To: **Ms. Noreen Bianca Lanado - FDT Purchasing**

Supplier Control No.: 19-005

Date: 2/18/2019

cc:

Supplier: SPPI

cc:

SUPPLIER		
	Section	RMC
	Person in charge	2pelayan T. SILVAN
	Approval	D. de Justo

☐ Support for the RoHS

4 M Change notification (変 更 通 知 書)

Part number	KD04072-Y294	Part name	SIDE GUIDE L3
Model	G960	Presence of attached datum and sample	Appending · unappending

■Content of change]

- ■ Man (Worker's change) — CHANGE OF TRIAL IN-CHARGE
- ☐ Machine (Equipment change) — FROM AB MOULD INJECT TO SPPI INJECT
- ☐ Material (Division of material change)
  - ☐ Support for the RoHS (Certificate with a data must be attached) 【 Cr(VI) , Cd, Hg, Pb, PBB, PBDE 】
  - ☐ Material change
  - ☐ End of life (EOL)
- ☐ Method (Work method change)
- ☐ Others ( )

■Change reason] Mold was fabricated in AB MOULD PHILS., transferred to SPPI for mass production.

FDTP	Purchasing Section	
	Control Number	PNP-EX-M-Mo-0016
	Person in charge	N.B. Lanado
	Approval	M.A. CAPAN

[Change time]	Evaluation result before hand	Appending · unappending

FDTP Evaluation and Result

FDTP QC Control No.:

Date:

Section	FDTP QCI/QA
Person in charge	
Approval	

→

Section	FDTP PE
Person in charge	
Approval	

→

Section	FTEC PE/QA
Person in charge	
Approval	

4 M Change answer

[Conclusion] Judgment : 4 M Content of change request

☐ Acceptable ☐ Not acceptable

■ [Matters in request]

■ [Opinion and evaluation result]

TO:FDTP) INSPECTION SECTION

To be filled by supplier 依頼元記入欄

Date 18 February, 2019

Requesting Supplier 依頼元名 SPPI

QUALIFICATION APPROVAL INSPECTION REQUEST FOR PLASTIC MOLDING DIE AND THE FIRST LOT PARTS
モールド型適用品・初回品 検査依頼票 兼 サンプル送付票

Part No. 図番	KD04072-Y294	Part Name 品名	SIDE GUIDE L13	Rev. 版数	0 版数 ⇒ Rev. 11 版数	P.O. number 型起工製番	
Molding die classification 区分	New ☐ DIE MAKE 新規 ■ 2ND DIE	or Revision up 改版	or Transfer 移管、転注	or Others ( ) その他( )	No. of cavity キャビティ数	1	※The number of samples to be submitted must be 5pcs. or more every each cavity. ※各キャビティ毎に5ケ以上提出の事

Application description at the inspection request 検定依頼時の申請内容					
① The purpose of inspection request 検定依頼目的	fill out from the 2nd trial TRY2以降について記入				
② location of the die remodeling 型改造箇所	fill out a detail for die remodeling location 型工事箇所を具体的に記入 SAMPLE FOR APPROVAL-T1 IN SPPI TRANSFFRED MOULD FROM JZT (CHINA)				
③ Number of the samples サンプル数	6 pcs. 個	If lacking of samples, fill out its reason 不足の場合理由を記入			
self check ④ Attached inspection data 自主検査データ添付	Yes 有り / No 無し	If there is no a data, fill out its reason データ未添付の理由を記入			
self check ⑤ Measurement environment 測定環境	Temperature 温度	25 ℃	Humidity 湿度	%	
self check ⑥ Change of the molding condition 成形条件変更有無	Yes 有り / No 無し	⑦ additional working/remedy 追加工／矯正有無	Yes 有り / No 無し	If change the condition, submit the new molding condition 条件変更の場合は新条件提出の事	
self check ⑧ Molding condition slip 成形条件票添付	Yes 有り / No 無し	⑨ remarks 備考			

※ If the Qualification Approval Request Form have incomplete data, the trial sample will not be accepted/inspected.

