BRITISH STANDARD

BS 3558-2:2001

Glossary of rubber terms —

Part 2: Additional British terms

ICS 01.040.83; 83.060

Committees responsible for this British Standard

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British Plastics Federation
British Rubber Manufacturers Association
British Telecom Plc
Chief and Assistant Chief Fire Officers Association
Clay Pipe Development Association Ltd.
Laboratory of the Government Chemist (LGC)
Ministry of Defence
Tun Abdul Razak Research Centre

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Foreword

This British Standard has been prepared by Technical Committee PRI/10.

BS 3558-1 was published in 1997, and includes those terms and definitions in BS 3558:1980 which have been agreed internationally.

BS 3558-2 contains those terms and definitions in BS 3558:1980 that have not been superseded by part 1 of this standard. Most of the terms are concerned with processing operations and equipment. Some of these have no equivalent in other languages and so may be inappropriate for international standardization. BS 3558:1980 has been withdrawn.

This part does not include fire terminology, for which reference should instead be made to ISO 3261. Unlike BS 3558:1980, it does not contain terms concerned with hose, tyres, belting and footwear.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 13 and a back cover.

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1 Scope

This part of BS 3558 defines terms for rubber in addition to those given in part 1.

The preferred terms are set in **bold type**. Other, synonymous, terms that are admitted but are non-preferred are set in normal type on a new line under the preferred term.

2 Terms and definitions

2.1

abrasion loss

volume of rubber abraded from a specified test piece under specified conditions

2.2

acetone extract

material extracted from rubber by acetone under specified conditions

2.3

air trap

<of **cellular** material> **void** in a **cellular** polymer

2.4

alcoholic potash extract

material removed from rubber by treatment with alcoholic potassium hydroxide solution after removal of the **acetone extract** and/or the **chloroform extract**

2.5

antistatic rubber

rubber that is electrically conducting to the extent that, when earthed, it will prevent the build-up of electric charges and dissipate and charges applied, without thereby presenting a risk of fire or electric shock

2.6

autoclave press

steam-pan incorporating means for applying mechanical pressure to a mould or moulds

2.7

bale cutter

press in which a bale of raw rubber is forced against a knife, so cutting it into pieces for more convenient handling

2.8

bareness

<in moulding> imperfection resulting from the failure of the rubber to fill out all the mould pattern detail

2.9

bin curing

unintentional vulcanization of a mix during storage

2.10

blender

vessel, fitted with movable blades, to convert the contents, usually compounding ingredients, into a uniform, homogeneous mixture

2.11 blister bar

bar parallel to a calender roll intended to minimize blistering during multiple bank calendering

2.12

blowing down

removal of excess ammonia from latex by stirring the latex while passing a stream of air across the surface

2.13

blowing

<of **cellular** material> production of a **cellular** material by decomposition of an added ingredient or by thermal action

2.14

book

<in processing> device consisting of several leaves of **liner** joined along one edge

2.15

bowl

roll of a calender

2.16

box

shell (non-preferred)

roller on which long lengths of rubber sheet or fabric are wound and temporarily stored during the processes of manufacture

2.17

breakdown

<in processing> preliminary softening, by mechanical work, of raw rubber or a mix to render it more suitable for masticating or mixing or further processing

2.18

breakdown

<of **cellular** material> imperfection due to local collapse of cell structure

2.19

breaker pad

mill bush (non-preferred)

member fitted into the **frame** of a mill or calender, designed to break preferentially in the event of overloading

2.20

breast roll

offset roll (non-preferred)

<in processing> **roll** whose axis is arranged parallel to that of the other rolls but not in the same vertical plane

2.21

bridge

two-spoked member supporting the **centre** in the head of an extruder

2.22

bump

breath (non-preferred)

<in moulding> momentarily to open and close a mould at an early stage in the moulding process to expel gas

2.23

camber

crown (non-preferred)

convexity of the longitudinal section of a **roll**

2.24

cavity

cell (non-preferred)

core (non-preferred)

<in moulding> blind hole deliberately made or formed in a rubber moulded product, particularly a **cellular rubber** product

