7.2.3 Soil

Monitoring data for vinyl chloride in soil were not located in the available literature.

7.2.4 Other

In the past, vinyl chloride had been detected in various foods as a result of migration from polyvinyl chloride food wrappings and containers (EPA 1985b). Vinyl chloride has been found in vinegar at levels up to 9.4 ppm, in edible oils at 0.15 to 14.8 ppm, and in butter at 0.05 ppm when these foods were packaged and stored in PVC containers (IARC 1979). At present, the Food and Drug Administration (FDA) regulates use of vinyl chloride polymers available for use in production of articles intended to contact food. These articles include food-packaging materials, coatings, plastisols, gaskets, and parts for food-processing (see Sect 9, Regulatory and Advisory Status). A recent study on the migration of vinyl chloride from PVC under conditions closely simulating actual food packaging and storage revealed that at very low concentrations of vinyl chloride in PVC packaging material, there was essentially zero migration of vinyl chloride (Kontominas et al. 1985).

It is reported that migration of vinyl chloride from rigid PVC water pipes into drinking water occurs, and that it is directly proportional to the residual level of vinyl chloride in the pipe itself. Under certain conditions, reaction with chlorine in the water may result in the complete removal of vinyl chloride from drinking water (Fishbein 1979, Ando and Sayato 1984). During one study, it was found that drinking water which ran through recently installed PVC pipes contained vinyl chloride at 1.4 μg/L, while water which ran through a 9-year-old system contained 0.03 to 0.06 μg/L (HSDB 1987). This suggests that use of PVC pipe in water distribution systems contributes to intake of vinyl chloride through ingestion of contaminated drinking water. Assuming that the average daily intake of water is 2 L, the average intake of vinyl chloride from water contaminated with vinyl chloride from PVC pipes is expected to range from 0.06 to 2.8 μg/day.

The interior air of two new cars was analyzed and the level of vinyl chloride was found to range from 824 to 3120 $\mu g/m^3$ (0.3 to 1.2 ppm) (EPA 1985b). The source of vinyl chloride was believed to be volatilization from vinyl plastics found in the car interiors. Levels of vinyl chloride in the air in new cars may exceed estimates of minimal risk levels for acute and intermediate exposure.

Vinyl chloride has been detected in tobacco smoke (EPA 1985b). Cigarettes and little cigars have been found to contain 5.6 to 28 ng vinyl chloride per cigarette (IARC 1979).

7.3 OCCUPATIONAL EXPOSURES

NIOSH estimates definite worker exposure to vinyl chloride to be 27,000 persons and probable worker exposure to be 2.2 million (Sittig 1985). This includes ~5000 workers employed in vinyl chloride synthesis, 5000 workers involved with polymerization processes, and as many as 350,000 workers associated with fabrication plants. Exposure is believed to occur primarily through inhalation and less frequently by absorption

through skin (Sittig 1985). In the past, concentrations of vinyl chloride in workplace air in some plants producing PVC have been reported to range from 100 to 800 mg/m^3 (39 to 315 ppm) with peak concentrations up to 87,300 mg/m^3 (34,000 ppm) (IARC 1979). Currently, the Occupational Safety and Health Administration (OSHA) sets standards for occupational exposure to vinyl chloride (see Sect. 9, Regulatory and Advisory Status). A recent NIOSH survey of three vinyl chloride plants indicated that the time-weighted-average exposure to vinyl chloride varied between 0.2 to 70 mg/m^3 (0.08 to 27 ppm) (IARC 1979).

7.4 POPULATIONS AT HIGH RISK

Data were not located specifically regarding subpopulations unusually sensitive to the effects of vinyl chloride. Individuals located near or downwind of production facilities, hazardous waste disposal sites, and landfills may potentially be exposed to higher ambient atmospheric levels.

Workers involved in the production or polymerization of vinyl chloride may constitute a group at risk because of the potential for occupational exposure. Since the mid 1970s, however, atmospheric levels in the workplace have often been reduced to ≤1 ppm (Fishbein 1979, Kilian et al. 1975, Hansteen et al. 1978). Occupationally exposed men may represent a sensitive subgroup because occupational exposure in men has been associated with an increased incidence of fetal loss in their wives (Infante et al. 1976, Waxweiler et al. 1977). No threshold concentration has been determined for this effect. Women (or couples) of child-bearing age may constitute a group at risk, because data suggest that ambient exposure to low (but not quantified) environmental levels is associated with an increase in the incidence of malformations at birth (Infante 1976; Edmonds et al. 1975, 1978; Theriault et al. 1983). No threshold has been determined for this effect.