To be filled by FDTP FDTP記入欄

○FDTP) PURCHASE SEC.MANAGER
○FDTP)TOOL&DIE DEPT. MANAGER
○FDTP)MECHA)MANUFACTURING DEPT. MANAGER
○FTEC)INSPECTION SEC.MANAGER
○
○
○
○

QUALIFICATION APPROVAL INSPECTION RESULT FOR PLASTIC MOLDING DIE AND THE FIRST LOT PARTS
モールド型適用品・初回品 検査結果連絡票

FDTP)INSPECTION SECTION

Part No. 図番		Rev. 版数		Supplier 依頼元	
Part name 品名				Attached data メーカデータ	Yes 有り / No 無し
Die classification 区分	New ☐ DIE MAKE 新規 ☐ 2ND DIE	or Revision up 改版	or Transfer 移管、転注	or Others ( ) その他( )	Molding condition slip 成形条件票	Yes 有り / No 無し

TRY No.	Inspection date 検査年月日	judgement 判定	Defective part 不良箇所			Remarks 備考	Inspecter 検査担当	Checked 照査	Approved 承認
1st trial 第1回トライ		GOOD 合格 / NO GOOD 不合格	Dimension 寸法不良 / Appearance 外観不良 / others その他		location 箇所				
2nd trial 第2回トライ		GOOD 合格 / NO GOOD 不合格	Dimension 寸法不良 / Appearance 外観不良 / others その他		location 箇所				
3rd trial 第3回トライ		GOOD 合格 / NO GOOD 不合格	Dimension 寸法不良 / Appearance 外観不良 / others その他		location 箇所				
4th trial 第4回トライ		GOOD 合格 / NO GOOD 不合格	Dimension 寸法不良 / Appearance 外観不良 / others その他		location 箇所				

Unit Name 機種名	Article 記事 measurement instrument 測定器	
	1. Digital calipers デジタルノギス	7. Block gauge ブロックゲージ
	2. Digital Micrometer デジタルマイクロメーター	8. Protractor プロトラクター
P.O. Number 型起工製番	3. Digital height gauge デジタルハイトゲージ	9. Projector 工具顕微鏡
	4. Pin gauge ピンゲージ	10. CMM 三次元測定器
	5. Screw gauge ネジゲージ	11. Gear rolling tester 噛合い試験機
	6. R gauge Rゲージ	12. Laser scan micrometer レーザーマイクロメーター

SPPI
Sanyo Plastic Philippines, Inc.

TO: Fujitsu Die Tech Corp. of the Phils.

CERTIFICATE FOR MATERIAL USED

D.R./P.O. No. :

QUANTITY : 6

PART NUMBER : KD04072-Y294

PART NAME : SIDE GUIDE L3

MATERIAL USED

MATERIAL GENERIC NAME : ABS

MATERIAL DESIGNATION : 100G10

MANUFACTURE OF MATERIAL : TORAY INDUSTRIES INC.

UL94 FLAME CLASS : 94HB

UL FILE No. : E41797

The amount of this product of the regrind materials used is weigth ratio 25% or less according to UL 746 regulations.

We certify the above description.

DATE 18-Feb-19

COMPANY NAME : SANYO PLASTIC PHILS.,INC

SIGN : MS.M.HERNANDEZ
Supervisor or Manager
(Signature over printed name)

Note: PART NAME can be written as per the drawing
MATERIAL USED shall be stated as per the **"UL Online Certification Directory"**

Revision 03
9/14/2015

SPPI

Sanyo Plastic Philippines, Inc.

OPERATIONS DIVISION
QUALITY CONTROL DEPARTMENT

PRODUCT EVALUATION SHEET

Part Name : **SIDE GUIDE L3**
Part Number: **KD04072 - Y294**
Model: -
Material Name: PC NX86K - 15 BLACK

Ink Name: N/A
Trial Date: 14-Feb-2019
Evaluation Date: 15-Feb-2019
PTS # / Sample #: 19-0016-FDT

■ Injection ☐ Printing ☐ Shafting

MARK	COORDINATES	Standard	Tolerance	Sample No./Cavity No. 1	2	3	IMTE USED	JUDGEMENT	REMARKS
	12/A	WARP SHOULD BE 0.7 OR LESS		0.100	0.100	0.100	E	OK	REVERSE WARPING
	12/A	186.50		186.77-186.80	186.75-186.83	186.79-186.87	E	OK	
	4/C-D	50.00	+0.70/-0.50	50.04-50.45	49.97-50.45	50.02-50.47	E	OK	
GO	7/D	ø4	+0.1	4.000	4.000	4.000	C	OK	1
STOP				4.090	4.090	4.090			
GO				4.000	4.000	4.000			2
STOP				4.090	4.090	4.090			
GO				4.000	4.000	4.000			3
STOP				4.090	4.090	4.090			
GO	7/D	ø4	+0.1	4.020	4.020	4.020	C	OK	4
STOP				4.090	4.090	4.090			
GO				4.020	4.020	4.020			5
STOP				4.090	4.090	4.090			
GO				4.020	4.020	4.020			6
STOP				4.090	4.090	4.090			
	7/D-E	59.50	-0.3	59.39-59.45	59.40-59.45	59.39-59.45	I	OK	
A	3/G	47.80	+0.5/-0.6	47.60-47.82	47.66-47.80	47.60-47.82	E	OK	
B				47.52-47.60	47.55-47.66	47.53-47.60			
	10/G-H	11.20	±0.20	11.070	11.090	11.090	E	OK	
	15/G	59.80	+0.6/-1.4	59.03-59.63	59.07-59.71	59.10-59.70	E	OK	

