C . The product is stable for at least six months when properly stored.

SAFETY MEASURES

Sufficient ventilation is recommended. Hands and eyes must be protected by gloves and goggles. In case of contact of the material with the eyes, rinse with plenty of water and consult a physician. Hands and tools should be cleaned before polymerisation. Wash contact areas of skin with soap and water.

HANDLING PRECAUTIONS

During handling maximum precaution should be taken. Keep the container tightly sealed when not in use. Avoid eye contact & protective gloves should be worn during handling. It itcomes in contact with the body, wash the affected organ with plenty of clean water.

SPILL OR LEAK PROCEDURES / WASTE DISPOSAL METHOD

If the material is spilled or leaked, absorb in Sawdust, Sand or other absorbent shovel up and remove to chemical waste disposal area. Dispose of waste in Chemical waste in Chemical Disposal Area.

MATERIAL SAFETY DATA SHEET - CHEMFIL 1028

Product Description

Chemfil 1028 is a liquid solvent free, carbodimide modified 4,4'-di-phenylmethane diisocyanate.

Typical Properties:

Appearance	:	Brown liquid
Viscosity @25°C, (mPas)	:	100
Flash Point, °C(COC)	:	199
Initial Boiling Point, 5mm Hg, °C	:	190
Specific Gravity @25°C, g/cm^3	:	1.23
Vapor Pressure @25°C, 5mm Hg	:	0.0003

Storage

Chemfil 1028 is supplied in drums. Once a container has been opened, care should be taken to exclude moisture. The most favorable temperature for storage is 25-35°C. If stored at higher temperatures, or if moisture is not excluded, an undesirable increase in viscosity will occur. Below 20°C solid crystals may form and settle out, which can alter the performance of the product. The solid crystals contain pur MDI and in this solid form may exhibit the same dimerization characteristics as pure MDI. Unless prompt action is taken to melt the product, subsequent dimerization will proceed and may deteriorate the clarityand as say of the product. Melting the crystals is ideally done by rolling the drum in a hot air oven at 80- 100°C. Melting under these conditions should take 4-8 hours. The drum contents should not be heated above 70°C to minimize dimmer formation. Warning: excessive heating or prolonged heating at 80°C-100°C may cause dangerous pressure build-up. Heating by electrical means is not recommended due to the danger of local overheating, which would result in dimmer formation. Melting in a water bath is likewise not recommended because of potential danger of the isocyanate reacting with water in case ofdrum leakage. Rolling the drum in atmospheric steam in an alternate procedure that can be used providing care is taken to ensure that the drum does not leak. The shelf-life is six months if the temperature is maintained at 25-35°C and moisture is excluded.

Toxicity and first aid:

Chemfil 1028 is hazardous and is an irritant to the skin, eyes, and respiratory tract. It may cause an allergic respiratory reaction if inhaled. The OSHA ceiling Permissible Exposure Limit(PEL)for Chemfil 1028 is 0.02 ppm. If this concentration in air is exceeded, an air supplied or other

approved National Institute for Occupational Safety and Health/Mine Safety and Health Administration respirator must be worn. Wear rubber gloves and safety goggles when handling Chemfil 1028 contaminated clothing should be changed immediately and decontaminated.

Liquid Chemfil 1028 on the skin should be removed immediately with soap and water. If the eyes are affected, they should be flushed thoroughly with flowing water for 15 minutes. Call a doctor.

Procedures for handling spills

Never approach a spill without full safety gear on. This includes an air supplied positive pressure breathing apparatus. Absorb spilled material with an oil absorbent or sawdust. Place contaminated absorbent in an open drum. Decontaminate the spill area and the drummed absorbent with a neutralizing solution comprised of water(90%), concentrated ammonium hydroxide(8%) and detergent(2%). Do not sewer the neutralized waste.

First aid:

Eyes: Immediately flush eyes with running water for 15 minutes. Call a doctor at once.

Skin: Wash affected areas with soap and water. Remove contaminated clothing and shoes. Discard shoesand launder clothing before reuse.

Ingestion

If swallowed, give large amounts of water to dilute. If vomiting occurs, give more water. Call a doctor immediately. Never give fluids or induce vomiting if the victim is unconscious or having convulsions.

Inhalation

Move to fresh air, Give artificial respiration, preferably mouth-to-mouth. If the victim is not breathing. Ifbreathing is difficult, oxygen may be given by qualified personnel. Call a doctor immediately.

In case of fire

Use water fog, foam or CO_2 extinguishing media. Firefighters should be equipped with self-contained breathing apparatus and turnout gear for protection against MDI vapors and toxic decomposition products. Avoid water contamination in closed container or confined area(CO_2 evolved).

In Case of spills or leaks

Wear protective plastic clothing, rubber gloves and boots, splash goggles and selft-contained breathing apparatus. Cover spill with inert dirt. Do not place spilled material in a closed container because reaction with moisture may cause dangerous pressure build-up.

Environmental hazard

MDI may cause pollution. Do not discharge into the ground, streams, ponds or public waters. For guidance, contact your regional office of the Environmental Protection Agency.

Empty containers

The container may be unsale due to product residuces. All labeled precautions must be observed.

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