

THE CELOTEX CORPORATION**CELOTEX**GENERAL OFFICE
1500 NORTH DALE MABRY
TAMPA, FLORIDA 33607

December 5, 1969

Mr. A. Plummer
Purchasing Agent
Bird & Son, Inc.
163 Washington Street
East Walpole, Massachusetts 02032

Dear Art:

This will confirm our discussions and the progress to date for Bird wraps. We have forwarded your No. 45 Asbestos Roll Wrap copy to the vendors involved and requested plate preparation and proofs. This, as you know, will be a roll wrap for Chicago and involves ~~2 square~~ and 1½ square product which will require a wrap for each. For Birmingham use, we have done likewise and will obtain sheet wrap for 2 square rolls only. The gummed tape copy for the #15 Asbestos Felt at the latter location has also been processed.

We have requested expediency from both sources and will advise when we receive any definite information on the progress of the copy.

I also spoke to Frank Molinari of your Advertising Department in reference to the wrapper copy we inquired about. This has been clarified and we informed Frank a copy of each would be forwarded to you when available, but he would not require proof approval before printing.

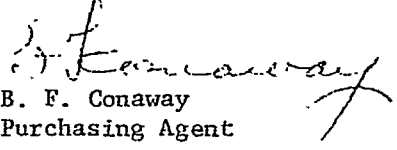
For identity purposes, we have also assigned temporary form numbers to the roll copy of Form 45-2 and Form 45-1½.

The writer also discussed in further detail, the ordering of these wraps and tapes with George Wright of U/L. For your general information, we have attached a copy of this written request and would suggest in submitting your request to George that a similar outline be followed. This will probably be initiated by your Mr. Carroll Homan who originated a letter dated October 22 which is no longer applicable since the procedure has been reversed.

I believe this covers our progress to date and if we can be of further assistance, please let me know.

Very truly yours,

THE CELOTEX CORPORATION


B. F. Conaway
Purchasing Agent

bjc

cc: Mr. W. E. Smith, Jr., Bird & Son, Inc.

THE CELOTEX CORPORATION

 **CELOTEX**

GENERAL OFFICE
1500 NORTH DALE MABRY
TAMPA, FLORIDA 33607

December 5, 1969

Mr. George Wright
Underwriters' Laboratories, Inc.
207 East Ohio Street
Chicago, Illinois

Dear George:

This is to advise that Bird & Son has an arrangement with the Celotex Corporation to manufacture the following products with their label applied.

As discussed, we have listed the products which Celotex manufactures. For further clarification, the identity of these same products are listed with the Bird label. As you also concurred, we have included the U/L reference information which applies to our particular products.

Celotex Product

No. 43 Asbestos Base Sheet Form W 2198 Type 15 B.U.
We are manufacturing this at both our Chicago and Birmingham locations.
U/L File R 2637 Vol. IV Section 1 Page 1

Bird Product

Bird No. 45 Asbestos Base Sheet Wrapper for 2 sq. and 1½ sq.
We will be furnishing this product at both of our plant locations.
Form No.'s 45-2 45-1.50

Celotex Product

#15 Perforated Asphalt Saturated Asbestos Felt - 4 square
Form T-610D (printed gummed tape)
U/L Type 15 Saturated Felt, Cap or Base Sheet
U/L File R 2637 Vol. IV Section General Page 2

Bird Product

No. 15 Perforated Asphalt Saturated Asbestos Felt - 4 square

*to a/l letter sent
Dec 9th
opening Birds
not*

BIRD 014010

Mr. George Wright

-2-

December 5, 1969

Based on the above information, we will within the next few weeks be ordering Bird wrappers for the Base Sheet and Bird gummed tape for the Asbestos Felt.

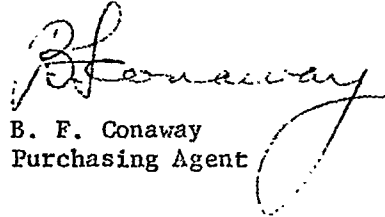
I believe the above includes all the details we discussed, and we have enclosed an extra copy of this memo for your referral to either Don Hock or Ray Hitchcock. You advised one of these men would be handling the orders which we will be submitting.

We have also discussed this with Bird and you may anticipate a similar memo from them regarding the reverse of this procedure with Celotex wraps.

If any further information is required, please contact the undersigned.