Product Trial Schedule versus Product Drawing

■ Part Number
■ Part Name/Revision Number
■ Material Name

REV. IN DRAWING 11
REV. IN ACTUAL 11
REV. IN P.O

IMTE					
	CALIPER	A	P.PROJECTOR	F	Remarks:
	CMM	B	R.TESTER	G	
	PIN GAUGE	C	PUSH/PULL GAUGE	H	**T1 IN SPPI-TRANSFERRED MOULD FROM JZT**
	MICROMETER	D			
	H.GAUGE	E	OTHER	I	

Overall Judgement	Injection Development		QC Department		Customer Approval
	Inspected	Checked	Checked	Noted	
FOR APPROVAL	Ms. J.Galicia	Mr.A.Punongbayan	Ms. E. Sumague	Ms. D de Justo	

SANYO PLASTIC PHILS. INC.

110 East Main Ave. SEPZ., L.T.I.
Biñan, Laguna, Philippines

SUMITOMO DEMAG INJECTION MACHINE SET UP SHEET

CAPACITY : 100 TONS | M/C. NO. 45

CONTROL NO.	FDTP-567-45-01	CONTROL NO.		CONTROL NO.		CONTROL NO.	
PART NAME	GUIDE L3	PART NAME		PART NAME		PART NAME	
PART NUMBER	KD04072-Y294	PART NUMBER		PART NUMBER		PART NUMBER	
CUSTOMER	FDTP	CUSTOMER		CUSTOMER		CUSTOMER	
CAVITY AMOUNT	1	CAVITY AMOUNT		CAVITY AMOUNT		CAVITY AMOUNT	
WEIGHT PER PIECE		WEIGHT PER PIECE		WEIGHT PER PIECE		WEIGHT PER PIECE	
SET UP BY:	J. ARANGUREN	SET UP BY:		SET UP BY:		SET UP BY:	
SET UP DATE:	14-Feb-19	SET UP DATE:		SET UP DATE:		SET UP DATE:	
EVALUATED BY:	J. GALICIA	EVALUATED BY:		EVALUATED BY:		EVALUATED BY:	
NOTED:		NOTED:		NOTED:		NOTED:	
APPROVED:		APPROVED:		APPROVED:		APPROVED:	

CLAMP CONDITION

APPLIED CLAMPING FORCE	60	APPLIED CLAMPING FORCE		APPLIED CLAMPING FORCE		APPLIED CLAMPING FORCE	
OPEN/ CLOSE SPEED		OPEN/ CLOSE SPEED		OPEN/ CLOSE SPEED		OPEN/ CLOSE SPEED	

MOLD OPEN

POSITION		VELOCITY		POSITION	VELOCITY	POSITION	VELOCITY	POSITION	VELOCITY
LIMIT	250	VLIMIT	30	LIMIT	VLIMIT	LIMIT	VLIMIT	LIMIT	VLIMIT
2ND	150	2ND	35	2ND	2ND	2ND	2ND	2ND	2ND
1ST	80	1ST	25	1ST	1ST	1ST	1ST	1ST	1ST

MOLD CLOSE

CHANGE PARAG				CHANGE PARAG		CHANGE PARAG		CHANGE PARAG	
POSITION		VELOCITY		POSITION	VELOCITY	POSITION	VELOCITY	POSITION	VELOCITY
1ST	140	1ST	20	1ST	1ST	1ST	1ST	1ST	1ST
2ND	65	2ND	15	2ND	2ND	2ND	2ND	2ND	2ND
MLD.CLMP	1.32	VCLAMP	10	MLD.CLMP	VCLAMP	MLD.CLMP	VCLAMP	MLD.CLMP	VCLAMP
POS.	25	LW PRES	15	POS.	LW PRES	POS.	LW PRES	POS.	LW PRES

EJECTOR SETTLING

	RETRACT	FORWARD 1ST	EJECT	RETRACT	FORWARD 1ST	EJECT	RETRACT	FORWARD 1ST	EJECT	RETRACT	FORWARD 1ST	EJECT
POS.	0	0	43									
VEL.	20	20	12									
PRES.	20		25									

