

Report No.: TMC181119105-S



APPLICATION FOR CE REPORT

On Behalf of

CHANGZHOU SUNNERGY ENERGY TECHNOLOGY CO., LTD.

Safety Helmet

Model: SNHE, SNH2, SNHD, SNHO, SNHP, SNHU, SNHC-H, SNH-1,SNH-7

Prepared For : CHANGZHOU SUNNERGY ENERGY TECHNOLOGY CO.,LTD. No.1-715/716, FUHANYUAN, EAST TAIHU ROAD, XINBEI DISTRICT, CHANGZHOU CITY, JIANGSU PROVINCE.

Prepared By : TMC Testing Services (Shenzhen) Co., Ltd. 1st Floor, Block A1, Zone A, Xinshidai Gongrong Industrial Park, No. 2, Shihuan Road, Shiyan Street, Baoan District, Shenzhen, China Tel: +86-755- 86642861 Web: <u>www.tmc-lab.com</u> E-mail: Cert@tmc-lab.com



Report No.: TMC181119105-S

	Т	EST Repo	rt	1944 P		
NC and and	EN 39	7-2012+A1	-2012	Ma	Man	
Standard specifie	s physical and p	erformance	requirements	, methods of	test and	<
marking requirements for i		helmets. The		requirements	apply to hel	mets
Report	<i><i><i>(</i>)</i></i>	11		1	11.	~
Reference No	TMC18111910	5-S	. C	20	J.C.	
n Len Len	< PM	< EN	Tack He	1 Can	1 Kan	~
Tested by (+ signature)	Jack He		Juni			
NC MC M	- Aller	Ma	Ma	Ma	Ma	
Approved by (+ signature)	Lemon Rao	210	Lh	LIA	110	~
Date of issue	Nov. 28, 2018	. 6	. (6	. 6.	
Contents	11 pages	~ MAL	~ Mr	~ M	~ Mr	1
Testing laboratory						
Name	TMC Testing S	ervices (She	nzhen) Co I t	d.	Jo.	
1, 20, 20,	101	Ser.	10	101	rial Park. No.	2.
Address	1st Floor, Block Shihuan Road,	k A1, Zone A Shiyan Stre	, Xinshidai Go	ngrong Indust		2, <
1, 20, 20,	1st Floor, Block Shihuan Road,	k A1, Zone A Shiyan Stre	, Xinshidai Go	ngrong Indust		2, 🔨
Address	1st Floor, Block Shihuan Road,	k A1, Zone A Shiyan Stree e	, Xinshidai Go et, Baoan Disti	ngrong Indust rict, Shenzher	n, China	2, <
Address	1st Floor, Block Shihuan Road, Same as above CHANGZHOU	k A1, Zone A Shiyan Stree SUNNERGY , FUHANYU/	, Xinshidai Go et, Baoan Distr KENERGY TE AN, EAST TAII	ngrong Indust rict, Shenzher CHNOLOGY HU ROAD, XI	n, China CO.,LTD	<
Address Testing location Applicant Name	1st Floor, Block Shihuan Road, <u>Shihuan Road</u> , CHANGZHOU No.1-715/716	k A1, Zone A Shiyan Stree SUNNERGY , FUHANYU/	, Xinshidai Go et, Baoan Distr KENERGY TE AN, EAST TAII	ngrong Indust rict, Shenzher CHNOLOGY HU ROAD, XI	n, China CO.,LTD	<
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Address Testing location Applicant Name : Address Test specification Standard	1st Floor, Block Shihuan Road, CHANGZHOU No.1-715/716 CHANGZHOU	k A1, Zone A Shiyan Stree SUNNERGY , FUHANYU/ CITY, JIANC	, Xinshidai Go et, Baoan Distr KENERGY TE AN, EAST TAII SSU PROVINC	ngrong Indust rict, Shenzher CHNOLOGY HU ROAD, XI	n, China CO.,LTD	<
Address Testing location Applicant Name Address	 1st Floor, Block Shihuan Road, Same as above CHANGZHOU No.1-715/716 CHANGZHOU EN 397-2012+. Compliance with N.A. 	k A1, Zone A Shiyan Stree SUNNERGY , FUHANYU/ CITY, JIANC	, Xinshidai Go et, Baoan Distr KENERGY TE AN, EAST TAII SSU PROVINC	ngrong Indust rict, Shenzher CHNOLOGY HU ROAD, XI	n, China CO.,LTD	<
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Address	 1st Floor, Block Shihuan Road, Same as above CHANGZHOU No.1-715/716 CHANGZHOU EN 397-2012+. Compliance with N.A. N.A. Safety Helmet N/A SNHE 	k A1, Zone A Shiyan Stree SUNNERGY , FUHANYU/ CITY, JIANC A1-2012 th EN 397-20 SUNNERGY FUHANYUA	, Xinshidai Go et, Baoan Distr Y ENERGY TE AN, EAST TAIL SSU PROVINC 12+A1-2012 Y ENERGY TE N, EAST TAIH	CHNOLOGY	n, China CO.,LTD NBEI DISTRIC	СТ, СТ, СТ СТ СТ СТ СТ СТ СТ СТ СТ СТ