Inhalation studies in animals demonstrated that exposure early in life resulted in greater risk of developing cancer than did exposure later in life (Drew et al. 1983). Although human studies that address the effect of age on cancer risk were not located, the animal data suggest that exposure during the younger years may result in increased cancer risk. Other animal studies suggest that prenatal exposure may increase cancer risk (Maltoni et al. 1980, 1981). Although human data were not located, the animal data may suggest that the prenatal exposure of humans to vinyl chloride may increase risk of cancer.

Animal studies have demonstrated that pretreatment with xenobiotics or drugs that induce mixed-function oxidase (MFO) potentiates the hepatotoxicity of vinyl chloride (Jaeger et al. 1974, Reynolds et al. 1975, Conolly et al. 1978). Although human data were not located, the animal data suggest that human exposure to environmental pollutants or drugs that induce MFO may result in increased sensitivity to vinyl chloride.

AN-5617
deltia

August 30, 1991

Jim Gray

SUBJECT: FDA SUBMISSION STATUS/GEON PRODUCTS

Attached are status updates on several Geon products you requested to be submitted to FDA. All of the referenced products have at least 1 ingredient that does not have FDA clearance.

If the particular application (use) of the product falls under the Housewares Exemption, we prefer that you substitute the indicated ingredient with an FDA-approved one.

We will re-evaluate the application if substitution is not possible.

Connie Dillon

Connie Dillon

0830-3/jp

Attachments (5)

22491001

BFG21227

FDA, USDA, NSF, WORKSHEET

SUBJECT: Neon 165-56-111-1

Requestor: Jim Gray (x-6637)

DATE:	COMMENTS/STATUS:
8/29/91	all ingredients have FDA clearance

22492001

FDA Status Geon 165-56-111-1

***** LAB RECIPE/MAKEUP *****

Sample Number 165 56-111-1 (Based on X1501-650-4901 K. Srail)
Batch Weight Factor =

Material	Code No	phr	Wt. %	LBS	GRAMS
110x377	Resin	100.000	80.354	0.000	0.0
Paraloid K-120-N	K-6	1.500	1.205	0.000	0.0
Ultrastrength 200	K-26	14.000	11.249	0.000	0.0
Mark 1901	S-86	1.900	1.527	0.000	0.0
Calcium stearate-fused	L-34	2.000	1.607	0.000	0.0
Mineral Oil VSP	L-16	2.000	1.607	0.000	0.0
Stearic acid - FDA	L-22	0.200	0.161	0.000	0.0
Aristowax 165 pwd	L-40	0.100	0.080	0.000	0.0
Ultraflex H	710356	2.750	2.210	0.000	0.0
TOTALS		124.450	100.000	0.000	0.0

Modified 87371 for GE Appliance

WITHOUT TiO_2 or Pigments

✓ FDA clearance

Requested by Ken Gray X6637

CT Kunkel 7/26/91

22492002

BFG21229

FDA, USDA, NSF, WORKSHEET

SUBJECT: Deon 87241 White 1364

Requestor: Jim Gray (x-6637)

DATE:	COMMENTS/STATUS:
8/29/91	2 ingredients (~~Phthalocyanine~~ B-304 (Blue K6911D PWD OTSA and 87333-000-7092 (B-151 (Cromophtal Red BRN-Toner) do not have FDA Clearance.

22493001

BFG21230

JUL 19 '91 10:35 FROM [redacted] GEON D5852 TO S-186605 PAGE.003

FDA Statue Geon 87241 white 1364

03R60
10360

PRODUCT NO. 87241 000 1364 LOC 10 DEPT 5666 ISSUE 06
DESCRIPTION ~~87241WHTPL1364~~ SBC 13C5 INT. RM. USERID: N32WMH1A
TERMID: PV1200
CO. CODE 0

PRODUCTION RECIPE INQUIRY PAGE 1

ITEM	RM	NUMBER	DESCRIPTION	QUANTITY	USE
110	961	000452	110 X 377 PS	100.000000	12
210	942	710859	BLENDEX 338	13.500000	
220	941	710700	2301 X 36	3.000000	
310	912	005086	MARK 1900	2.000000	
410	925	710356	ULTRAFLEX H	5.000000	
420	924	709916	TIOXIDE R-FC6	9.000000	
510	923	008304	BLUE K6911D PWD	.458000 (none)	
520	961	000412	87333-000-2012	.154000	
530	961	000587	87333-000-7092	.023000 (none)	
610	943	00L016	MINERAL OIL USP	2.000000	
620	943	00L034	CA STEARATE-FUSE	2.000000	
630	943	00L002	STEARIC ACID	.100000	
640	943	00L040	ARISTOWAX-165 PW	.100000	