MODE	NORMAL	TIMER CONT.		MODE	TIMER CONT.	MODE	TIMER CONT.	MODE	TIMER CONT.
EJ.COUNT	1	EJ. KEEP	0.3	EJ.COUNT	EJ. KEEP	EJ.COUNT	EJ. KEEP	EJ.COUNT	EJ. KEEP
EJ. START	PEN LIM	RET. KEEP	0	EJ. START	RET. KEEP	EJ. START	RET. KEEP	EJ. START	RET. KEEP
DELAY	0	RE-EJ. KEEP	0	DELAY	RE-EJ. KEEP	DELAY	RE-EJ. KEEP	DELAY	RE-EJ. KEEP

INJECTION CONDITION

HOLDING/ PACKING

HOLD PRESS. VEL	15	HOLD PRESS. VEL		HOLD PRESS. VEL		HOLD PRESS. VEL	
NO. OF STAGES	3	NO. OF STAGES		NO. OF STAGES		NO. OF STAGES	

TIME		PRESSURE		TIME	PRESSURE	TIME	PRESSURE	TIME	PRESSURE
4TH		4TH		4TH	4TH	4TH	4TH	4TH	4TH
3RD	0.5	3RD	500	3RD	3RD	3RD	3RD	3RD	3RD
2ND	2	2ND	650	2ND	2ND	2ND	2ND	2ND	2ND
1ST	2	1ST	500	1ST	1ST	1ST	1ST	1ST	1ST

INJECTION/ FILLING

FILL TIME	3	FILL TIME		FILL TIME		FILL TIME		FILL TIME	
FILL PRESSURE	1400	FILL PRESSURE		FILL PRESSURE		FILL PRESSURE		FILL PRESSURE	

POSITION		VELOCITY		POSITION	VELOCITY	POSITION	VELOCITY	POSITION	VELOCITY
5TH	8	5TH	20	5TH	5TH	5TH	5TH	5TH	5TH
4TH	45	4TH	40	4TH	4TH	4TH	4TH	4TH	4TH
3RD	60	3RD	20	3RD	3RD	3RD	3RD	3RD	3RD
2ND	65	2ND	80	2ND	2ND	2ND	2ND	2ND	2ND
1ST		1ST		1ST	1ST	1ST	1ST	1ST	1ST
COOLING	20	FILLING		COOLING	FILLING	COOLING	FILLING	COOLING	FILLING
HOLD		OPERATION	STD	HOLD	OPERATION	HOLD	OPERATION	HOLD	OPERATION
INTERVAL	50	V-P PRES	0	INTERVAL	V-P PRES	INTERVAL	V-P PRES	INTERVAL	V-P PRES
V-P SWITCH	POS. SW	DOSE MODE	STD	V-P SWITCH	DOSE MODE	V-P SWITCH	DOSE MODE	V-P SWITCH	DOSE MODE
HOLDING PRES		DECELARATING		HOLDING PRES	DECELARATING	HOLDING PRES	DECELARATING	HOLDING PRES	DECELARATING
OPERATION	STD	PATTERN		OPERATION	PATTERN	OPERATION	PATTERN	OPERATION	PATTERN

EXTRUDER SETTING

PULL BACK - BEFORE

POS	0 mm	VEL.	25 mm/s	POS mm	VEL. mm/s	POS mm	VEL. mm/s	POS mm	VEL. mm/s
	1ST	2ND	PLAST	1ST	2ND PLAST	1ST	2ND PLAST	1ST	2ND PLAST
POS	OFF	70	73	POS		POS		POS	
BCK PRES	OFF	80	70	BCK PRES		BCK PRES		BCK PRES	
REV	OFF	90	80	REV		REV		REV	
DELAY	ON			DELAY		DELAY		DELAY	

PULL BACK - AFTER

POS	3 mm	VEL.	25 mm/s	POS mm	VEL. mm/s	POS mm	VEL. mm/s	POS mm	VEL. mm/s
DELAY		OFF		DELAY		DELAY		DELAY	
MATERIAL NAME		PC		MATERIAL NAME		MATERIAL NAME		MATERIAL NAME	
GRADE		NX86K-15		GRADE		GRADE		GRADE	
COLOR		BLACK		COLOR		COLOR		COLOR	

BARREL TEMP.