Very truly yours,

THE CELOTEX CORPORATION


B. F. Conaway
Purchasing Agent

bjc

BIRD 014011

LEXTAR

BULLETIN LT-103

PULPEXTM
POLYOLEFIN PULPS

for
Adhesive
and
Coating
Applications

GENERAL INFORMATION
PRODUCTS SUMMARY AND APPLICATIONS
PROPERTIES

General Information

PULPEX™ polyolefin pulps are high-surface-area, short-length fibrils that find use as an asbestos replacement in adhesive and coating applications. Because of its unique fibrillated structure (Figure 1), Pulpex functions to increase viscosity and improve crack- and slump-resistance of a variety of adhesives and coatings. These improvements are achievable at relatively modest (0.4 to 3%) concentrations. In certain applications, Pulpex can replace asbestos shorts at one-tenth the asbestos concentration. Pulpex polyolefin pulps are also chemically inert, with excellent resistance to acids, alkalis, bleaches, solvents, mildew, and sunlight.

Types Available

Pulpex is available in two basic types: Pulpex P, made from polypropylene, and Pulpex E from polyethylene. Both types are available in various grades in the form of a wet lap (sheet), or as a wet or dry fluff. (See Figure 2.) Table I lists the types available and presents properties information.

The wet-lap form of Pulpex typically requires shearing action such as that obtained with a Cowies disperser to achieve dispersibility. If shearing equipment is not available, use of the wet-fluff form is suggested. Both forms are suitable for use in water-based adhesive and coating formulations.

For solvent-based formulations the use of the dry-fluff form is recommended.

Figure 1.
Photomicrographic Comparison of Fibrils

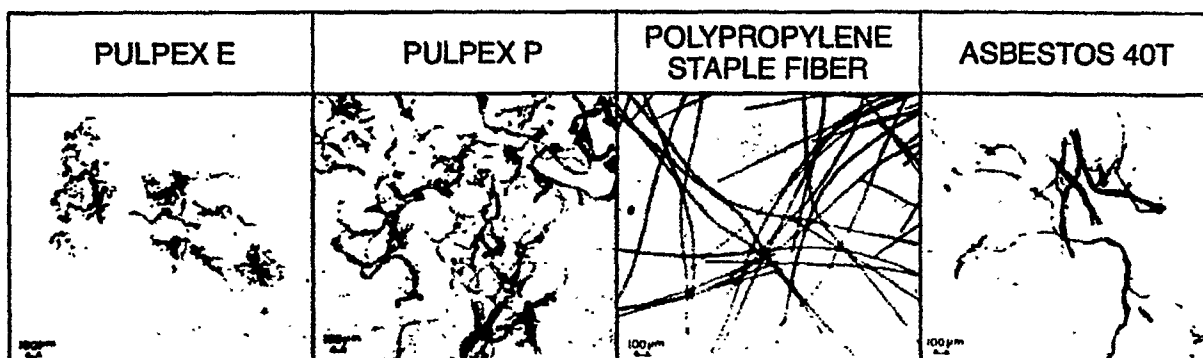


Figure 2.

Pulpex is supplied in a wet-lap form (left) and as a dry- or wet-fluff form (right). The lap form requires shearing for dispersibility.

PULPEX™ Polyolefin Pulps**Pulpex P, Grade AD-HR, for Asphalt Roof Coatings and Cements**

Pulpex P, grade AD-HR, is a dry-fluff polypropylene pulp developed for use in asphalt solvent cutback coatings and mastics. At low concentration and in combination with talc, it improves uniformity of product mixture and provides excellent wet- and dry-slump resistance.

Suggested Formulation

	Percent by Weight	
	Roof Coating	Roof Cement
Asphalt cutback (65% solids)	87.5	70.0
Talc (5 microns average size)	5.5	13.5
Talc (16 microns average size)	5.5	13.5
Pulpex P, AD-HR	1.5	3.0
	100.0	100.0

Typical Properties^(a)

Brookfield viscosity at 73°F (No. 6 spindle at 10 rpm), cps	27,000	270,000
Stormer viscosity at 73°F, KU	120	—
Wet-slump resistance at 100°F (40-mil coat on aluminum panel)	Passed	Passed
Dry-slump resistance at 150°F (100-mil coat on roofing felt)	Passed	Passed
Pliability at 32°F	Passed	Passed
Product uniformity		
After one week at 73°F	Slight bleed; stirs in	
After one week at 150°F	Bleed; stirs in	

^(a) ASTM D 2822-75 and D 2823-75 used as a guide.

Formulating Procedure

Mix talc with asphalt cutback in a suitable mixer for about 2 minutes or until well dispersed. Add Pulpex P, AD-HR, over a 1-minute period while mixing, and continue mixing until smooth.