✓ FDA Clearance

Request by Jim Gray x6637

KZ Kreiden 7/26/91

2249312

ROUTE TO: BATH COMPUTER ROOM

****

* GEON VINYL TECHNICAL DOCUMENT *

****

R103360 G E O N V I N Y L RECIPE 07/25/91 13:56:28

GEON 87333 RED PMB 709 LOC: 12 DEPT: 5667 ISSUE: S91
COMMODITY NO.: 87333 000 7092 EFFECTIVE DATE: 01/01/91
SBC NBR: 13PM DELETE FLAG: NO
LAB REF: CMPR:
BASED ON:
APPLICATION:

PARTS	INGREDIENTS	SEQ	LOC	PERCENT
72.72600	961 000452 110 X 377 ✓	120	12	60.000 P.S.
36.36300	925 709635 SUPER-PFLEX 200 ✓	210		30.000 ✓
12.12100	921 00B151 RED BR-N	310		10.000
121.21000		TOTAL		100.000

Cromophtal Red Ben-Tone (Ciba-Geigy) To FDA

TYPE SAMPLE: COLOR: 2
MATCHED TO:
ISSUED:
MARKETING APPROVAL:

2242303

BFG21232

LOC: 10 DEPT: 5772
EFFECTIVE DATE: 06702/8[illegible]
DELETE FLAG: NO
CMPR: F. [illegible] HAUTE

[illegible] 2012 [illegible]

[illegible] BLACK PWD MB 201, ISSUE 4, 5/23/84

[illegible] COLOR LETDOWN FOR TINTING PURPOSES

[illegible]	INGREDIENTS	SEQ	LOC	PERCENT
68.00000	961 000452 110 X 377	110	10	68.00
31.00000	925 709635 SUPER-PFLEX 200	210		31.00
1.00000	922 710008 BLACK MONARCH 700	310		1.00
	Carbon Black, [illegible] (Cabot)			
100.00000		TOTAL		100.00

FDA
PS
1??.90, 175.300, 175.390, 176.170, 177.1210, 177.1350, 177.1460, 177.1600, 181.29
177.2400; 177.2600 (A[illegible] 4785)

TYPE SAMPLE:
COLOR: 2
MATCHED TO:
ISSUED: TO ADD LOC 47 - TERRE HAUTE
MARKETING APPROVAL:

MISC CMNT: PROCESSING WITH NO HEAT ON JACKET. ADD ALL INGREDIENTS TO HENSCHEL. HENSCHEL MIX AT LOW SPEED FOR ONE MINUTE. DROP TO PACKAGE.

BGH21233

FDA, USDA, NSF, WORKSHEET

SUBJECT: Dem 87371 White 1364	
Requestor: Jim Gray (X-6637)	
DATE:	COMMENTS/STATUS:
8/29/91	2 ingredients do not have FDA Clearance (87535-705 (630442 & 710825) and B-304 (Phthalocyanine Blue K6911D PWD DFSP).

2249401

BFG21234

78

B. F. GOODRICH COMPANY

* FDA Status Geon 87371 White 1364

DATE 3-11-91 PROB. NO. 4122-714

SUBJECT OF EXPT GENERAL ELECT

CUSTOMER

STANDARD

TYPE MATCH ~~White 1364~~ / Snow White 12H2421

COMMENTS

(1)

87371 White 1364 — Dale Butcher (40-22-78)

110x377	✓	100.000	
K-26	Du ✓	14.000	178.3790
S-86	✓	2.000	
L-34	✓	2.000	
L-35	✓	2.000	
K-6	✓	2.000	178.3790; 177.2010; GRAS; 1.5
L-2	✓	.100	
L-40	✓	.100	
709916	✓	9.000	
87333-203	Obsolete?	.294	
87535-205	[illegible]	.074	(NONE)
B-304	[illegible]	.339	(NONE)

SPECIFIC GRAVITY = 1.39
HARDNESS = D-75

CIE LAB	L*	A*	B*	DE
Incd. C	0.00	-0.04	-0.04	0.06
A	-0.00	0.16	-0.07	0.18
F	-0.07	0.04	-0.16	0.18

Requested by Jim Bray X6637

R. K. Hinden 7/26/91

EXPERIMENTER BUTCHER / PROCHASKA DATE 3-11-91

2249002

ROUTE TO: BATH COMPUTER ROOM

****

* GEON VINYL TECHNICAL DOCUMENT *

****

87535-706

R103360 G E O N V I N Y L RECIPE 07/22/91 13:42:29

GEON 1CB530 BLUE PWD MB
COMMODITY NO.: 001CB 00E 0530
SBC NBR: 13PM
LAB REF:
BASED ON: 1CB530-0000-2
APPLICATION:

