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TEST REPORT

HKAS HOKLAS 158

Report No.: 02828-11

June 14, 2011

MS. JIDAPA NIMITJARAS
DEPT; KNITTING
11 MOO 5 SOI KLONGMADUE 17 SETTHAKIJ RD.,
DONKAIDEE, KRATHUMBAN, SAMUTSAKHON,
THAILAND. 74110

Test(s) requested : EN 388 TESTS
Product Category : AF 126-512
Product Type : MICROTEX CUT-HEAT LONG K1030
Sample description: ---

Style / Article no.	:	MICROTEX™ KEVLAR (CUT HEAT)	**Buyer**	:	--
Ref no.	:	GT-300511-1	**Exported to**	:	--
Order no.	:	PO-300511-1	**Date of receipt of application form**	:	Jun 2, 2011
			Date of receipt of sample	:	Jun 2, 2011
Supplier	:	--	**Testing period**	:	June 2, 2011 – June 14, 2011
Number of sample(s)	:	3 PAIRS OF GLOVES	**Service required**	:	REGULAR

1. Conclusion:

Testing	Result	Combine / Separate Test Item(s)	Failed Test Item(s)
Abrasion resistance of glove	Level 2	(S01)	---
Blade cut resistance of glove	Level 3	(S02)	---
Tear resistance of glove	Level 4	(S01)	---

The abrasion resistance got level 2; the blade cut resistance got level 3 and the tear resistance got level 4 according to EN 388 standard.

Approved by

Original signed

John Cheung Fai Cheong
Assistant Laboratory Supervisor

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4. Test Results :

	TEST METHOD	Test item(s) (S01)	Requirement	P/F
1	**Abrasion resistance of glove*** **(NF EN 388:2004 §6.1)**			
	Lowest value of four tests :	591	---	---
	Performance Level :	2	---	---
2	**Tear resistance of glove*** **(NF EN 388:2004 §6.3)**			
	Lowest value of four tests (N):	>200	---	---
	Performance Level :	4	---	---

	TEST METHOD	Test item(s) (S02)		Requirement	P/F
3	**Blade cut resistance of glove*** **(NF EN 388:2004 §6.2)**	Index (I)			
	Sequence	Test 1	Test 2		
	1	5.4	5.4	---	
	2	4.4	4.7	---	
	3	5.4	6.8	---	
	4	7.5	7.8	---	
	5	6.3	5.1	---	
	Average (I):	5.8	5.9	---	
	Lowest average value (I) :	5.8		---	---
	Performance Level :	3		---	---

*Table of Performance Level for Glove

Test Item	Performance Level					
	0**	1	2	3	4	5
Abrasion Resistance (NF EN 388:2004 §6.1) Number of cycles (minimum)	< 100	100	500	2000	8000	---
Blade Cut Resistance (NF EN 388:2004 §6.2) Index (I) (minimum)	< 1.2	1.2	2.5	5.0	10.0	20.0
Tear Resistance (NF EN 388:2004 §6.3) Force (N) (minimum)	< 10	10	25	50	75	---

** Performance level 0 means the glove falls below the minimum performance level for the given individual hazard.

- End of report -

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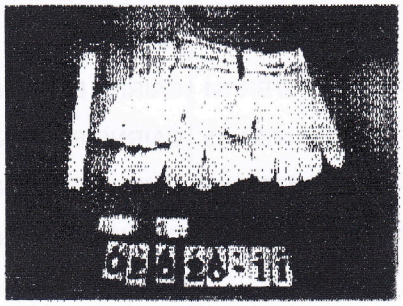
2. Label(s) on the sample(s):

Sample(s)	ID	Size	Style/Art. No.	Sub-sample(s)	Component(s)	Colour
(01)	i	--	MICROTEX™ KEVLAR (CUT HEAT)	(a)	Glove	Yellow
(01)	ii	--	MICROTEX™ KEVLAR (CUT HEAT)	(a)	Glove	Yellow
(01)	iii	--	MICROTEX™ KEVLAR (CUT HEAT)	(a)	Glove	Yellow

Remarks: (1) ID is used for identification in which the numbers of sample received are of the same article, ref. no., colour, etc.

