






LAMPIRAN

Lampiran 1 Hasil Kain Penyempurnaan Anti Api

Variasi Flamatic DM-3072	Kain Hasil Pencelupan
650 g/l	
600 g/l	
550 g/l	
500 g/l	
450 g/l	

Lampiran 2 Hasil Uji Ketahanan Api *Before Washing*

Keterangan	Konsentrasi	Waktu Nyala (s)	Waktu Bara (s)	Panjang Api (cm)
Arah Lusi	Flamatic 650	1,12	0	10,5
		1,29	0	10,5
		1,15	0	10,5
		1,13	0	10
		1,12	0	10,5
	Flamatic 600	1,68	0	12
		1,57	0	12,5
		1,71	0	11,5
		1,59	0	11,5
		1,65	0	12
	Flamatic 550	2,1	0	13
		2,18	0	13,5
		2,2	0	14
		2,14	0	12,5
		2,23	0	13
	Flamatic 500	2,65	0	14,5
		2,6	0	15
		2,61	0	13,5
		2,56	0	15
		2,68	0	14
	Flamatic 450	3,12	0	15
		3,17	0	15,5
		3,19	0	16
		3,11	0	14,5
		3,14	0	15

(Lanjutan) Lampiran 2 Hasil Uji Ketahanan Api *Before Washing*

Keterangan	Konsentrasi	Waktu Nyala (s)	Waktu Bara (s)	Panjang Api (cm)
Arah Pakan	Flamatic 650	1,15	0	12
		1,14	0	12,5
		1,13	0	11,5
		1,14	0	12
		1,13	0	12
	Flamatic 600	1,37	0	12,5
		1,38	0	12,4
		1,37	0	12,5
		1,37	0	12,4
		1,38	0	12,5
	Flamatic 550	1,51	0	13,5
		1,53	0	14,5
		1,52	0	13
		1,53	0	15
		1,52	0	14
	Flamatic 500	1,7	0	15
		1,69	0	15
		1,71	0	15,5
		1,68	0	14,5
		1,72	0	15
	Flamatic 450	2,23	0	15,5
		2,21	0	15,5
		2,2	0	16
		2,2	0	15
		2,23	0	15,5

Lampiran 3 Hasil Uji Kekuatan Tarik Kain

Arah	Keterangan	Konsentrasi Zat Anti Api (Flamatic DM-3072) (g/l)				
		650	600	550	500	450
Lusi	1	50	53	54,5	55,5	56
	2	49,5	52	54	55	57
	3	50,5	54	55	56	57,5
	4	49	53,5	55,5	55	58
	5	51	52,5	54	56,5	58,5
Pakan	1	37	39	39,5	41,5	43,5
	2	37,5	38,5	40	42,5	43,25
	3	37	40	40,5	42	43
	4	38	39,5	41	41	44
	5	38	38	41,5	43	44,5

Lampiran 4 Hasil Uji Kekuatan Sobek Kain

Arah	Keterangan	Konsentrasi Zat Anti Api (Flamatic DM-3072)				
		650	600	550	500	450
Lusi	1	12,23	12,86	13,8	13,49	14,12
	2	12,39	13,02	13,49	13,65	13,96
	3	12,55	13,18	13,49	13,8	14,12
	4	12,7	13,18	13,8	13,49	14,43
	5	12,55	13,33	13,8	14,12	14,2
Pakan	1	11,45	11,61	12,55	12,7	13,02
	2	11,14	11,76	12,23	12,63	12,86
	3	11,29	11,92	12,55	12,55	13,18
	4	11,29	12,08	12,23	12,78	13,33
	5	11,76	11,92	12,55	12,86	13,49

Lampiran 5 Hasil Uji Ketahanan Api *After Washing 10 Kali*

Keterangan	Konsentrasi	Waktu Nyala (s)	Waktu Bara (s)	Panjang Api (cm)
Arah Lusi	Flamatic 650	2,59	0	14,4
		2,58	0	14,3
		2,57	0	14,2
		2,59	0	14,5
		2,59	0	14,6
		3,6	0	14,9
Flamatic 600	Flamatic 600	3,6	0	14,9
		3,59	0	14,7
		3,58	0	15,1
		3,6	0	14,8
		3,57	0	15
Flamatic 550	Flamatic 550	4,67	0	15,5
		4,69	0	15,6
		4,67	0	15,4
		4,68	0	15,8
		4,66	0	15,3
		4,89	0	16,3
Flamatic 500	Flamatic 500	4,89	0	16,3
		4,88	0	16,5
		4,86	0	16,4
		4,87	0	16,6
		4,89	0	16,2
Flamatic 450	Flamatic 450	5,77	0	17,5
		5,78	0	17,7
		5,79	0	17,4
		5,77	0	17,6
		5,79	0	17,3