LOC: 67 DEPT: 4212 ISSUE: 001
EFFECTIVE DATE: 01/25/91
DELETE FLAG: NO
CMPR: W. FAY/CVP

PARTS	INGREDIENTS	SEQ	LOC	PERCENT
100.00000	961 000277 30 GEON RESIN	110	67	67.390
46.47600	921 00B286 BLUE NO.1	210		31.320
.11900	921 630442 VIOLET 246-0487	220		.080
1.79600	921 710825 YELLOW DCC-1003	230		1.210
148.39100		TOTAL		100.000

SPECIFIC GRAVITY: 1.77 HARDNESS:
TYPE SAMPLE:
MATCHED TO:
ISSUED:
MARKETING APPROVAL:

175.300; 175.390; 176.170; 177.1210 B-286 (Shepherd Chemical Co.)

No FDA Cl. 630442 Carbazole Violet (Sun Chem)

No FDA Cl. 710825 Medium Chrome Yellow (Dominion Color Corp)

2249403

FDA, USDA, NSF, WORKSHEET

SUBJECT: Geox 87241 Black 288

Requestor: Jim Gray (x-6637) / Carol Kovach

DATE:	COMMENTS / STATUS:
8/29/91	all ingredients have FDA clearance

22495001

FDA Status Geon 87241 Black 288

ROUTE TO: CHUCK PURKS

****

* GEON VINYL TECHNICAL DOCUMENT *

****

CUSTOMER NO / DESC: [redacted]

R103360 GEON VINYL RECIPE 08/14/89 09:01:44

OSHA WARNING LABEL: A

GEON 87241 BLACK PLTS 288 LOC: 12 DEPT: 5461 ISSUE: 018

COMMODITY NO.: 87241 000 2884 EFFECTIVE DATE: 08/11/89

SSC NBR: 18C5 DELETE FLAG: NO

LAB REF: 165-1-74-1 CMPR: T. H. FORSYTH

BASED ON: 87241 BLACK PELLETS 288, ISSUE 17, 02/15/89

APPLICATION: CIM - HI IMPACT - UL RATED

	PARTS	INGREDIENTS	SEQ	LOC	PERCENT
①	100.00000	941 000482 110 X 377 ✓	120	12	78.125
②	13.50000	942 710899 BLENDEX 338 ✓	210	77	10.547
③	3.00000	941 710700 2301 X 36 ✓	220		2.344
④	5.00000	925 710356 ULTRAPFLEX H ✓	310		3.906
⑤	2.00000	912 008086 MARK 1900 ✓	410		1.563
⑥	.50000	922 008002 BLACK RAVEN 410 PWD	510		.391
⑦	2.00000	943 00L016 MINERAL OIL VSP ✓	610		1.563
⑧	2.00000	943 00L034 CA STEARATE-FUSED ✓	620		1.563
	128.00000		TOTAL		100.000

SPECIFIC GRAVITY: 1.38 HARDNESS: D-81

TYPE SAMPLE: USE PREVIOUS SAMPLE COLOR: 2

MATCHED TO: 4-7600

ISSUED: TO REVISE SPECS.

MARKETING APPROVAL: J. C. KELLEY

① P.S.

② 181.32

③ 175.105; 175.300; 175.300; 176.180; 177.1200; 177.1210; 181.32 (...)

④ 175.300; 175.390; 176.170; 177.1200; 177.1350; 177.1460; 177.1600; 181.29 (182.98) (182.5191)

⑤ 178.2010 (p 21 CFR)

⑥ 177.2400; 177.2600 ✓

⑦ 172.878; 178.3620 ✓ (Kaydol 87-90 only supplier ...)

⑧ 177.2600; 178.2010; 181.2900 (P.S.)

Requested by Carol Rozsich ... Jim Gray x 46371

K R Hunter 7/8/91

2249 5002

FAX 2238

I N T E R O F F I C E M E M O R A N D U M

Date: 19-Jul-1991 11:37am EDT
From: JIM GRAY
GRAY, JIM
Dept: D/5384
Tel No:

T[redacted]Y (GRAY, JIM)

Subject: G.E.

Bob Hinderer,

Further to our discussions concerning the housewares exemption status of 87241 for incidental food contact, I have additional questions and products for review.

Last time, you looked at 87241 black and identified the carbon black as the only potential problem. Have we recieved any statement from the carbon black supplier? If so, please send me a copy and advise if we are clear.

Secondly, I am enclosing the following recipes :

87241 White 126
87241 White 1364
87371 White 1364
and
X-1501-650-4901

Please review the 87241 recipes to see if the pigment systems are acceptable per the incidental food contact housewares exemption standards.

