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( Reaffirmed 1995 )

*Indian Standard*

# GLOSSARY OF TERMS USED IN RUBBER INDUSTRY

PART 1 DEFINITIONS OF BASIC TERMS

( *First Revision* )

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# Indian Standard

## GLOSSARY OF TERMS USED IN RUBBER INDUSTRY

### PART 1 DEFINITIONS OF BASIC TERMS

#### ( First Revision )

#### 0. FOREWORD

**0.1** This Indian Standard ( Part 1 ) ( First Revision ) was adopted by the Bureau of Indian Standards on 5 February 1988, after the draft finalized by the Rubber Sectional Committee had been approved by the Petroleum, Coal and Related Products Division Council.

**0.2** This standard was originally formulated in six parts of IS : 7503 'Glossary of terms used in rubber industry', covering the following terms and definitions:

( Part 1 ) - 1974 Definitions of general terms and terms pertaining to latex and physical chemical properties and testing, commonly used in rubber trade and industry

( Part 2 ) - 1976 Terms relating to compounding process, machinery and vulcanization used in rubber industry

( Part 3 ) - 1979 Terms relating to calendering, coating, and moulding commonly used in rubber, trade and industry

( Part 4 ) - 1979 Terms relating to extrusion commonly used in rubber trade and industry

( Part 5 ) - 1981 Terms relating to process

( Part 6 ) - 1986 Definitions relating to cellular materials

The various terms had been grouped together into the above six parts, as and when they came up. However, keeping in view the latest rationalized classification, existing in ISO 1382 - 1982, these terms have now been regrouped into six parts ( Parts 1 to 6 ) afresh under new rationalized and amplified classifications as follows:

**Part 1** Definitions of basic terms

( general terms and basic terms concerning latex )

**Part 2** Definitions of additives

( general terms, additives relating to vulcanization, protective agent, fillers and colours, extenders and plasticizers, special chemicals and latex additives )

**Part 3** Definitions relating to properties and testing

( general terms, uncured properties, properties and testing relating to cure, mechanical and physical properties, degradation properties and testing, properties and test specific for latex and chemical properties and tests )

**Part 4** Definitions relating to processing

( general terms, processing machine and processing of latex )

**Part 5** Definitions relating to products — Hoses

**Part 6** Definitions relating to cellular materials

**0.3** In the present revised standards, some of the terms listed below which were present in the original parts of IS : 7503 have now been deleted and some new terms have been included:

a) *Terms deleted* — Accelerated ultra, anti-cracking agent, banding time, book, calender crown chalk blower, clamp, coefficient of vulcanization, core, density, die holder, dielectric, dielectric constant, dielectric strength, dilatancy, doubling machine, draw, dumb-bell test piece, elongation, face cloth, former, frame, gum dipping, haul-off equipment, impulse, inhibitor, insert pin, iodine number, micelle, modulus, mould finish, peak cure, pelletizer, premature coagulation, rate of cure, raw rubber, relative density, rubber hydrocarbon, separating agent, sheet rubber, shrink, skimmed fabric, stock, thixotropy, tip, treated liner, under cure, viscosity, vulcanizate and warming mill.

b) *Terms added* — Adhesion strength, cure rate index, field latex, mix, Mooney viscosity, stress relaxation, and visco-elasticity.

**0.4** In the preparation of this standard, assistance has been derived from the following publications:

a) ISO 1382-1982 Rubber vocabulary. International Organization for Standardization ( ISO ).

b) BS 3558 : 1980 Glossary of rubber terms. British Standards Institution.

**0.5** In case there is any difference between the definitions in this glossary and those in the standards for individual materials, the latter shall prevail.

## 1. SCOPE

1.1 This standard ( Part 1 ) defines the basic terms relating to rubber industry.

## 2. BASIC TERMS

### 2.1 General

2.1.1 *Elastomer* — A macromolecular material which returns rapidly to approximately its initial dimensions and shape after substantial deformation by a weak stress and release of the stress.

2.1.2 *Extrudate* — A profile produced by extrusion of a rubber compound.

2.1.3 *Master Batch* — A well dispersed mixture of rubber and one or more compounding ingredients in known proportion for use as a raw material in the preparation of the final mix.

2.1.4 *Mix* — An intimate mixture of rubber(s) with compounding ingredients.

2.1.5 *Natural Rubber* — Rubber formed in a living plant.

2.1.6 *Reclaimed Rubber* — The product recovered by the treatment of vulcanized rubber, which is capable of revulcanization.

2.1.7 *Rubber* — An elastomer which can be modified to a state in which it is essentially insoluble ( but can swell ) in a boiling solvent such as benzene, methylethylketone and ethanol-toluene azeotrope. A rubber in its modified state cannot be easily remoulded to a permanent shape by the application of heat and moderate pressure.

A rubber in its modified state, free of diluents, retracts within 1 minute to less than 1.5 times its original length after being stretched at normal room temperature to twice its length and held for 1 minute before release.

2.1.8 *Rubber Compound* — An intimate mixture of rubber(s) with all the ingredients necessary for the finished article.

2.1.9 *Synthetic Rubber* — Rubber prepared by polymerization of monomers.

2.1.10 *Vulcanization ( Cure )* — A process in which rubber through a change in its chemical structure ( for example cross-linking ), is converted into a condition in which elastic properties are conferred or improved or extended over a greater range of temperature. In some cases, the process is carried to a point where the substance becomes rigid.

### 2.2 Basic Terms Concerning Latex

2.2.1 *Centrifuged Rubber Latex* — Latex, the rubber concentration of which has been increased by the removal of serum by centrifugal force.

2.2.2 *Coagulum* — Immediate product of coagulation of latex consisting of agglomerates of rubber particles.

2.2.3 *Creamed Rubber Latex* — Latex, the rubber concentration of which has been increased by creaming and removal of the separated serum.

2.2.4 *Evaporated Rubber Latex* — Latex, the rubber concentration of which has been increased by evaporation of some of the water.

2.2.5 *Field Latex* — Natural rubber latex with or without a preservative and prior to concentration or any other processing.

NOTE — The preservative is added to maintain the original state of the latex as it came from the tree.

2.2.6 *Latex* — Colloidal aqueous dispersion of polymeric substance.

2.2.7 *Precoagulum* — The coagulum resulting from partial inadvertent coagulation of a rubber latex.

2.2.8 *Preserved Rubber Latex* — Latex treated to inhibit putrefaction and accompanying coagulation.

2.2.9 *Prevulcanized Latex* — Latex in which the particles have been partially vulcanized.

2.2.10 *Serum* — Dispersion medium of a latex.

2.2.11 *Stabilized Latex* — Latex treated to inhibit premature coagulation.