Viscosity adjustments can be made by adjusting the base viscosity of the asphalt cutback or by adjusting the concentration of Pulpex P, AD-HR. A comparison of the viscosities obtained with Pulpex P, AD-HR, vs asbestos is shown in Figure 1.

Availability

Pulpex P, AD-HR, dry-fluff polypropylene is packaged in plastic bags enclosed in paperboard boxes. Net weight is 20 pounds/box shipped 20 boxes/pallet, or 400 pounds.

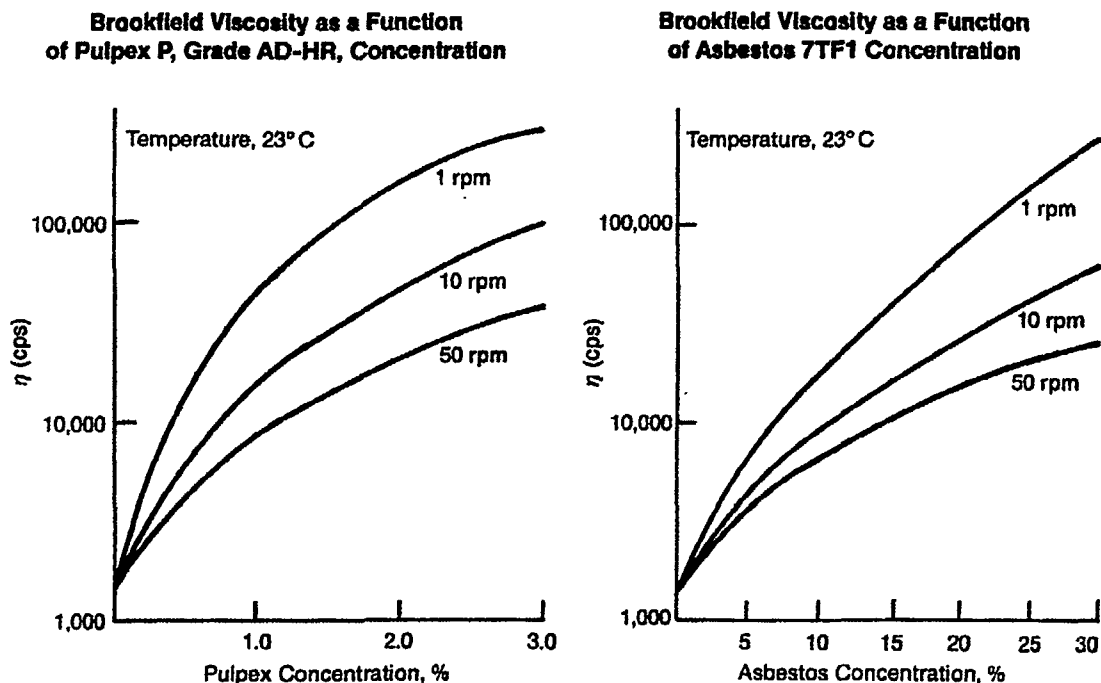
(over)

A HERCULES INCORPORATED COMPANY • WILMINGTON, DELAWARE 19899

We cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used. We accept no responsibility for results obtained by the application of this information or the safety and suitability of our products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product or product combination for their own purposes. Unless otherwise agreed in writing, we sell the products without warranty, and buyers and users assume all responsibility and liability for loss or damage arising from the handling and use of our products, whether used alone or in combination with other products.

Figure 1

Asphalt Cutback
Viscosity-Concentration Comparison
Asbestos 7TF1 and Pulpex P, Grade AD-HR

**Material Suppliers**

This listing identifies the manufacturer of the specific material referred to in this bulletin. It is not our intention to imply that these products are the only ones that can or should be used with Pulpex polyolefin pulps.

1. Asphalt cutback—65% dead-level asphalt (Type I, ASTM A 312) dissolved in 35% Varsol 18 mineral spirits (Exxon Corporation). Brookfield viscosity was 1,400 cps at 10 rpm with a No. 6 spindle.
2. Talc—Vertal No. 5 (5 microns) and Vertal 3XD (16 microns). H. M. Royal, Inc., 689 Pennington Ave., Trenton, NJ 08601.

Product Safety

Products cited herein may be considered hazardous under the U.S. Occupational Safety and Health Act of 1970. Material Safety Data Sheets should be obtained prior to use of these products.

PULPEX™ Polyolefin Pulps**Pulpex P, Grade AD-HR, for Aluminized-Asphalt Roof Coatings**

Pulpex P, grade AD-HR, is a dry-fluff polypropylene pulp developed for use in asphalt solvent cutback coatings. At low concentrations and in combination with talc and aluminum paste, it provides a uniform product with excellent wet- and dry-slump resistance.