(Lanjutan) Lampiran 5 Hasil Uji Ketahanan Api After Washing 10 Kali

Keterangan	Konsentrasi	Waktu Nyala (s)	Waktu Bara (s)	Panjang Api (cm)
Arah Pakan	Flamatic 650	2,38	0	12,7
		2,38	0	12,6
		2,38	0	12,4
		2,38	0	12,5
		2,37	0	12,6
	Flamatic 600	2,44	0	13,2
		2,43	0	12,9
		2,4	0	13,1
		2,5	0	13,4
		2,4	0	13,3
	Flamatic 550	2,45	0	14,1
		2,5	0	14,3
		2,51	0	14,2
		2,49	0	14,5
		2,5	0	14,6
	Flamatic 500	2,95	0	15,8
		2,94	0	16
		2,93	0	15,7
		2,93	0	15,9
		2,97	0	15,8
	Flamatic 450	3,31	0	17,4
		3,3	0	17
		3,2	0	17,1
		3,5	0	17,3
		3,4	0	17,2

Lampiran 6 Hasil Uji Ketahanan Api After Washing 20 Kali

Keterangan	Konsentrasi	Waktu Nyala (s)	Waktu Bara (s)	Panjang Api (cm)
Arah Lusi	Flamatic 650	4,26	0,43	17,6
		4,35	0,39	17,4
		4,31	0,42	17,5
		4,19	0,44	17,3
		4,29	0,37	17,7
	Flamatic 600	5,37	0,32	18
		5,21	0,29	17
		5,34	0,35	19
		5,29	0,38	20
		5,19	0,36	16
	Flamatic 550	7,49	0,81	20
		7,53	0,78	19
		7,61	0,75	21
		7,46	0,7	22
		7,56	0,71	19
	Flamatic 500	8,23	1,03	21,5
		8,17	0,95	21,5
		8,29	0,99	21,5
		8,15	0,93	21,5
		8,21	0,95	21,5
	Flamatic 450	8,95	1,11	22
		9,04	0,98	21,5
		8,87	1,02	21
		9,02	0,96	23
		9,07	0,93	22

(Lanjutan) Lampiran 6 Hasil Uji Ketahanan Api After Washing 20 Kali

Keterangan	Konsentrasi	Waktu Nyala (s)	Waktu Bara (s)	Panjang Api (cm)
Arah Pakan	Flamatic 650	3,28	0,18	15,3
		3,34	0,23	15,1
		3,44	0,15	15,4
		3,21	0,2	15,2
		3,33	0,24	15,5
	Flamatic 600	4,25	0,18	16,5
		4,32	0,27	16,7
		4,3	0,33	16,4
		4,27	0,29	16,6
		4,31	0,28	16,9
	Flamatic 550	5,4	0,34	16,8
		5,38	0,42	17,1
		5,34	0,33	17,5
		5,51	0,35	17,2
		5,37	0,31	17,3
	Flamatic 500	6,65	0,43	18,5
		6,71	0,37	18,3
		6,52	0,46	18,7
		6,87	0,38	18,6
		6,6	0,41	18,4
	Flamatic 450	7,83	0,63	21,5
		7,7	0,65	21,3
		8,08	0,59	21,6
		7,59	0,67	21,4
		7,75	0,56	21,2

Lampiran 7 TDS Flamatic DM-3072

Technical Information	
General properties	
Chemical constitution	Organic phosphorus compound, fiber - reactive
Physical form	Viscous, clear, colorless to yellowish liquid
Specific gravity at 20° C	1.290 – 1.310 g/cm ³
pH (100 g/l)	3.5 – 6.0
Ecological/ toxicology	The usual hygiene and safety rules for handling chemicals should be observed in storage, handling and use. The product must not be swallowed.
Compatibility	FLAMATIC® DM-3072 can be used in combination with many other finishing agents. Preliminary trials are advisable.
Storage stability	FLAMATIC® DM-3072 is stable for 1 year when properly stored in closed containers at 20° C. The product is sensitive to cold below 0° C and sensitive to heat above 40° C.
Application	
<ul style="list-style-type: none">• The fabric to be treated should be highly absorbent, and free of alkali and other extraneous matter. On high – twist yarns or tightly woven fabrics proper results cannot be guaranteed in any case.• The amount of FLAMATIC® DM-3072 durable flame retardant must be evenly applied into the fabric.	
Dissolving / diluting	
<ul style="list-style-type: none">• FLAMATIC® DM-3072 durable flame retardant is added to cold water with stirring, a homogeneous distribution in the bath must be guaranteed.• Cellulose crosslinking agents, for example DYMATEX MEL or DYMATEX MLF, diluted in water, are added then.• Softeners such as SOFMATIC PE or SILIMATIC DM-3480 are added diluted with an equal amount of water.• Wetting agents such as WETMATIC PAC can be added in any dilution with water.• Phosphoric acid (80 or 85%) serves as catalyst. The catalyst is also prediluted with water before filling with cold water to the required liquor volume.	
Required amount	
<ul style="list-style-type: none">• The required amount of FLAMATIC® DM-3072 durable flame retardant depends on the standard to be met, the type of fiber, area weight and construction of the goods as well as on a possible blend with synthetic fibers such as polyester. It has to be determined by preliminary trials.• Remark : Heavier materials need a lower, light and especially open and voluminous fabric a higher amount of FLAMATIC® DM-3072 durable flame retardant.	