Then, please review the 87371 and experimental recipes to identify any areas of concern relative to incidental food contact applications. These are primarily targeted for refrigerator through the door ice and water dispenser housings. I would appreciate a letter similar to the one you faxed concerning the 87241 if in fact these formulations look acceptable, If not, please identify which materials are of concern.

Thanks,

Jim Gray
PH. - 6637
Fax - 6605

22435003

cc: PRIBANIC

BFG21239

AN 8178 deleted

September 9, 1991

Chuck Bush

SUBJECT: VI UPDATE

The Medical Committee presently has two outstanding activities. We are giving top priority to the completion of the remaining three papers on the primate/rodent studies with PVC/HCl which were conducted at SWRI. We plan to submit these to the VI for approval by the end of September and, subsequently, to Fundamental and Applied Toxicology for publication.

Because of the importance of publishing this work and the pressing matters, we will not devote any time to the monograph project until the primate studies have been submitted for publication. Practically, we would not be in a position to complete the monograph until these studies are published anyway. Once we resume this process, I will ask Drs. Hirschler and Kaplan to take prime responsibility for the combustion and toxicity areas, respectively. I will provide editorial/technical oversight.

One other item which I should mention is Roy Gottesman's request for comments on the mouse as a model for indoor air pollution. Clearly the mouse is a poor model for primates (i.e., man) with respect to the prediction of HCl lethality and the potential to cause pulmonary damage. However, from a purely theoretical point of view, the mouse "model" should be able to predict the relative irritancy of HCl. While Alarie et al. have published some information in this area, I am not certain that they have convincingly shown this to be the case. Therefore, it would be reasonable to ask Anderson Laboratories, Inc. to present their best case (supporting data).

A final item of interest, although it does not fall under the Technical Committee's activities, is the development of Emergency Exposure Guidelines for VCM. Jim Knaak (Occidental) reports that he will have a draft document to me by the end of September. The ultimate goal is to submit this to AIHA for adoption.

Bob

Bob Hinderer

0906-1/jp

2249601

BFG21240

AN 8181
detail

September 13, 1991

Mike Marshall

SUBJECT: CRITIQUE OF "PCB" FETAL TOXICITY STUDIES

In response to your request, I am enclosing some comments on the following papers that you provided:

1. Fein et al. (1984) Prenatal Exposure to Polychlorinated Biphenyls: Effects on Birth Size and Gestational Age. J. Pediatrics 105(2): 315-320.

   This paper is neither well conducted, or well reported. The areas of this study which appear to merit a greater degree of confidence is the analyses of PCBs in cord and maternal serum and the variables measured to assess infant health and viability. Generally, these are less subjective in nature.

   The biggest area of concern with this study is the information which was gathered (or not gathered) and how that information was obtained. In any study like this extreme care must be taken in designing the questionnaire and interviewing the participants. The authors appear to have increased the potential for bias by only asking whether or not fish was part of their diet. This not only highlighted or signaled "concern" to the volunteer, but they ignored other potential dietary variables which also could be contributing factors. There is also no mention of how the authors confirmed that the fish came from Lake Michigan. Considering that the authors noted that this was an upper socioeconomic group, it is quite likely their fish was obtained from restaurants (i.e., flown in). In fact, much "fish" is flown into groceries/fish markets.

   It is also equally unfortunate that the authors limited their analyses to just one chemical. Numerous chemicals which are also reasonably expected to be possible contaminants in fish are not considered. An even stronger association might have been missed.

   Still, the most important finding seems to have been quickly dismissed. Table I shows that in the exposed (fish eating) group, twice as many people consumed alcohol before pregnancy and three times as many consumed alcohol during pregnancy. This observation is very important because alcohol is a known fetal toxin. Although the authors state (Table II) that they adjusted for the effects of alcohol, I'm not convinced. I would like to know how they did it.

Furthermore, it would have been nice to know how many drinks a day were consumed by each participant (a simple question) and whether they were smokers.

I am also concerned about the potential effect of different sample sizes: 71 vs. 242 (Table II). However, I'll leave this to a biostatistician.

In conclusion, good epidemiology studies are hard to design and hard to conduct. This isn't one of them. Alcohol and/or smoking are better bets as causal agents.

2. Jacobson et al. (1990). Effects of in Utero Exposure to Polychlorinated Biphenyls and Related Contaminates on Cognitive Functioning in Young Children. J. Pediatrics 116(1): 38-45.