Suggested Formulation

	Percent by Weight
Asphalt cutback (65% solids)	65.00
Talc (5 microns average size)	5.00
Talc (16 microns average size)	5.75
Pulpex P, AD-HR	1.25
Aluminum paste (coarse grade)	22.00
Stabilizer (Syloid AL-1)	1.00
	100.00

Typical Properties^(a)

Brookfield viscosity at 73°F (No. 6 spindle at 10 rpm), cps	32,000
Stormer viscosity at 73°F, KU	140
Wet-slump resistance at 100°F (40-mil coat on aluminum panel)	Passed
Dry-slump resistance at 150°F (100-mil coat on roofing felt)	Passed
Pliability at 32°F	Passed
Reflectance, %	
Initial	47
After 3 days at 96°F at 100% RH	40
Product uniformity	
After one week at 73°F	Slight bleed; stirs in
After one week at 150°F	Bleed; stirs in

^(a)ASTM D 2823-75 and D 2824-75 used as a guide.

Formulating Procedure

Mix talc and stabilizer with asphalt cutback in a suitable mixer for about 2 minutes or until well dispersed. Add Pulpex P, grade AD-HR, while mixing over a 1-minute period, and continue mixing until smooth. Add the aluminum paste and mix thoroughly at low speed for the minimal time required for dispersion.

Availability

Pulpex P, grade AD-HR, dry-fluff polypropylene pulp is packaged in plastic bags enclosed in paper-board boxes. Net weight is 20 pounds/box shipped 20 boxes/pallet, or 400 pounds.

(over)

A HERCULES INCORPORATED COMPANY • WILMINGTON, DELAWARE 19899

We cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used. We accept no responsibility for results obtained by the application of this information or the safety and suitability of our products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product or product combination for their own purposes. Unless otherwise agreed in writing, we sell the products without warranty, and buyers and users assume all responsibility and liability for loss or damage arising from the handling and use of our products, whether used alone or in combination with other products.

Material Suppliers

This listing identifies the manufacturer of the specific materials referred to in this bulletin. It is not our intention to imply that these products are the only ones that can or should be used with Pulpex polyolefin pulps.

1. Asphalt cutback — 65% dead-level asphalt (Type I, ASTM D 312) dissolved in 35% Varsol 18 mineral spirits (Exxon Corporation). Brookfield viscosity was 1,400 cps at 10 rpm.
2. Talc — Vertal No. 5 (5 microns) and Vertal 3XD (16 microns). H. M. Royal, Inc., 689 Pennington Ave., Trenton, NJ 08601.
3. Aluminum paste (coarse leafing grade No. 6233). Alcoa, Pittsburgh, PA.
4. Stabilizer — Syloid AL-1. W. R. Grace Co., Baltimore, MD.

Product Safety

Products cited herein may be considered hazardous under the U.S. Occupational Safety and Health Act of 1970. Material Safety Data Sheets should be obtained prior to use of these products.

6-82

PULPEX™ Polyolefin Pulps

Pulpex E, Grade D-H, for Asphalt Roof Cements

Pulpex E, grade D-H, is a dry-fluff polyethylene pulp that is an effective replacement for asbestos in asphalt cements formulated with thickening clays. The end product is a highly viscous, uniform cement with excellent slump resistance.

Typical Properties

Appearance	dry, white fluff
Polymer	polyethylene
Specific gravity	0.96
Melting point, °C	132
Fibril length, mm	
Average	0.6-1.2
Maximum	2.5
Fibril diameter, μ	30-40
Surface area (BET, N ₂), m ² /g	10-15
Moisture content, %	< 5
Chemical reactivity	essentially inert ^(a)

^(a) Swells in chlorinated hydrocarbons.

Product Safety

Products cited herein may be considered hazardous under the U.S. Occupational Safety and Health Act of 1970. Material Safety Data Sheets should be obtained prior to use of these products.

Suggested Starting Formulation

	Roof Cement (% by Weight)
Asphalt cutback (65% solids)	69.5
Bentone 34	2.0
Wet methanol	.5
Talc (5 μ size)	12.5
Talc (16 μ size)	12.5
Pulpex E, grade D-H	3.0
	100.0

(over)

A HERCULES / SOLVAY COMPANY • WILMINGTON, DELAWARE 19899

We cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used. We accept no responsibility for results obtained by the application of this information or the safety and suitability of our products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product or product combination for their own purposes. Unless otherwise agreed in writing, we sell the products without warranty, and buyers and users assume all responsibility and liability for loss or damage arising from the handling and use of our products, whether used alone or in combination with other products.