2.25

cellular

consisting of a mass of cells

2.26

cellular rubber

mass of cells in which the matrix is rubber

2.27

centre

cone (non-preferred)

core (non-preferred)

<of an extruder> part on the die which shapes the internal profile of an extrudate

2.28

chalk blower

device for applying a powder to the inner surface of a tubular extrudate as it leaves the die

2.29

chatter marks

imperfection on calendered sheeting consisting of transverse narrow bands of alternately thicker and thinner material

2.30

chloroform extract

materials extracted from rubber by chloroform under specified conditions after removal of the **acetone extract**

2.31

cloth mark

impression left on rubber by a fabric

2.32

coagulum

immediate product of coagulation of latex consisting of agglomerates of rubber particles

2.33

cold cure

vulcanization at room temperature, commonly by means of sulfur monochloride solution or vapour

2.34

cold checks

cold sheets (non-preferred)

imperfection on calendered sheeting consisting of surface roughness

2.35

composition

kinds and proportions of all ingredients contained in a mix

2.36

compression hardness

<of **cellular** material> force required to produce a specified compression over all of a **cellular** material test piece under specified conditions

2.37

compression mould

mould for compression moulding

2.38

compression stress

stress applied so as to cause shortening or contraction of the test piece in the direction of the stress expressed as the average force per unit area of the original cross-section of the test piece

2.39

compression strain

deformation produced in a test piece by a compression stress; it is the contraction in the direction of the stress expressed as a percentage of the original dimension in that direction

2.40

conducting rubber

rubber with a sufficient degree of electrical conductivity to function as an electric current carrier

NOTE A product made from this material has higher electrical conductance than one **antistatic rubber**.

2.41

core pin

pin being part of a mould, to form a hole in a moulded product

2.42

core

plug (non-preferred)

<of a mould> mould part that projects to form a **cavity** in the moulded product, particularly for **cellular** products

2.43

crack growth test

test for the determination of the growth of a defined cut penetrating a test piece when subjected to cyclic flexing producing strains perpendicular to the length of the cut

NOTE See BS 903-A10.

2.44

creel

<in processing> apparatus for holding a large number of bobbins or spools of textile or steel cord allowing the cords to be brought together to form a layer

2.45

crescent tear test

test for tear strength determination using a test piece of crescent shape with a nick of specified depth at the midpoint of the concave edge to initiate tearing

NOTE See BS 903-A3.

2.46

cross axis

skew axis (non-preferred)

adjustment to the contour of the nip formed between two rolls of a calender by skewing the axis of one roll relative to the other

2.47

crowsfeet

small flowmarks of V shape on calendered sheeting

2.48

crystallization

orientation of the disordered long-chain molecules of a high polymer into repeating patterns

2.49

die line

longitudinally raised identification line formed deliberately on an extrudate

2.50
die holder
die box (non-preferred)
nozzle (non-preferred)
device for locating a die in relation to an extruder head

2.51
dilatancy
reversible ability of a fluid to become more viscous on agitation and to resume its more fluid state on standing

2.52
doubling machine
machine with two rolls for building thicker sheeting from plies of thinner sheeting

2.53
dough mill
mill for homogenizing dough

2.54
draw
<of a mould> taper on the member or members of a mould to facilitate the extraction of a moulded product

2.55
dry rubber content
concentration of rubber in a latex usually expressed as a percentage by mass

2.56
dynamic properties
properties exhibited under cyclic stressing

2.57
edge wheel
hand tool comprising a wheel with a narrow smooth edge for consolidating a join

2.58
elasticity
tendency of a body to return to its original size and shape after having been deformed

2.59
elongation
increase in length of a test piece produced by a **tensile stress**
NOTE This property is usually expressed as a percentage of the original test length.