T1	305	T4	295	T1	T4	T1	T4	T1	T4
T2	300	T5	290	T2	T5	T2	T5	T2	T3
T3	295			T3		T3		T3	

MOLD TEMP. SETTING

CONTROLLER TYPE	MTC	CONTROLLER TYPE		CONTROLLER TYPE		CONTROLLER TYPE		CONTROLLER TYPE	
CORE	CAVITY	CORE	CAVITY	CORE	CAVITY	CORE	CAVITY	CORE	CAVITY
SET 80	SET 80	SET	SET	SET	SET	SET	SET	SET	SET
ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL

ACTUAL MONITORING

FILL START	75.99	FILL PEAK	1341	FILL START	FILL PEAK	FILL START	FILL PEAK	FILL START	FILL PEAK
V-P SWITCH	8	CYCLE	38.84	V-P SWITCH	CYCLE	V-P SWITCH	CYCLE	V-P SWITCH	CYCLE
CUSHION	7.9	FILLTIME	2.596	CUSHION	FILLTIME	CUSHION	FILLTIME	CUSHION	FILLTIME
HOLD END	8.94	PLAST TM	13.25	HOLD END	PLAST TM	HOLD END	PLAST TM	HOLD END	PLAST TM

REMARKS

> 19-0016-FDT
> MOULD FABRICATED IN JZT
> ZERO SET =TIME
> FLASH =0.200
> VIRGIN MATERIAL
> ± 10 % ON PRESSURE, VELOCITY, TIME AND POSITION
> ±10°c ON TEMPERATURE

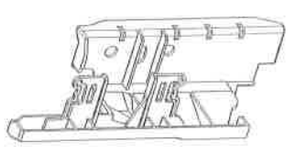
REMARKS

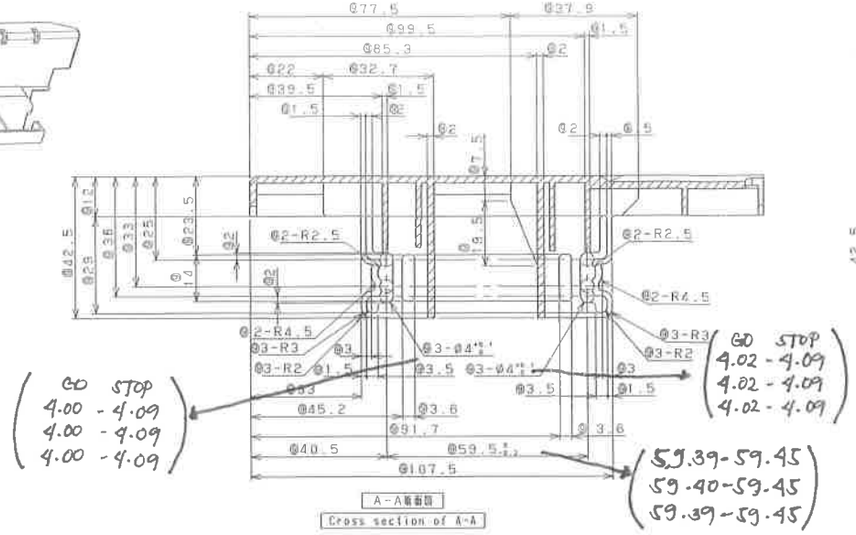
REMARKS

REMARKS

UNCONTROLLED
Sign: Date: 1/21/19

February 16·2019
11 IN SPPI- TRANSFERRED MOULD FROM JZT (CHINA)