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 Testing&Certification Services
 t (86)755 86642861



Test case verdicts	len. Len.	Lb.	Lo.	10.
Test case does not apply to the test object	JAN JAN	MAC	-WAC	A.
Test item does not meet the requirement	: F(ail)		· · · ·	
Date of receipt of test item(sample) Date (s) of performance of tests	1 C	28 2018	LAND	14

Safety Helmet Model :SNHE PC meet a criterion no: EN 397:2012+A1:2012

Copy of marking plate (for example model SNHE):

size range (in centimetres).17 X 22.5 date of manufacture: 2018.11 CHANGZHOU SUNNERGY ENERGY TECHNOLOGY CO.,LTD. Made In China

Note: marking label for other models are identical to above except for model name and rating.

Remark:

-The above markings are the minimum requirements required by the safety standard. For the final productions samples, the additional markings which do not give rise to misunderstanding may be added.

Label testing

Rubbing for 15 s with a piece of cloth soaked with water. And a further 15 s with a piece of cloth soaked with petroleum.-

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1.	The second se	397	1.	1.	1.
Clause	Requirement + Test	R	esult - Remark	1	Verdict
, and	and and me	- all	- ML	- and	no.
3	Terms and definitions	1.	~ · ·	1.	Р
3.1	industrial safety helmet	1	6	6	P
3.2	shell	1 and	1 and	N/4	P
3.3	peak				Р
3.4	brim	. (6	. (P
3.5	harness	× AN	1 MM	X M	× P
	a) of maintaining the helmet in positio head	n on the	-	~	Р
1 the	b) of absorbing kinetic energy during	an impact	- MA	- and	P
3.5.1	headband	1.	· · · ·		Р
3.5.2	nape strap	1	6	. (.	P
3.5.3	cradle	1 BUC	- Enc	X MM	P
3.5.4	cushioning				Р
3.5.5	anti-concussion tapes	. (. C.	. (.	P
3.5.6	comfort band or sweatband	XM	× KN	X MA	× P
3.6	protective padding		<u> </u>		Р
3.7	ventilation holes	.0			N/A
3.8	chin strap	101	1/11	101	< P P
3.9	chin strap anchorage			2	Р
1 MA	a) the component(s) fitted to the ends chinstrap material for this purpose	of the	THAC	NAC	R
	b) that part of the helmet shell or of the headband where the chin strap is atta		-		Р
3.10	helmet accessories	1 Mars	14 N	- Who	P
3.11	wearing height	<i>.</i>	~	· · · ·	Р
3.12 🕜	external vertical distance	6	6	6	P
3.13	internal vertical distance	× M	1 BUL	1 m	P
	1) with the cradle present				Р
THAC	2) with the cradle and any protective p the crown area removed, so that the s on the headform		THAC	TIMC	- MAC
3.14	internal vertical clearance	3			Р
Ale.	1) with the cradle present;	- Mar	Mr.	- Mar	P
112	2) with the cradle removed and any p padding in the crown area left in place		1	10	Р
3.15	horizontal distance	THAC	THAC	THAC	R
1	Physical requirements	7			Р
4.1	Materials and construction				Р
4.2	External vertical distance				Р
4.3	Internal vertical distance				P
1.4	Internal vertical clearance				P