2.60
embossing machine
machine with two or more rolls for embossing sheeting

2.61
extrusion mark
score line (non-preferred)
mark or line formed accidentally in an extruder on an extrudate

2.62
face cloth
fabric treated to give a smooth finish and used for temporary support of sheet rubber

2.63

fish back

cloth opening (non-preferred)

crimping bar (non-preferred)

herring-bone bar (non-preferred)

<in processing> bar with correlations so arranged that, when taut fabric is drawn across it, longitudinal wrinkles are removed

2.64

floating platen

platen suspended between the top and bottom platens of a **multi-daylight press** and capable of vertical movement

2.65

fractional coagulation

deliberate coagulation of a portion of the rubber particles in latex

2.66

frame

<of a mould> metal plate with a large, shaped hole which, when used between flat plates, forms a mould

2.67

gum dipping

process of impregnating textiles with rubber by immersion in rubber solution

2.68

haul-off gear

take-off gear (non-preferred)

equipment for pulling an extrudate from an extruder

2.69

heat stretching

heat stabilizing (non-preferred)

process of adjusting the thermal and dimensional properties of a fabric under specific combinations of temperature, tension and time

2.70

hot water cure

vulcanization in hot water or aqueous solution

2.71

hot air cure

vulcanization in heated air

2.72

indentation hardness

<of a **cellular** material> force required to produce a specified indentation in the **cellular** material under specified conditions

2.73

insert

<in moulding> component made of metal or other material, which is to become or has become an integral part of a rubber moulded product

2.74

insert pin

moulding pin (non-preferred)

<of a mould> pin to place and hold in position an **insert** during a moulding operation

2.75

knife bar

bar carrying knives arranged for cutting sheeting longitudinally

2.76

land

<in moulding> contact area substantially normal to the direction of closing between two separate parts of a mould

2.77

lease bars

<in processing> two or more metal bars interposed laterally between adjacent cords of a layer of cords to facilitate identification and tracing of individual cords

2.78

let-off gear

take-up gear (non-preferred)

<in processing> apparatus for releasing material from a reel or box under control tension

2.79

liner

<in calendering> sheet material used for temporarily interleaving sheets of rubber that would otherwise stick together

2.80

lot

definite quantity of some commodity manufactured or produced under conditions that are presumed uniform

2.81

low temperature cure

vulcanization at a lower temperature than usual for a particular product

2.82

micelle

<of latex> sub-microscopic aggregate of molecules of surface materials usually in aqueous solution

2.83

mother stock

type of masterbatch in which the compounding ingredients are present in a higher proportion than those required in the final mix

2.84

mould finish

surface finish of a mould

2.85

mould lid

top part of a latex foam mould

2.86

mould mark

surface imperfection transferred to a moulded product from corresponding marks on a mould

2.87

mould register

means of correctly aligning the parts of a mould

2.88

moulded finish

surface finish of a moulded product as it leaves the mould, no subsequent operations having been performed

2.89

moulded skin

surface layer of a moulded product which may differ slightly from the bulk of the material in the moulded product

2.90

moulding pressure

force applied by the press divided by the projected area of the mould cavity or cavities

2.91

multi-daylight press

daylight press with more than one opening

2.92

open sided press

swan-neck press (non-preferred)

cantilever press with columns on one side only and whose opening is therefore accessible for loading from three sides

2.93

open steam cure

vulcanization in steam without a mould

2.94

pelletizer

machine similar to a strainer for preparing pellets of rubber

2.95

plasticize

to render less viscous

2.96

plucking

tearing out of isolated portions from a rubber surface during separation from a second surface

2.97

polyester foam

urethane foam based on a polyester-isocyanate reaction product

2.98

polyether foam

urethane foam based on a polyether-isocyanate reaction product

2.99

porosity

<as applied to an imperfection> the accidental presence of numerous small cavities

2.100

pot mould

mould having a jacket through which a fluid may be circulated for controlling temperature

2.101

pre-former

member interposed between an extruder head and die to unify the rate of flow of rubber through the die

2.102

preform

<in moulding> piece of mix of specified shape and size to fill a mould

2.103

press cure

vulcanization in a mould in a press

2.104

profiling machine

machine with two or more rolls of which at least one carries one or more circumferential grooves for converting rubber into strips having a predetermined contour

2.105

proofed fabric

composite produced by proofing

2.106

quadruple shear test

test for determination of shear modulus and bond strength in shear in which four parallelepipeds of rubber are bonded to five rigid plates

NOTE See BS 903-A14.