This is the new and improved version of Fein et al. (1984). They probably have learned from peer review and possibly earlier manuscript rejection in other journals. They look at lead and DDT, as well as PCB's. They include smoking. They also record the number of cigarettes smoked and drinks (alcohol) consumed. Unfortunately, this paper suffers from many of the same problems. They do not tell, or perhaps do not test, whether there are correlations with these or other variables.

In summary, these studies do not/cannot show that PCB's are associated with fetal toxicity. There are a number of technical issues such as the appropriateness/implication of log transformation of the data (Jacobson et al. (1990), which warrant further in-depth assessment.

If the Chlorine Institute sponsors a more in-depth analysis, I would appreciate receiving a copy.

Bob Hinderer

0911-1/jp

cc: C. Bush
R. Gomez
C. Mattia

DEPARTMENT OF HEALTH & HUMAN SERVICES

OCT 0 3 1991
Public Health Service

Food and Drug Administration
1390 Piccard Drive
Rockville MD 20850

SEP 25 1991

MAF-379

AN-5463
deleted

Robert K. Hinderer, Ph.D.
Manager, Health and Toxicology
Environment, Health and
Safety Management Systems
The BFGoodrich Company
3925 Embassy Parkway
Akron, Ohio 44313-1799

Dear Dr. Hinderer:

This acknowledges receipt of your submission dated August 13, 1991 pertaining to Geon® 86155 Transparent 0027.

This material is retained as a Master File for a device, and it has been assigned the number MAF-379. You may amend this master file to include additional information at any time. All amendments shall be submitted in duplicate, identified with the above MAF number, and addressed to:

Food and Drug Administration
Center for Devices and Radiological Health
PMA Document Mail Center (HFZ-401)
1390 Piccard Drive
Rockville, Maryland 20850

Information in your MAF may be incorporated by your client in their premarket approval applications (PMAs), investigational device exemptions (IDEs), premarket notification submissions, reclassification petitions, color additive petitions or other submissions to FDA.

Reference to your MAF can only be authorized by you. In order that your client's submission will not be found deficient for lack of an authorizing letter and to expedite processing, please provide it directly to your client with the instruction that the original of your letter be included in the original copy of the client's submission along with a copy in each additional copy. Under this approach your MAF need not be amended to include the letter of authorization.

If you require assistance regarding device master files procedures, you may contact the Premarket Approval (PMA) Section at (301) 427-1186.

Sincerely yours,

Mary Jo Robinson

Mary Jo Robinson
Assistant to the Director
Premarket Approval Section
Center for Devices and
Radiological Health

2249801

BFG21243

NSF

5514
deleted

NSF *International*

September 11, 1991

Re: Standard 51
Pedricktown, NJ

Mr. W. C. Bechtel
B. F. Goodrich
3925 Embassy Parkway
Akron, OH 44313

Dear Mr. Bechtel:

This is to advise that your firm's Listing at Pedricktown has been revised for Geon 87256 nat. 021 to add the following:

Geon 87256-010-0210
Geon 87256-020-0210
Geon 87256-Nat. 021

Very truly yours,

Robert W. Stevens
Manager

/aw
cc: Listing
2.28

2249900l

350 S. Main Street, Suite 310, Doylestown, Pennsylvania 18901
Telephone: 215-340-0680 FAX: 215-340-1277

BFG21244

NSF

NSF *International*

SEP 16 1991

AN5824
detailed

September 12, 1991

Mr. W. C. Bachtel
B.F. Goodrich
3925 Embassy Parkway
Akron, OH 44313

Subject: NSF Stand 51
Your Letter Dated August 9, 1991

Dear Mr. Bachtel:

I am in receipt of satisfactory acceptance for your additional material designations. Your request is being processed. You should be receiving your Official Listing in the near future.

Please be advised that you are not authorized to utilise the NSF Mark in connection with these trade designations until you receive your Official Listing.

Sincerely,

Patricia A. Galloway

Patricia A. Galloway
Service Representative
Midwest Region
313-769-5362

PAG:mg/m9.57

cc: J. Paschal

22500001

3475 Plymouth Road, PO Box 130140, Ann Arbor, Michigan 48113-0140 USA
Telephone: 313-769-8010 FAX: 313-769-0109 Telex: 753215 NSF INTL

BFG21245

98010 FAX7690109 P01

BFGoodrich MEMO

TO: Connie | DEPT. | BLDG.

PLEASE CALL
MR./MS. John Armbruster
TIME 11:20 | DATE 9/17 | TELEPHONE NO. 313-769-5290

MESSAGE w/ NSF
trying to locate
signature page of
correspondence dated 8/9/91.
Will send copy to
RKH. cpd
9/17/91

FROM: Joanne | DEPT. | BLDG.

