

Product Name **SHARPIE RAILROAD TIE REPAIR SEAL**

MSC1-10

One component caulking, Moisture cure type, SPECIAL Modified silicone.

Cooperative development with HANKYU RAILWAY company\* a famous railway company in JAPAN.

High hardness and strength, optimum elongation developed for wood repair.

Applicable to concrete, metal and so on. Possible to be painted on!

■Benefit

- ◇Prolong wooden railway sleepers life      ◇Quick repair while railway is in service
- Prevent from erosion and corrosion by repair

■Advantages

- ◇Best balance in strength/hardness/elongation  
Excellent performance  
for wooden railway sleepers repair
- ◇Easy and safety operation  
Operate without mixing and electrical equipment
- ◇Good adhesion Strong adhesion  
with various substrates Show better  
with recommended primer
- ◇Anti-mold agent

■Application

- Crack and Corrosion of wooden railway sleepers
- Reinforcement of fixing by stop pegs
- Joints of floor at station platform

■Technical Product Data

Product Name	SHARPIE RAILROAD TIE REPAIR SEAL
Consistency	Brown Pasty
Main Component	Special Modified silicone polymer

Based on JIS A 5758 & JIS A 1439

Viscosity (Pa·s, 10rpm) 23°C	200~500	Cure Rate	Days of curing skin to 5mm
Density (g / ml)	1.40	5°C, 50%RH	Approx.7days ~ 10days
Tack-Free Time (min.) 23°C	15	23°C, 50%RH	Approx.1day ~ 2days
Nonvolatile ( % )	96	50°C, 50%RH	Approx. ~ 1day

Cured property after 23°C\*7days

50% Tensile Stress	0.90
Tensile Strength ( MPa )	2.50
Elongation at break ( % )	350
Hardness ( Shore A )	55



Tensile Properties-1

Cure condition	Item	Test condition	50% Tensile stress (N/mm <sup>2</sup> )	Maximum tensile stress (N/mm <sup>2</sup> )	Elongation at break (%)
After curing		23°C	1.00	1.70	180
After heating ( 80°C )		23°C	1.10	2.00	170
After immersion in water		23°C	0.75	1.00	200

with primer P-50

Substrate: Mortar



Tensile Properties-2

Test condition \ Item	50% tensile stress (N/mm <sup>2</sup> )	Maximum tensile stress (N/mm <sup>2</sup> )	Elongation at break (%)	
After curing, 5°C*2hours	1.36	2.17	200	with primer
After curing, -40°C*2hours	1.67	3.77	270	Substrate : Wood*Wood

■Application substrate

railway wooden tie wood metal plate stainless	concrete slate tile granite stone	*Prior confirmation adhesion to some overcoated substrate surface. *Maybe have to chipping on the surface or using primer P-50 *Solvent crack may occur if applied on acrylic or polycarbonate plate.
--	--	---

Based on ASTM C920: 2008

Item / Property	Method	Result	Details
Class	C920	Class 25	
Type		Type S	
Grade		Grade NS	
Hardness	C661	32	Durometer Shore A
Adhesion & Cohesion Under Cyclic Movement	C719	No bond failure	
Effects Of Heat Aging	C1246	0.9%	No cracking and chalking
Effects Of Accelerated Weathering	C793	No cracks after UV exposure and bend test	
Adhesion-In-Peel	C794	31.8 N	
Staining	C1248	No surface stain	The primer was applied onto the substrates and allowed to dry till tack-free before application of the sealant.

■Fungal Resistance

Test micro-organisms: Aspergillus niger(ATCC 6275) ; Penicillium pinophilum(ATCC 36839); Paecilomyces variotti(ATCC 18502); Chaetomium globosum(ATCC 6205); Gliocladium virens(ATCC 9645)  
 Adopted ISO 846 : 1997 Plastics-Evaluation Of The Action Of Micro-Organisms; Section 8.22 : Determination Of Fungistatic Effect (Method B)

Fungal resistance	Intensity of growth on	NOTE
Inoculated test samles	0(None)	under standard temperature and moisture conditions without inoculation
Control samples	0(None)	inoculated with micro-organisms and incubated
Sterile samples	0(None)	under standard temperature and moisture conditions without inoculation
Viability Check	Growth	

■Chemical Resistance

Household bleach	No effect	Adopted ANSI Z124.3: 1995; (Section 5.2)
Urine/urea(6% uric acid)	No effect	



■Notice

- The surfaces to be bonded must be dry, free of oil, dust, grease and other contaminants.
- NO operation when it rains or snows.
- Before operation, wooden corrosion should be removed.
- CAN NOT operated on asphalt.
- NO application on the surface which contained volatile.
- DO NOT operated too thin.
- CAN NOT adhere to marble and glass.

■Recommend primer

Recommend Substrates	Product Name	NOTE
concrete, metal, wood	SHARPIE Primer P-50	Non-yellowing(weather resistance)

■How to use

Please operate the product according to following procedure

- |   |  |
|---|--|
| ①.Pre-study and preparation                       | ⑦.Load the sealant into a caulking gun |
| ②.Pre-check                                       | ⑧.Apply                                |
| ③.Seam/surface dust free and dried                | ⑨.Use a spatula to finish the joint.   |
| ④.Setup holder and accessories                    | ⑩.Remove the masking tape              |
| ⑤.Setup the masking tape                          | ⑪.Clear up around                      |
| ⑥.Apply primer(primer tack-off time : 30min/20°C) | ⑫.Check the operation                  |

■Attention

- Keep away from heat/sparks/static electricity/open flames/hot surfaces. No smoking.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Avoid release to the environment.
- IF SWALLOWED: Rinse mouth.
- IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.
- IF skin or eye contact occurs immediately flush with water for 15 minutes. And call a POISON CENTER or doctor/physician.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Keep out of reach of children
- Storage in a dark cold place. Keep away from sunshine.
- Construction and Industrial use ONLY
- See SDS for detailed description.

■Packaging

●Sealant

SHARPIE RAILROAD TIE REPAIR SEAL . . . 320ml cartridge x10 /box  
◇ color : Brown

●Primer

SHARPIE Primer P-50 . . . 500g /can

★The data above, due to different materials and conditions of application which are beyond our knowledge and control we strongly recommend carrying out sufficient tests in order to ensure that our products are suitable for the intended process and applications. Except for wilful acts any liability based on such recommendations or any oral advice is hereby expressly excluded.



シャープ化学工業株式会社  
SHARP CHEMICAL IND. CO.,LTD.

<http://www.sharpchem.co.jp>  
<http://www.sharpchem.co.jp>

■Headquarter・Factory

〒592-8352 13-12Chikkohamaderanishi-machi, Nishi-ku, Sakai City, Osaka  
TEL: +81-72-268-0322 FAX: +81-72-268-3119

■Sunshine Chemical

Technology(SHANGHAI)CO.,LTD.  
〒201-402 No.16-1Lane 2058DaYe Highway Fengxian District Shanghai,China  
TEL: +86-21-5740 6320 FAX: +86-21-5740 2721

■Takasago Sales Office

〒592-8352 2-9-1 Takasago, Takaishi City, Osaka  
TEL: +81-72-268-0321 FAX: +81-72-268-0326

■Tokyo Sales Office

〒135-0016 5-26-9 Toyo, Koto District, Tokyo  
TEL: +81-3-3649-8103 FAX: +81-3-3646-6011

■Sapporo Office

〒004-0845 5-2-25-20 Kiyota, Kiyota District, Sapporo  
TEL: +81-11-883-2489 FAX: +81-11-883-2145