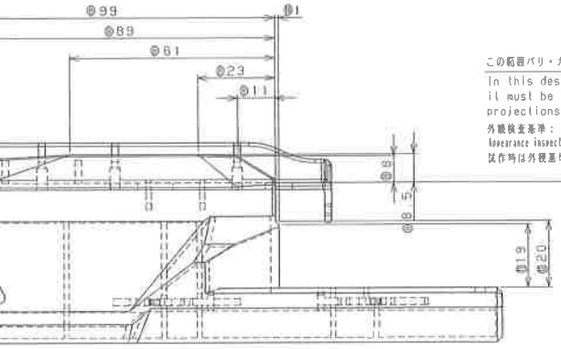


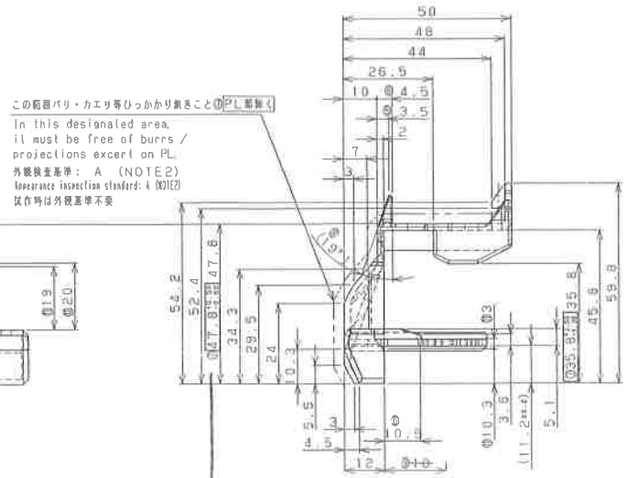


GO STOP
4.00 - 4.09
4.00 - 4.09
4.00 - 4.09

GO STOP
4.02 - 4.09
4.02 - 4.09
4.02 - 4.09

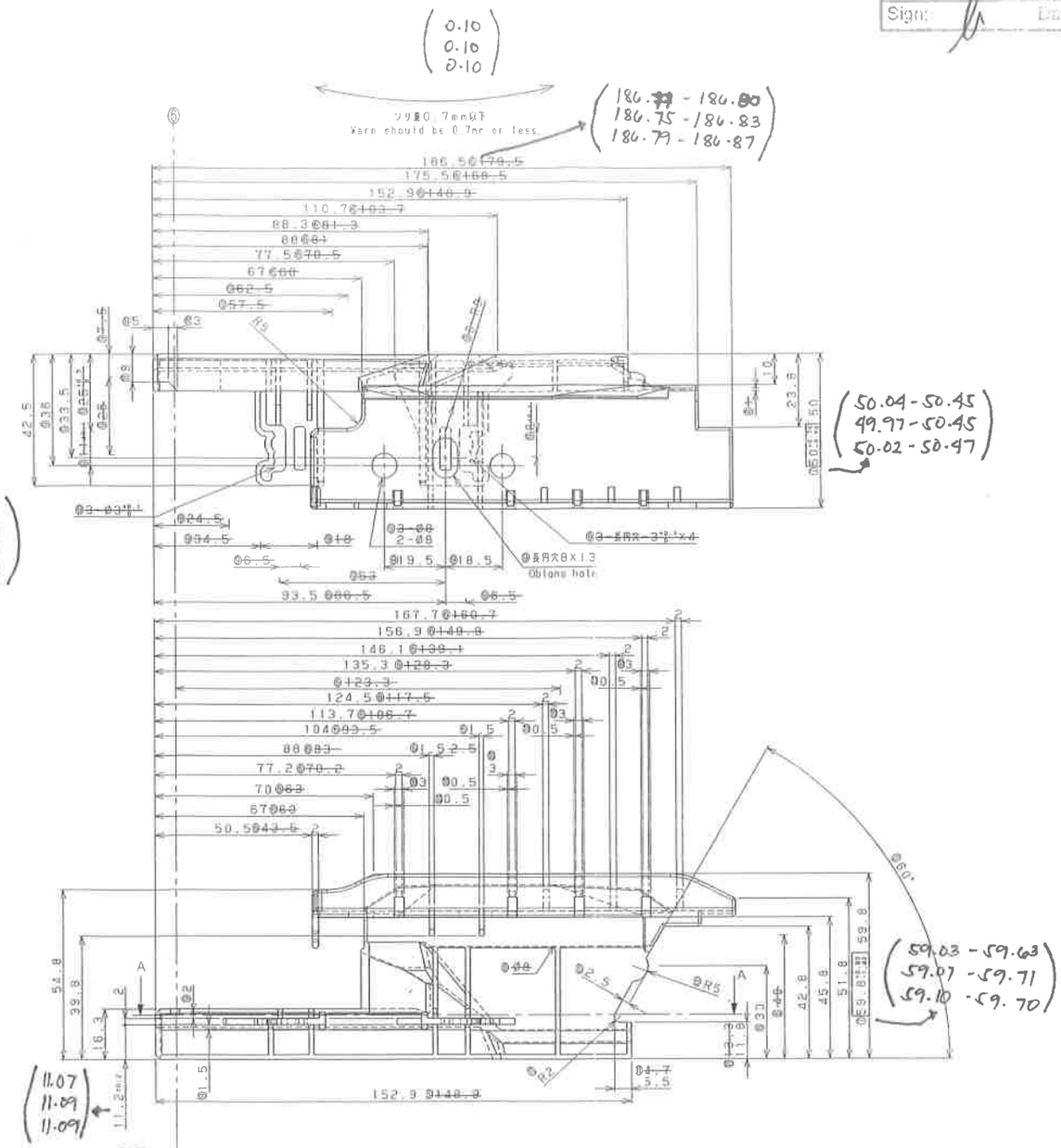
59.39-59.45
59.40-59.45
59.39-59.45





A
47.60-47.82
47.66-47.80
47.60-47.82

B
47.52-47.60
47.55-47.66
47.53-47.62



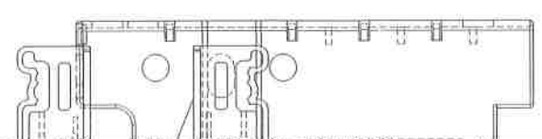
0.10
0.10
0.10

186.80-186.80
186.75-186.83
186.79-186.87

50.04-50.45
49.97-50.45
50.02-50.47

59.03-59.63
59.07-59.71
59.10-59.70

11.07
11.09
11.09



CREATED 2013/03/05
UPDATED 2013/11/26

Material Safety Data Sheet

1. Chemical Product and Company Identification

Product name : "TORAYCA" NX66K-15
Name of supplier : Toray Plastics (Shenzhen) Co.,Ltd.
Address :
450,NanHuan Rd. West ,ShaJing,BaoAn,ShenZhen,Guang Dong Province,P.R. China.(518104)
Telephone number : +86-755-2723-5000
FAX number : +86-755-2723-5016
Manager of Production Department : General Manager

Emergency phone No. :
+86-755-2723-5000

Recommended use of the chemical and restrictions on use :
Recommended use :For household appliance, electronic materials, industrial materials.
Use restriction : Do not use for an internal implantation.
If considering use for medical purposes or food container purposes, please contact us in advance about the specific usage.
Product No.(MSDS No.) : R3E-RCCNX66K15N-2

2. Hazards Identification

GHS Classification :
Health Hazards :
Acute toxicity -Oral : Not classified
Acute toxicity -Dermal : Not classified
Acute toxicity -Inhalation : Classification not possible
Skin corrosion/irritation : Classification not possible
Serious eye damage/eye irritation : Classification not possible
Respiratory sensitization : Classification not possible
Skin sensitization : Classification not possible
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
Specific Target Organ/Systemic Toxicity (Single Exposure) : Not classified
Specific Target Organ/Systemic Toxicity (Repeated Exposure) : Not classified
Aspiration hazards : Classification not possible
Environmental Hazards :
Hazardous to the aquatic environment (Acute) : Not classified
Hazardous to the aquatic environment (Chronic) : Not classified

Other hazards which are not covered by the GHS :
Small amount of volatile gases may be released and may irritate eyes ,nose and throat.