3. Sample(s) description assigned by laboratory:

Test Item	Sample(s)	Combine / Separate sub-sample(s)
(S01)	(01)-i+ii	(a)
(S02)	(01)-iii	(a)



Product Name:	Product Code:
MICROTEX™ CUT-HEAT 350	AF 116-512 (normal), AF 146-512 (dotted)
Raw Materials :	Kevlar: >99% (AF116-512), 75% (AF146-512) PVC: 25% (AF146-512)

Section ii : Hazardous Ingredients 1 Identity Information

Chemical Component	Hazardous Component
All chemicals and raw materials used are non toxic I non hazardous. The materials are: 1. Kevlar fiber, para-aramid polymer, CAS number 26125-61-1, Water, absorbed Pulp wet-lap CAS number 7732-18-5, >96% of fiber	N/A
	TLV
2. Polyvinyl chloride (where applicable – with dots – AF146-512), chloroethylene homopolymer compound, CAS number 9002-86-2. Polyvinyl Chloride Polymer 80% Inert Fillers, calcium carbonate 9% Heat Stabilizers, organometallic compounds 5% Plasticizer, high molecular weight esters, 5% Colorant, organic colorants 1%	N/A
	PEL
	N/A

TLV - Threshold Limit Value established by Occupational Safety and Health Administration (OSHA)
PEL - Permissible Exposure Limit established by the American Conference of Industrial Hygienist,87-88

Section III: Physical Data

Physical Appearance	Color(Optional) : golden yellow Surface Finishing : pvc dotted
Powder Coating	N/A
Boiling Point	N/A
Vapour Pressure (mm Hg)	N/A
Vapour Density (air = 1)	N/A
Specific Gravity (water = 1	1.35-1.55 g/cc
Solubility in Water	Insoluble
% Volatile by Volume	N/A
Evaporation Rate	NIA
Viscosity	N/A

Section IV : Quality Assurance Conformity	
Conformity:	The MICROTEX™ CUT-HEAT 350 Gloves are produced conforming to EN388 for mechanical risks rating of 424X accordingly.

Section V: Fire and Explosion Hazard Data	
Flashpoint	NIA
Auto Ignition Temperature	NIA, PVC >388C
-Flammable Limits	N/A
Extinguishing Media	Water, Carbon Dioxide, Chemical Foam, Dry Powder and Fire Extinguishing Media may be used
Fire Fighting Procedures and Personal Protection	Use standard procedure for combustion material fires, including approved self contained breathing apparatus
Fire and Explosion Hazards	Burning Kevlar® produces hazardous gases similar to those from wool. These are mostly carbon dioxide, nitrogen oxides and small amounts of hydrogen cyanide, ammonia, aldehydes, aliphatic hydrocarbons and other toxic gases, depending on conditions of burning.

Section VI: Health Hazard Data	
Bio-Compatibility:	The chemical formulation of the gloves and surface substances does not contain any substances normally known to be harmful to the user to any person with whom the gloves get in contact.
Medical Conditions Generally Aggravated by Exposure	Kevlar Gloves are not expected to cause any adverse health effects. Skin: continual rubbing of fibers and fiber pieces on skin (as when under cuffs or collar, or when constantly handling fibrics) may cause irritation.

Section VII: Emergency and First Aid Procedures	
Caution Statement	Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician if irritation persist or develops later. Inhalation: If large amounts of fumes, dust or fibers are inhaled, remove to fresh air. If breathing is difficult, give oxygen and call a physician. If persistent cough or other symptoms develop, get medical attention. Skin: If fibers irritate the skin, wash with soap and water. Wash contaminated clothing before reuse. Use hand creams to sooth and moisten irritated skin. Get medical attention if irritation persist after contact stops. Ingestion: Not a probable route. However, in case of gastro-intestinal distress following accidental ingestion, call a physician.User should be aware that components used in making all types of gloves may cause allergic reactions in some users.

Section VIII : Reactivity Data	
Stability	Stable
Condition To Avoid	Does not apply
Incompatibility (Materials to Avoid)	Gloves are intended to be used for mechanical risk protection. User should review application guides and consider performing lab compatibility to specific applications
Hazardous Decomposition Products	fiber decomposition temperature >400 C. At lower temperatures finish may boil off as a fume, which should be vented
Hazardous Polymerization	Will not occur

Section IX : Spill, Leak and Disposal Procedures	
Steps to be taken in case material Is leaked or spilled	These products are solid articles and are not subjects to leak or spill.
Waste Disposal Method	Consult current local, state and federal regulations for proper disposal Methods. Since the fiber is essentially nonbiodegradeable, it should not be flushed to surface waters or sanitary sewer systems.

Section X : Personal Protection Information	
Eye, Skin, Respiratory Protection	Not necessary under conditions of intended use
Ventilation	Not necessary under conditions of intended use

Section XI : Special Precautions to be taken in handling and storage.

Do not store gloves where temperature may rise above 104°F(40°C) : store them in a cool and dry place. Open packages of gloves should be shielded from exposure to direct sun or fluorescent lighting to prevent discoloration, Gloves should not be stored in damp or high humidity areas.