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	EN 397		11	1.	11
Clause	Requirement + Test	Resu	lt - Remark	1	Verdict
- an	and and and	NV IV	- M	- an	no.
4.5	Horizontal distance		1	1	P
4.6	Wearing height	1	1	7	Р
1 kg	80 mm for helmets mounted on headform s designation 525	ize	1 MAC	THAC	< (P
m	85 mm for helmets mounted on headform s designation 555	ize	SIL	SIL	P
Lb.	90 mm for helmets mounted on headform s designation 585	ize	1m.	1/12	P
4.7	Harness	Jo.	J.	J.C.	Р
4.7.1	Headband/nape strap	C.	260	161	P
4.7.2	Cradle				Р
4.7.3	Comfort band or sweatband	Sar	One	JAro	Р
4.8	Chin strap	la.	Lu.	Lb.	P
4.9	Ventilation				Р
4.10	Accessories	2Ne	One	Are	P
14	Le Le Le L	12	1 m	14	110
5	Performance requirements				Р
5.1	Mandatory requirements	6	na.	Ma.	A P
5.1.1	Shock absorption	1	1.	11	P
5.1.2	Resistance to penetration	1	1	/	Р
5.1.3	Flame resistance	N'S	- White	NU	P
5.1.4	Chin strap anchorages		1.	1.	Р
5.1.5	Label	1	6	6	Р
5.2	Optional requirements	est -	1 MAY	AN AND	P
5.2.1	Very low temperature (– 20 °C or – 30 °C)			. / .	Р
5.2.2	Very high temperature (+ 150 °C)	. (.	. (.	. (.	Р
5.2.3	Electrical properties	4n-	X MM	~ M	P
5.2.4	Lateral deformation			2	Р
5.2.5	Molten metal splash	S.	.0	.0	Р
× lan	a) be penetrated by the molten metal.	GU-	X Par	1 MI	< P
, wh	b) show any deformation, measured at right a to the base plane of the helmet, greater than 10 mm.	angles	MC	MC	P
110	c) burn with the emission of flame after a period 5 s has elapsed after the pouring of molten m	iod of netal	11	11	Р
. (has ceased.	- C -			

		· / ·
6	Test requirements	Р
6.1	Samples	Р
6.2	Conditioning for testing	Р
6.2.1	Temperature conditioning cabinet	Р
6.2.2	Pre-conditioning	Р

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	EN 397		111	. / .
Clause	Requirement + Test	Result - Remark	1	Verdict
- and	WILL WILL WILL	an an	- an	an'
6.2.3	Low temperature			P
6.2.4	High temperature	6 6	6	Р
6.2.5	Water immersion	and all	N/ N/	P
6.2.6	Artificial ageing			P
6.2.6.1	Apparatus	.CC.	. (.	Р
6.2.6.2	Procedure	Mr An	~ MA	P
6.2.7	Very low temperature			P
6.2.8	Very high temperature	J. J.		Р
6.2.8.1	Apparatus	lan X lan	× 601	< P
6.2.8.2	Procedure			P
6.3	Testing atmosphere	Ja Ja	Ja	Р
6.4	Headforms	la, La,	1 lai	P
6.4.1	Construction			Р
6.4.2	Selection of size	Jn Jn	Sa	P
6.5	Measurement of clearance, distances and we height	earing	Lean	P
6.6	Shock absorption	0.0		e
6.6.1	Principle	100	× la	< P P
6.6.2	Apparatus			Р
6.6.3	Test procedure	Ja Ja	Ja.	Р
Lin	a) the sample shall be mounted on the appro headform (see 6.4.2) in the manner in which intended to be worn on the head, ensuring	it is	- Lev.	P
1 MM	(minimal) clearance between the headband a the headform.	1. An	THAT	< 10°
THAC	b) the striker shall be allowed to fall on to the centre of the crown of the helmet shell from a height of 1 000 mm \pm 5 mm, measured from point of impact on the helmet to the underside the striker.	n the	THAC	TIM
6.7	Resistance to penetration	Mrs. Mrs	- Mar	P
6.7.1	Principle	1. 1.	1 in	P
6.7.2	Apparatus	1 1	1	Р
6.7.3	Test procedure	an in	Ma.	P
1	a) the sample shall be mounted on the appro headform (see 6.4.2), ensuring (minimal) clea between the headband and the headform.		ALC .	P
Low	b) the striker shall be allowed to fall on to the helmet shell from a height of 1 000 mm \pm 5	mm,	Llow	< P
	measured from the point of impact on the hel shell to the point of the striker. The impact po shall be within a circle of radius 50 mm centre the top of the helmet. The helmet shall be tilte the headform as necessary.	int ed on		