Use adequate local exhaust ventilation during drying and molding.
Sweep up and dispose of spilled resin to eliminate slipping hazard.
Don't pile up too high in order to avoid injury caused by falling of the product.
Because carbon fiber included in resin may be scattered by crushing resin, please take the measures bagging up

immediately
Contact with fibers can cause temporary irritation or itching to skin, eye, nose or throat.

3. Composition/Information on Ingredients

Substance/Mixture : Mixture
Chemical name :
Mixture of Polycarbonate, Flame Retardant, Carbon Fiber, Glass Fiber and additives
Synonyms :
Carbon Fiber, Glass Fiber reinforced Flame Retardant PC Resin

Common chemical name
Polyphenyl-carbonate
Composition(%) : 50% or more
Chemical formula(Constitutional/Structural formula)
(C16H14O3)n
CAS No. : 25971-63-5
ENCS No. : 7-738
ISHL No. : Existing
TSCA : Regd.

Common chemical name
Oligomeric aromatic phosphate
Composition(%) : 20% or less
CAS No. : 139189-30-3
ENCS No. : 3-4403
ISHL No. : 4-9-285

Common chemical name
Carbon fiber
CAS No. : 7440-44-0
ENCS No. : Not applicable
ISHL No. : Not applicable
TSCA : Regd.

Common chemical name
E-Glass
Composition(%) : 7-9%
CAS No. : 65997-17-3
ENCS No. : Not applicable
ISHL No. : Not applicable
TSCA : Regd.

Common chemical name
Maleic anhydride
Composition(%) : 0.1-0.9%
Chemical formula(Constitutional/Structural formula)
C4H2O3
CAS No. : 108-31-6
ENCS No. : 2-1101
ISHL No. : Existing

FOR EXTERNAL USE ONLY

ce immediately (show the label where possible).
air and keep at rest.

ove casualty to fresh air.
r dyspnea.

ce immediately (Show the label where possible.).
melting resin, wash the affected area under water

eek medical advice.

inutes. Arrange for transport to the nearest
soon as possible.
d continue rinsing.

ce immediately (show the label where possible).

temperature polymer.

ar, CO2,

nitrogen oxides, Carbon dioxide etc.
oke.

g area.

tures :

Preventive measures for secondary accident :
Shut off all sources of ignition; No flares, smoking or flames in area.

7. Handling and Storage

Handling :

Preventive measures :

Exposure control for handling personnel :

S20-When using do not eat or drink.
S21-When using do not smoke.
S22-Do not breathe dust.
S23-Do not breathe
gas
fumes.

