

TEST REPORT

No. : TJIN2405000294CM01-1_EN
Date : 2024-06-06
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CUSTOMER NAME: CHANGSHA XIANGJIA METAL MATERIAL TRADING CO., LTD
ADDRESS: Room, 1605-1606, Mingcheng International Building, No 46, Renmin East Road, Changsha City, Hunan Province.

Sample Name : DROP FORGED DOUBLE COUPLER CLASS B
Product Specification : 48.3"x48.3mm
Manufacturer : ADTO

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Date of Receipt : 2024-05-27
Testing Period : 2024-05-27 ~ 2024-06-06
Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical
Services (Tianjin) Co., Ltd.,

Duke Gai

Duke Gai
Authorized signatory



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Summary of Results:

No.	Test Item	Test Method	Result	Conclusion
1	Slipping Force	EN 74-1:2022	See Result	Pass
2	Failure Force	EN 74-1:2022	See Result	Pass
3	Pull Apart Force	EN 74-1:2022	See Result	Pass
4	Cruciform Bending Stiffness and Cruciform Bending Moment	EN 74-1:2022	See Result	Pass
5	Rotational Moment and Stiffness	EN 74-1:2022	See Result	Pass
6	Indentation	EN 74-1:2022	See Result	Pass

Note: Pass : Meet the requirements;
Fail : Does not meet the requirements;
N/A : Not Apply to the judgment.



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Test Item: Slipping force, Failure force, Pull-apart force, Indentation, Cruciform bending stiffness and cruciform bending moment, Rotational moment and stiffness

Test Method: EN 74-1:2022

Sample Description: See Photos

Test Condition:

Specimen: Right angle coupler, Class B, 40pcs

Test Results:

Test Clause	Test Item	Test Requirement (Right angle coupler, Class B)	Test Result	Conclusion
7.2.1	Slipping force	$\Delta \leq 7\text{mm}$, $F_{\Delta \leq 7\text{mm}} \geq 10.0\text{kN}$	$\Delta_{\text{avg}} = 7\text{mm}$, $F_{\Delta \leq 7\text{mm}} = 16.2\text{kN}$	Pass
7.2.2	Failure force	$F_{\text{min}} \geq 15.0\text{kN}$, $F_{\text{avg}} \geq 15.0\text{kN}$	$F_{\text{min}} = 15.0\text{kN}$, $F_{\text{avg}} = 15.0\text{kN}$	Pass
7.3	Pull-apart force	$F_{\text{pull}} \geq 50.0\text{kN}$	$F_{\text{pull}} = 56.8\text{kN}$	Pass
7.4.1	Cruciform bending stiffness and cruciform bending moment	$M_{0.1} \leq 0.48\text{Nm}$, $C_{0.1} \geq 15.0\text{Nm/rad}$, $M_0 = 0.8\text{Nm}$, $C_0 \geq 12.3\text{Nm/rad}$	$M_{0.1} = 0.48\text{Nm}$, $C_{0.1} = 15.0\text{Nm/rad}$, $M_0 = 0.8\text{Nm}$, $C_0 = 12.3\text{Nm/rad}$	Pass
7.4.2	Rotational moment and stiffness	$M_T \leq 0.13\text{Nm}$, $C_T \geq 7.5\text{Nm/rad}$	$M_T = 0.13\text{Nm}$, $C_T = 7.5\text{Nm/rad}$	Pass
7.5	Indentation	$F \leq 10.0\text{kN}$, $\Delta \leq 1.5\text{mm}$	$F = 10.0\text{kN}$, $\Delta \leq 1.5\text{mm}$	Pass

Note:

1. $F_{\Delta \leq 7\text{mm}}$, F_{min} , F_{avg} , $M_{0.1}$, M_0 , $C_{0.1}$, C_0 , M_T , C_T are the 5% quantile for the 75% level of confidence.



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- $y_{0.1} = 1.25$ according to EN 74-1:2022.
- Specification of steel bar for failure force and pull-apart force: steel bar of $\Phi 48.3\text{mm}$.
- Specification of tube for indentation: Steel tube of $\Phi 48.3\text{mm} \times 2\text{mm}$ (wall thickness).
Specification of tube for slipping force and rotational moment and stiffness: steel tube of $\Phi 48.3\text{mm} \times 3.2\text{mm}$ (wall thickness).
Specification of tube for cruciform bending stiffness: Steel tube of $\Phi 48.3\text{mm} \times 3.2\text{mm}$ (wall thickness).
Specification of steel bar for cruciform bending moment: steel bar of $\Phi 48.3\text{mm}$.
- Please see Annex A for details of test results.

Annex A Details of test results

Sample No.	$F_{\Delta \leq 7\text{mm}}$ (kN, $\Delta \leq 7\text{mm}$)	F_{min} (kN, 10mm $\Delta \leq 2\text{mm}$)
1	17.96	17.74
2	22.16	22.18
3	18.66	18.60
4	24.12	23.60
5	18.91	17.67
6	24.22	25.27
7	18.97	19.65
8	19.25	18.98
9	20.50	19.81
10	19.68	20.72
$F_{\Delta \leq 7\text{mm}}$	16.2	15.8



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