CR 0008 PRINTED IN USA

R FORM

...ON
...RICH

...38
...75
...m transmission)

...r from Joe Kelly
As requested
John Armbruster

8) HARD COPY TO FOLLOW: ___ YES ✓ NO

FROM:

9) NAME: John S. Armbruster

10) DEPARTMENT NAME: Region 02

11) NSF FAX NO. 313-769-0109 DATE: 9-17-91

12) TOTAL # OF PAGES, INCLUDING THIS PAGE: 3

IF YOU HAVE ANY PROBLEM RECEIVING, CALL 313-769-8010 EXT 223 FOR ASSISTANCE.

BFG21246

2250000?

BFGoodrich

The BFGoodrich Company
Geon Vinyl Division

6100 Oak Tree Boulevard
Cleveland, Ohio 44131
216-447-6000

August 9, 1991

Region 02:
O.K. to make changes
JLD 9/5/91

National Sanitation Foundation
3475 Plymouth Road
Ann Arbor, Michigan 48105

Attention: Mr. Pete Greiner
Ms. Gwen Ball

Dear Pete and Gwen:

We are in the process of changing some of our product numbers. These changes will have nothing to do with composition of the material. It will have to do with different amounts of work we put into the compounds. Below are changes we are making:

STD	Present Listing	New Listing
51	Geon 87256 Nat. 021	Geon 87256-010-0210 Geon 87256-020-0210 Geon 87256 Nat. 021
51	Geon 8700A Gray 244A	Geon 8700A Gray 244A Geon 8700A Gray 244 78710-011-02440
51	Geon 8700A Nat. 022A	Geon 8700A Nat. 022A Geon 8700A Nat. 0220 Geon 78710-011-0220 Geon 78710-021-0220
51	Geon 8700A Gray 260A	Geon 8700A Gray 260 Geon 8700A Gray 260A Geon 78710-011-2600
51	Geon 8700A Black 296A	Geon 8700A Black 296A Geon 8700A Black 296 Geon 78710-021-2960 Geon 78710-011-2960
51	Geon 8700A White 119A	Geon 8700A White 119A Geon 8700A White 119 Geon 78710-021-1190 Geon 78710-011-1190
51	Geon 8700A White 132	Geon 8700A White 132 Geon 8700A White 132A Geon 78710-011-1320 Geon 78710-021-1320

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14 &	Geon 87345 Wht 127	Geon 87345 Wht 127 ✓
		Geon 87345 Wht Pwd 127 ✓
		Geon 87345-010-1270 ✓
14 & 61	Geon 8761 Gray 273	Geon 8761 Gray 273 ✓
		Geon 78761-010-2730 ✓

G will handle these

Please [illegible] these different compound names in your publi[illegible] Let me know if there are any problems and when [illegible] [illegible]ted.

Regards,

THE BFGOODRICH COMPANY
GEON VINYL DIVISION

J C Kelley

Joseph C. Kelley
Technical Service Manager

JCK/ga

cc: R. Wilging

cc: to Regions & handle Std 51 updates.

2250003 A

2250003 B

DATA SEARCH ON VCM/TOXICITY STUDIES FOR CRAIG ELGUT
Order number 911001-135640-MIZ -001-007
page 124 set 13 with 374 of 374 items

Item 374

ACCESSION NUMBER	57
FILE LOCATION	GEN
DOCUMENT TYPE	PUBLICATION
TITLE OR SUBJECT	CONTROL OF EXPOSURE TO POLYVINYL CHLORIDE DUST
AUTHOR/AFFILIATION	NONE,NONE;
ORIGIN	HEALTH AND SAFETY EXECUTIVE,GUIDANCE NOT EH 31;
DATE	1982, MAY
ABSTRACT	THE HEALTH AND SAFETY COMMISSION'S ADVISORY COMMITTEE ON TOXIC SUBSTANCES HAS RECOMMENDED THAT, IN LINE WITH THE COMMISSION'S GENERAL POLICY: EXPOSURE TO PVC DUST SHOULD BE KEPT AS LOW AS IS REASONABLY PRACTICABLE; IN ANY CASE EXPOSURE SHOULD NOT EXCEED 10 MG/M3 FOR TOTAL PVC DUST IN AIR AND 5 MG/M3 FOR RESPIRABLE PVC DUST IN AIR. THE EFFECTS OF EXPOSURE TO PVC DUST ARE REFERRED TO IN PARAGRAPH 9 AND ADVICE IS GIVEN ON ASSESSMENT AND CONTROL IN PARAGRAPHS 10 TO 13. METHODS OF SAMPLING AND MEASUREMENT ARE DESCRIBED IN PARAGRAPHS 14,15 AND THE APPENDIX.
DESCRIPTORS *******	PVC DUST;AIR; STABILIZERS;PLASTICIZERS;ANTIOXIDANTS;VINYL CHLORIDE MONOMER;AIR SAMPLING;TWA; RESPIRABLE DUST;TOTAL DUST;DUST SAMPLING;