1.	1. 1.	E	N 397	1.	1	1.
Clause	Requirement + Test	č	F	Result - Remark	. (Verdio
AP -	and and	an	No No	AN-	AN Y	19 2
	c) each of the helmets as impacted in a different pos		6.1 shall be			P
6.8	Resistance to flame	Mar	Ma.	Ma.	- No.	R
6.8.1	Principle	11.	11	11.	11.	P
6.8.2	Apparatus	1	1		/	P
6.8.3	Test procedure	Mar	- Mar	- and	M	
6.9	Chin strap anchorage	1.	1.	1	1.	F
6.9.1	Principle	6	1	6	6	F
6.9.2	Apparatus	NIN	NY NY	- and	AN STR	
6.9.3	Procedure					F
6.10	Electrical properties	6	0		0	F
6.10.1	Test 1	1 AN	1 all	- M	X MA	
6.10.1.1	Principle					F
6.10.1.1	Procedure	. (.	. (.		. (.	F
6.10.2	Test 2	× PM	× PM	× PM	X MM	19
6.10.2.1	Principle					F
6.10.2.2	Procedure		.0			
5.10.3	Test 3	1 Car	× 191	100	× la	160
5.10.3.1	Principle					- F
6.10.3.2	Procedure	30	30	C	J.	
5.11	Lateral deformation	14	14	10.	1 m	1
6.11.1	Principle					F
6.11.2	Procedure	J.	Jn.	J.C.	J.	
6.12	Molten metal splash	14,	X Car	161	10	17
6.12.1	Principle					F
6.12.2	Apparatus	One	Sme	SIL	SIL	100
6.12.3	Procedure	Lb.	Lb.	16.	1 m	1
	a) whether any metal pene	etrated the he	elmet shell.	NO		F
Ale	b) the extent of any deform			NO	Olio	1
11	c) if the shell burned with the after a period of 5 s.	A 14		NO	1 m	
Are	anc anc	SIL	One	Sna	One	Are
7	Marking	Lu.	Lu.	14	1 m	1
7.1	Markings on the helmet					F
Ale.	a) number of this Europea	in Standard.	Also.	- Mar	Ale.	12
11	b) name or identification m	nark of the m	anufacturer.	11	11	1
	c) year and quarter of mar	nufacture.				
	d) type of helmet (manufa This shall be marked on b Harness.		- /			6
	e) size or size range (in ce marked on both the shell a TMC Testing Services(Shenzho	and the harne	ess	shidai Gongrong In		F