Protective measures against fire & explosion :

S33-Take precautionary measures against static discharges.

Local ventilation / Total air ventilation :

Because gas is generated when handling molten resin with molding machine or extruder, use adequate local ventilation.
In addition, in a building, the work space carrying out above work, try for total air ventilation with ventilation fans and so on.

Safety treatments :

Prevent deposition of dust.

Safety Measures/Incompatibility :

S29-Do not empty into drains.
Avoid rough handling or dropping.
Don't breathe the gas generated by processing, because it stimulates skin and respiratory organs and it is possible to feel unwell if you breathe many gas.
Prevent deposition of dust, because a dust explosion may happen by static electricity or electric spark.

Storage :

Recommendation for storage :

This material is flammable.Follow fire defense law and local regulations for storage and handling.
Keep away from direct sunlight, water leak, moisture and sources of heat and ignition. Store in the well-ventilated place and locked up.

Incompatible storage condition :

S15-Keep away from heat.

Recommendation on container and packaging materials :

Use unbreakable container and packaging materials satisfied storage condition.

8. Exposure Control/Personal Protection

Engineering measures :

Because gas is generated when high temperature processing, use adequate local ventilation to keep comfortable work environment.
This material is electrically conductive, and it can cause the short-circuiting of electrical equipments. Proper countermeasure should be needed.

Adopted value :

Japan Society for Occupational Health and ACGIH do not determine adopted value of powder-dust of ABS resin.
Generally, data shown below is known about dusts.
Recommended value of Japan Society for Occupational Health(2008) Class 3 dusts
The weighted average per hour : Respirable dust 2mg/m3,Total dust 8mg/m3
Recommend value of ACGIH(2003) General dust
The weighted average per hour : Inhalation dust 3mg/m3,Total dust 10mg/m3

Insufficient incineration may cause the short-circuiting trouble of electrical equipments.

14. Transport Information

UN No./Packaging group :

N.A.

Marine pollutant :

N.A.

Regulation in Japan :

N.A.

Specific safety measures and conditions on transport :

Avoid wetting or rough handling so that the packaging will not be damaged. In case the bags are damaged and the pellets are scattered, pay attention so that no one will slip and fall.

All of the materials that spilled shall be rapidly collected.

Take precautionary measures against static discharges when using pneumatic transportation.

15. Regulatory Information

Other regulatory information :

We are not able to check up the regulatory information in regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other Information/References

Other information :

The information relates to this specific material. It may not be valid for this material if used in combination with any other materials or in any process.It is the user's responsibility to satisfy him-selves as to the suitability and completeness of this information for his own partibular use.

The information herein is given in good faith, but no warranty, express or implied, is made. Please consult us for further information.

To the best of our knowledge, the information contained herein is accurate.However, we assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of user. All materials may present unknown hazards and should be used in caution. Although certain hazards are described herein, we can not guarantee that there are the only hazards which exist.

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its compl etaness and we assume no liability resulting from its use. It is advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.

References :

This MSDS conform to the JIS standard and Japan MSDS making guideline.

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April 1, 2017

Dear customer;

Investigation result of using 10 substances of RoHS Directive

We would like to express our deep appreciation for your use of our resin products. As requested in your questionnaire, the investigation result of using 10 substances of RoHS Directive are shown below.

1.Product names to be investigated

(1)TORAY NYLON resin "AMILAN" all grades
(2)TORAY NYLON Particulate all grades
(3)TORAY PBT resin "TORAYCON" all grades
(4)TORAY PPS resin "TORELINA" all grades
(5)TORAY LCP resin "SIVERAS" all grades
(6)TORAY CFRTP resin "TORAYCA" all grades

2. 10 substances of RoHS Directive

(1)Cadmium and cadmium compounds
(2)Lead and lead compounds
(3)Mercury and mercury compounds
(4)Hexavalent chromium compounds
(5)Polybromobiphenyls(PBB)
(6)Polybromodiphenyl ethers(PBDE)
(7)Bis (2-ethylhexyl)phthalate (DEHP) (CAS No. 117-81-7)
(8)Benzyl butyl phthalate (BBP)(CAS No. 85-68-7)
(9)Dibutyl phthalate (DBP)(CAS No. 84-74-2)
(10)Diisobutyl phthalate (DIBP)(CAS No. 84-69-5)

3.Results

We intentionally do not use the substances listed above.

Should you need further information, please feel free to contact us.

Yours faithfully,

Masahiro Nishizawa
General Manager
Plastics Technical Department
Toray Industries, Inc.