2.107

reverse camber

<of calenders> concavity of the longitudinal section of a roll

2.108

rib

<of moulds> wall between cavities

2.109

roll

<in processing> roller or hollow cylinder forming a major moving member of a rubber processing machine

2.110

roll bending

adjustment to the contour of the nip formed between two rolls of a calender by bending one or both rolls

2.111

roll deflection

bending of the moving **roll**s of a calender, particularly when a nip is loaded

2.112

rubber hydrocarbon

rubber polymer based solely on carbon and hydrogen

2.113

rubber polymer

polymer or polymers constituting the basis of a rubber

2.114

self-vulcanization

intentional vulcanization at or near room temperature

2.115

shore D hardness

measure of high hardness, of American origin, derived from the penetration of a specified indentor into a test piece under specified conditions

NOTE Shore D hardness is defined fully in ASTM D 2240 *Standard test method for rubber property — Durometer hardness* and some details are given in BS 903-A57.

2.116
slab moulding
process of compression moulding in which a multi-cavity mould is charged with a single slap or sheet of mix

2.117
spew line
line on the surface of a moulded product at the junction of the mould parts

2.118
spider
member with three or more spokes supporting the centre in the head of an extruder

2.119
spider line
radial line on a cross-section of an extrudate corresponding to the spokes of a **spider** or **bridge**

2.120
spread sheet
sheet made by spreading rubber dough on a support from which the sheet is finally removed

2.121
spreader chest
part of a spreader consisting of a heated table, the function of which is to assist evaporation of solvent as the coated fabric passes over it

2.122
spreading knife
doctor (non-preferred)
doctor blade (non-preferred)
doctor knife (non-preferred)
blade used for spreading dough or latex smoothly and uniformly

2.123
stitch wheel
hand tool comprising a narrow wheel with a narrow serrated edge for stitching

2.124
stitch
consolidation of a seam by rolling it with a **stitch wheel**

2.125
stock blender
device comprising one or more driven rollers mounted above, and used in conjunction with, a mill to improve blending of a mix

2.126
strike-through
penetration of rubber from a coated to an uncoated surface

2.127
sulfide sulfur
sulfur present in a vulcanizate as inorganic sulfide

2.128
sunlight crazing
development of a random pattern of shallow surface cracks on a rubber surface due to exposure to sunlight

2.129

sunlight checking

sun checking (non-preferred)

crazing or cracking of the surface of rubber due to exposure to sunlight

2.130

T-head

extruder head of T shape, to divert the flow of rubber to a direction at right angles to the axis of the screw, for direct extrusion round a core

2.131

take-off gear

wind-up gear (non-preferred)

apparatus for winding material on a reel or box from a calender or spreader under controlled tension

2.132

tension stand

<in processing> assembly of large diameter rollers for tensioning fabric

2.133

test portion

portion of a material set aside for the purpose of determining or estimating the identity of the material or some of its constituents or determining or estimating the material's ability to satisfy particular requirements

2.134

thermoplasticity

ability to exhibit plastic flow with rise of temperature, to revert to comparative rigidity on cooling, and to repeat the cycle indefinitely

2.135

thixotropy

characteristic of certain non-Newtonian fluids (e.g. latex mixes) in which the reformation of structural viscosity after agitation takes a finite time

2.136

tip

<of an extruder> detachable conical end of a **centre**

2.137

total solids

proportion, expressed as a percentage by mass, of matter not volatile at 100 °C in a latex

2.138

tracer wheel

hand tool comprising a roller with a knurled working face for consolidating a join

2.139

transfer mould

mould for transfer moulding

2.140

treated liner

processed liner (non-preferred)

liner that has been specially treated to improve its smoothness or to ease its separation from the rubber

2.141

V-block

central member of a **Y-head** to maintain separation of the simultaneous discharges to two extruders

2.142
vapour cure
vulcanization by exposure to the vapour of sulfur monochloride

2.143
variable die
<of an extruder> die comprising two or more components, each adjustable relative to the other(s)

2.144
water extract
material extracted from rubber by water under specified conditions

2.145
whip
<for **cellular** materials> beating member of a latex frothing machine

2.146
Y-head
extruder head of Y shape to direct together the simultaneous discharges from two extruders to a single die

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