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1.	EN 397	1. 1.	1.
Clause	Requirement + Test	Result - Remark	Verdict
de	and and and and	and and	- an
1.	f) abbreviation for the material of the shell shall be	1. N.	р
1	in accordance with EN ISO 472. (For example,	1 1	1
An	ABS, PC, HDPE, etc.)	W ML	- Al
7.2	Additional information	1. 1.	P
7.2.1	A label shall be attached to each helmet giving the following information, provided precisely and comprehensively in the language of the country of sale:	TIME TIME	T NAC
Č.	"For adequate protection this helmet must fit or be		P
NY	adjusted to the size of the user's head.	M MC	1 AN
	The helmet is made to absorb the energy of a blow by partial destruction or damage to the shell and	1. 1.	
. 6.	the harness, and even though such damage may		. (
~ Mr	not be readily apparent, any helmet subjected to	NN NN	14
	severe impact should be replaced.		
. 6.	The attention of users is also drawn to the danger of modifying or removing any of the original		. (
XM	component parts of the helmet, other than as	AN AN	× M
	recommended by the helmet manufacturer.		
. C.	Helmets should not be adapted for the purpose of		
Ny x	fitting attachments in any way not recommended by the helmet manufacturer.	X MAL X MAL	AN X
	Do not apply paint, solvents, adhesives or self-		
. (.	adhesive labels, except in accordance with	6 6	. 0
Apr.	instructions from the helmet manufacturer."	ALL ALL	- Al-
7.2.2	Each helmet shall carry moulded or impressed marking or shall carry a durable self-adhesive		P
. C.	label stating the optional requirements complied	. C C.	
NY	with, as follows:	AND AND	1 M
	Optional requirement	Marking/Label	Р
. (.	Very low temperature	– 20 °C or – 30 °C as	Р
- MY	AND AND AND AND	appropriate	- M
	Very high temperature	+ 150 °C	P
	Electrical insulation	440 V a.c.	P
× 191-	Lateral deformation LD	Molten metal splash MM	P
7.2.3	The following information, provided precisely and		P
0	comprehensibly in the official language(s) of the country of sale, shall accompany each helmet:	Ja Ja	
1 km	a) the name and address of the manufacturer;	141 141	P
	b) instructions or recommendations regarding		P
Jan C	adjustment, fitting, use, cleaning, disinfection,	Jac Ja	
× 101	maintenance, servicing and storage. Substances	Len Len	101
	recommended for cleaning, maintenance or	1	<u></u>
	disinfection shall have no adverse effect on the		
	helmet and shall not be known to be likely to EN 397:2012+A1:2012 (E) 22 have any adverse		
	effect upon the wearer, when applied in		
	accordance with the manufacturer's instructions;		

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1.	EN 397	1.	1.	1.		
Clause	Requirement + Test	Result - Remark	. (Verdict		
-dr	and and and an	AN A	- M	- dr		
1.	c) details of suitable accessories and appropriate spare parts;	1.		Р		
THAN	d) the significance of the optional requirements complied with and given in accordance with 7.2.2, and guidance regarding the limits of use of the helmet, corresponding to the respective risks;	THAC	TIME	T IP		
1 MA	e) guidance regarding the obsolescence deadline or period of obsolescence of the helmet and its component parts;	TIME	TIME	(IP		
1 KMC	f) guidance regarding details of the type of packaging suitable for transportation of the helme	í. That	THAC	1 MPC		
A	Annex A(informative)	C	Jac.	N/A		

0	A	Annex A(informative)	Mrs Mrs	One	SIL	N/A
	×10	Recommendations for the construction of industrial sa		ZIn.	110	N/A
	Jo.	Jan Ja	Ja Ja	30	5	Jo.
	D S	Anna an D(information)	12. 12.	an an	12	

B	Annex B(informative)	1		< P
	Alternative procedure for artificial ageing			Р
Jan .	Jac Jac Jac	Ja.	J.C.	JaC.
C	Annex C(normative)	461	× 61.	X (C) P
	Test results — Uncertainty of measurement			Р
) as	In In In In In	J.	-nC	Ja.
D	Annex D(informative)	161	161	P

Significant technical changes between this European Standard and EN 397:1995

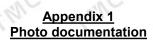
14.

ZA	Annex ZA(informative)			N/A
THAC	Relationship between this European Standard and the Essential Requirements of EU Directive 89/686/EEC Personal Protective Equipment	(EU) 2016/425	THAC	N/A



attachment 3: Photo Documents

Report No.: TMC181119105-S







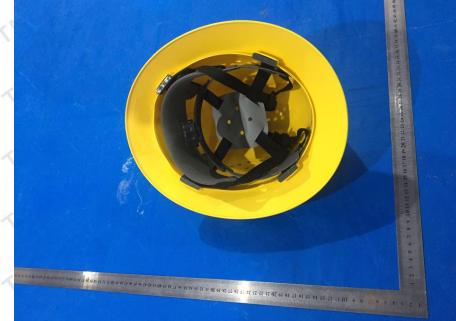


Fig.1

TMC Testing Services(Shenzhen) Co., Ltd. Testing&Certification Services

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