

42-50000

This specification describes Glass Backed Uniform Mica Tape (QUA-CH-3) and
Sheet (QUA-CH-3) (hereafter abbreviated as mica). Mica is reconstructed
from IT CONTAINS 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 82

Table 1

Table 1

Symbol	Nominal thickness (mm)	Nominal width (mm)	Nominal length	Tolerances			
				Thickness of each point (mm)	Average thickness (mm)	Width (mm)	Length (mm)
CHAT-CH-1 0-0.13mm	0.13	19	30m	+0.05 -0.03	+0.03 -0.01	+0.5 -0.5	+1 0
		25					
		32					
CHA-CH-3 0.1-1.0mm	0.13	455	100mm	+0.05 -0.03	+0.03 -0.01	+5 0	+10 0

Note: a : Width b : Length

[illegible]

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2/3

Quality

Quality of this mica is given in Table 2.

Table 2. (Testing method JIS G2116)

No.	Item	Unit	Quality	Remarks
			CMT-CH-3	QMA-CH-3
			-0.15	-0.15
1	Weight (Mass per unit area)	g/m ²	103±20	169±20
2	Mica content (Composition bal.)	%	35±5	55±5
3	Binder content (Composition bal.)	%	24±3	24±3
4	Tensile strength	N/5mm	≥200	≥200
5	Breakdown voltage	kV	≥1.3	≥1.3
6	Winding property	-	Good	Good
7	Revolving property to roll	-	Good	Good

4. Shelf life

Shelf life of this mica is 12 months after manufacturing date in normal condition (20±15°C, 65±20% RH).

5. SAMPLING, WINDABILITY AND OTHER CRITERIA, etc.

THE PROCEDURES INDICATED IN ANNEXURE 'A' ATTACHED SHALL BE FOLLOWED DURING INSPECTION.

ANNEXURE 'A' SPECIFICATION NO. A0271 FOR ACCELERATOR/CATALYST (A-800) AND SPEC. NO. A0272 FOR TRIFUNCTIONAL EPOXY RESIN SHALL BE THE PART OF THIS SPECIFICATION.

7. ADHESION CONTENT SHALL BE TESTED AS PER TEST METHOD JEC-37F-2

NO.	DESCRIPTION	DATE	BY
1	BY GEE/TMD	15-01-2005	BY GEE/TMD
2	BY GEE/TMD	15-01-2005	BY GEE/TMD
3	BY GEE/TMD	15-01-2005	BY GEE/TMD

ALIAS	DESCRIPTION	INITIAL	DATE
12	MATERIAL 12	10W	2005-01-15
12	MATERIAL 12	10W	2005-01-15
12	MATERIAL 12	10W	2005-01-15

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ANNEXURE - A		12.7
TO SPECN. NO. A0270 for Glass Mica Tape		3/3
(GLAT-CN-3)		
1.	Sampling: In case of GLAT-CN-3 the no. of rolls to be selected for sampling shall be as per table-1 in para-3 of IS: 8402: 1987.	
2.	Acidification/Windability test: This test shall be carried out as per clause - 17 of IS No. C2116:1992.	
3.	Flexibility Test: To judge the quality of the tape from the point of view of flexibility, the test shall be carried out as per para-18 of IS: 8402: 1987 as a routine requirement.	
4.	Process for preparation of tape for windability test:	
4.1	Each roll of tape shall be dipped in solution of Methanol/Methyl Alcohol with 0.25% Catalyst P-200 to specn. No. A0271 until bubbling stops/ ceases-dipping time shall not in any case be more than 15 minutes.	
4.2	Each roll of tape shall then be removed from the solution and then dry in air and kept in a tight container for about 16 (sixteen) hrs. Each roll of tape is, thus, ready for winding. The tape duly treated in solution shall be used in tapping on the dummy main pole/commutating pole of HTM.	
5.	Tape shall satisfy the following criteria for acceptance:	
5.1	Layers of tape, layer-to-layer, shall not be too sticky while opening the tape from the bobbin in the process of winding of the coils.	
5.2	No delamination of Mica and Glass fibre tapes shall take place.	
5.3	The delamination of glass tape and mica tape shall not occur while cutting some portion of the tape during winding process at the round zones of the coils.	
5.4	No tearing of Mica layer of tape shall take place while applying hand pressure (torison) of about 2 (two) kgf during winding/tapping.	
5.5	Glass Fibre from the tape edges shall not come out.	
5.6	Mica shall not fall from the tape.	
5.7	Flexibility of tape shall be such that it (tape) shall stick to the coil profiles and shall not become loose while releasing hand tension.	
* FOLLOWING:-	GLAT-CN3 TAPES/SHEETS TO BE APPLIED ON A DUMMY MP COIL (DOWN OF APPROX. 43x73 mm; CORNER DIA. 2.5 mm.) OR C.P. COIL (DIMENSION OF: 35x82 mm; CORNER DIA. 3.2 mm.). THE ACCEPTANCE TO BE GIVEN FINDING THE RESULTS THERE ON i.e. THERE SHALL BE NO CRACK OF MICA PAPER AND TEARING OF THE SUBSTRATUM GLASS CLOTH.	
5.8	THERMO GRAVIMETRIC ANALYSIS (TGA) TEST FOR THE SUBJECT MATERIAL SHOULD BE CARRIED OUT BY THE SUPPLIER ONCE IN EVERY THREE YEARS AND VALUES OBTAINED SHOULD BE RECORDED.	

CHHO	13	CHITTARANJAN LOCOMOTIVE WORKS WEST BENGAL
PART OF SPECN NO A 0270 FOR	GLASS MICA TAPE (GLAT-CN-3)	NO. 80W 702-670 DATE 8.01.2008

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