BFG21249

DOCUMENT NUMBER:

Product

AN-5583 deleted

NSF International
MATERIAL FORMULATION CONFIDENTIAL REPORT

Document Control Code FM00139-002 Company Number 38031 Standard Number 51
Regional Office 02 Issue Date 09/03/91 CBI Code _____
Regional Representative J ARMBRUSTER
*** DO NOT DUPLICATE ***

I. PROGRAM PARTICIPANT

RJF INTERNATIONAL CORPORATION Plant At: MARIETTA, OH 45750
MR. LUCKY HAYNES
3875 EMBASSY PARKWAY
FAIRLAWN, OH 44333

II. SUPPLIER
Basic Material Supplier BFGoodrich [ ] Natural
Material Type KOROKIDAN [ ] Precolorant
Complete Formulation Id GWON 86096 IRAN [ ] See Form

III. TYPE OF FOOD CONTACT (Check All that Apply)

[ ] Dry [ ] Oil
[ ] Aqueous [ ] Beverages > 0, but < or = 8% alcohol
[ ] Acidic (pH [illegible] = 5.0) [ ] Beverages > 8% alcohol
[ ] Dairy Products [ ] None

IV. TEMPERATURE (Check One)
[ ] < or = 145°F [ ] 100°F maximum [ ] 120°F maximum
[ ] 212°F maximum [ ] >212°F (Specify maximum _____°F)

V. COMPOSITION OF FORMULATION AND PERTINENT DATA - USE REVERSE SIDE.
To Be Completed By Basic Material/Pigment Supplier

VI. CERTIFICATION
It is herein certified that this material is intended for the specific end use application(s). It is further certified that the information provided is accurate and complete and, in the case of materials intended for food zone application the material meets the requirements of the Federal Food, Drug, and Cosmetic Act as amended.

BASIC MATERIAL SUPPLIER
Company BFGOODRICH
Signature [signature]
Title TECHNICAL SERVICE MGR
Address 4100 OAK GLEN BLVD
Telephone 216-447-6547 FAX 216-447-6762
Date 9/16/91

Seal in the BLUE envelope provided, insert in an outer envelope and MAIL TO:

Toxicology Services
NSF International
PO Box 130140
Ann Arbor, MI 48113-0140

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2250200

V. **COMPOSITION OF FORMULATION AND PERTINENT DATA**

Chemical Description of Ingredient (Do NOT Use Trade Names)	Parts by Weight	Supplier	Section of the U.S. Code of Federal Regulations (21 CFR)* under which accepted.
Please verify the material type/color and formulation identification referenced in Section IV on the reverse.			
Poly Vinyl Chloride	100.0	BFG Geon 30	Prior Sanctioned
Dioctyl Phthalate	35.0	Harwick Emtnen Chem. Kodaflex DOP-LO	none
Dioctyl Azelate	30.0	Henkel - 002	178.3740
Epoxy Soya	5.0	Argus Drapex 6.8 FMC Corp ESO CP Hall Corp Paraplex G-62 Ferro Corp Plas-Chek 775	GRAS; 181.27
Calcium Zinc Nontoxic Stabilizer (Synpron 221)	1.5	Synthetic Products 221	181.29; 178.2010; 181.27
85367-000-4302	0.17	BFG	
85367-000-4222	0.025	BFG	
Master Batch 85367-000-4302			
Polyvinylchloride	92.6	BFG Geon 110X377	Prior Sanctioned
Linseed Oil	3.0	American Chemical Service Epoxol 9-5	178.3740
Blue 5006 (Pigment)	5.0	Whittaker, Clark & Daniels	178.3910; 176.2600; 178.3297
85367-000-4222			
Polyvinylchloride	92.0	BFG Geon 110X334	Prior Sanctioned
Linseed Oil	3.0	American Chemical Service Epoxol 9-5	178.3740
Violet 5012 (Pigment)	5.0	Whittaker, Clark & Daniels	178.3910 CAS No. 12769-96-9

PLEASE PROVIDE SIGNATURE/CERTIFICATION ON REVERSE SIDE.

* Available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D.C. 20402 (202-783-3238) or your local U. S. Government Printing Office outlet.

Title 21 (Food and Drugs), Parts 1-99: General information and color additives (direct).

Title 21 (Food and Drugs), Parts 170-199: Direct and indirect food additives, including ingredients for use in food contact materials