Lampiran 8 TDS Knittex CHN



Technical Information

DYMALUBE® DM-3265A

Softener and additive in resin finishes

DYMALUBE® DM-3265A is a Additive and softener for crease-resistant, shrinkproof, non-iron, wash and wear finishes on natural and regenerated cellulose fibers and their blends with synthetic fibers, Suitable for dry, moist and wet cross-linking processes and To improve abrasion resistance, tear strength, bursting strength, sewability on all fabric types.

Properties and fields of application

- Increase fiber lubrication.
- Excellent sewability.
- Excellent degree of whiteness even with high temperatures.
- Soft, surface smooth handle.
- Stable to metal salts and strong acids.
- Excellent durability to washing and dry cleaning.
- Excellent stability to sublimation.
- Low affinity to the fiber.

General properties

Chemical basis	Emulsion of polyalkylene
Physical form	White to yellowish emulsion
Ionicity	Nonionic
pH	3.5 – 5.5
Ecological/ toxicology	The usual hygiene and safety rules for handling chemicals should be observed in storage, handling and use. The product must not be swallowed.
Specific gravity at 20° C	0.980-1.010 g/cm ³
Compatibility	DYMALUBE® DM-3265A can be used in combination with most products commonly used in finishing.
Storage stability:	DYMALUBE® DM-3265A is stable for 2 years when properly stored in closed containers at 20° C . The product is sensitive to cold below 0° C and above 60° C.

Lampiran 9 TDS Dymalube DM-3265 A

Technical Information



DYMALUBE® DM-3265A

Softener and additive in resin finishes

DYMALUBE® DM-3265A is a Additive and softener for crease-resistant, shrinkproof, non-iron, wash and wear finishes on natural and regenerated cellulose fibers and their blends with synthetic fibers, Suitable for dry, moist and wet cross-linking processes and To improve abrasion resistance, tear strength, bursting strength, sewability on all fabric types.

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Chemical basis	Emulsion of polyalkylene
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Ecological/ toxicology	The usual hygiene and safety rules for handling chemicals should be observed in storage, handling and use. The product must not be swallowed.
Specific gravity at 20° C	0.980-1.010 g/cm ³
Compatibility	DYMALUBE® DM-3265A can be used in combination with most products commonly used in finishing.
Storage stability:	DYMALUBE® DM-3265A is stable for 2 years when properly stored in closed containers at 20° C . The product is sensitive to cold below 0° C and above 60° C.

Lampiran 10 TDS *Phosphoric Acid*



Phosphoric Acid, 85% w/w

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/11/2014

Revision date: 12/11/2018

Supersedes: 01/02/2013

Version: 1.3

SECTION 1: Identification

1.1. Identification

Product form : Substance
 Substance name : Phosphoric Acid, 85% w/w
 Chemical name : ortho-Phosphoric Acid
 CAS No : 7664-39-2
 Product code : LC18640
 Formula : H₃PO₄
 Synonyms : orthophosphoric acid, conc=85% / Phosphoric acid, solid / phosphoric syrup, conc=85%

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Food industry: additive
 Petrochemistry:
 Catalyst/ auxiliary substance
 Pharmaceutical product: component

Recommended use : Laboratory chemicals

Restrictions on use : Not for food, drug or household use

1.3. Details of the supplier of the safety data sheet

LabChem Inc.
 Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
 Zanesville, PA 15063 - USA
 T 412-836-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification
 Skin corrosion/irritation Category 1B H314
 Serious eye damage/eye irritation Category 1 H318
 Full text of H statements - see section 10

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS-US) :

P260 - Do not breathe mist, vapors, spray
 P264 - Wash exposed skin thoroughly after handling
 P280 - Wear protective gloves, protective clothing, eye protection, face protection
 P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
 P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P310 - Immediately call a poison center or doctor/physician
 P363 - Wash contaminated clothing before reuse
 P405 - Store locked up
 P501 - Dispose of contents/container to comply with local, state and federal regulations
 If inhaled: Remove person to fresh air and keep comfortable for breathing