Properties(b)

Brookfield viscosity at 73°F and 10 rpm	248,000 cps (spindle #7)
Product uniformity	
After 73°F, 7 days	no separation
After 150°F, 7 days	no separation
Wet-slump resistance at 100°F	
(40-mil wet coat on aluminum panel)	pass
Dry-slump resistance at 150°F	
(100-mil dry coat on roofing felt)	pass
Pliability at 32°F	pass

(b)ASTM D 2822 as a guide.

Formulating Procedure

Bentone 34 and asphalt cutback are shear-mixed with a Cowles disperser at 3,000 rpm for 10 min. Then wet methanol activator is added and mixed for an additional 5 min.

Transfer mixture to a Hobart paddle mixer, and at low speed add talc, mix for 2 min, then add Pulpex E, grade D-H, over 1 min and stir 5 min or until smooth.

Raw Material Suppliers

Asphalt cutback

65% dead-level asphalt (Type I, ASTM D 312) dissolved in 35% Varsol 18 mineral spirits (Exxon Corp). Brookfield viscosity (10 rpm) was 1,400 cps.

Talc

5 μ size, Vertal #5 talc
16 μ size, 3XD Vertal talc
H. M. Royal Inc.
689 Pennington Ave.
Trenton, NJ 08601

Bentone 34

NL Industries Inc.
P.O. Box 700
Highstown, NJ 08520

Availability

Pulpex E, grade D-H, is shipped in multiwall paper bags (10 lbs net), 100 bags per pallet.

Products Summary and Applications

Suggested applications for Pulpex include asphalt coatings and mastics, caulks and sealants, construction mastics, stucco cements, block filler, and textured paints. Current grades and applications are as follows:

Pulpex E, grade D-H	Dry-fluff polyethylene pulp is effective in applications such as asphalt emulsions, caulk and sealants, construction mastics, stucco cements, and ceiling and wall texture compounds. It is effective in both water- and solvent-based formulations.
Pulpex E, grade D-V	Wet-fluff polyethylene pulp is effective in water-based formulations that include asphalt emulsions, construction mastics, stipple paints, and block filler paints.
Pulpex E, grade D	Wet-lap polyethylene pulp can be used in latex-based textured paint and block filler paints. Shear is required to achieve dispersibility.
Pulpex E, grade A-H	Dry-fluff polyethylene pulp is effective in oil-based caulks and ceiling texture compounds.
Pulpex P, grade AD-H	Dry-fluff polypropylene pulp is suggested for use where high processing temperatures are required, such as in manufacture of certain gun cements or in manufacture of PVC floor tile and phenolic molding compounds.
Pulpex P, grade AD-HR⁽¹⁾	Dry-fluff polypropylene pulp is designed specifically for use in asphalt-solvent cutback coatings. It offers the advantages of good dispersibility, wet- and dry-slump resistance, and airless spraying.

⁽¹⁾Developmental grades, available in limited quantities only.

Table I
Typical Properties

Grade	Dry-Fluff Grades			Wet-Fluff Grades		
	Pulpex E		Pulpex P	Pulpex E		Pulpex P
	A-H	D-H	AD-H	A-V	D-V	AD-V
Appearance	Dry, white fluff ^(a)	Dry, white fluff ^(a)	Dry, white fluff ^(a)	Wet, white fluff ^(b)	Wet, white fluff ^(b)	Wet, white fluff ^(b)
Polymer	Polyethylene	Polyethylene	Polypropylene	Polyethylene	Polyethylene	Polypropylene
Specific gravity	.96	.96	.90	.96	.96	.90
Melting point, °C	132	132	165	132	132	165
Fiber length, mm						
Average	0.6-1.2	0.6-1.2	0.8-1.5	0.6-1.2	0.6-1.2	0.8-1.5
Maximum	2.0	2.5	2.5	2.0	2.5	2.5
Fiber diameter, μ	10-20	30-40	20-40	10-20	30-40	20-40
Surface area (BET, N ₂), m ² /g	6-10	10-15	5-10	6-10	10-15	5-10
Moisture content, %	<5	<5	<5	50	50	50
Chemical reactivity	Inert ^(c)	Inert ^(c)	Inert ^(d)	Inert ^(c)	Inert ^(c)	Inert ^(d)

^(a) Packaged in paper bag, 10 lbs net weight.

^(b) Packaged in polyethylene-lined paper bag, 40 lbs net weight.

^(c) Swells in chlorinated hydrocarbons.

^(d) Reacts with strong oxidizing agents at elevated temperatures.

Grade	Wet-Lap Grades		
	Pulpex E		Pulpex P
	A	D	AD
Appearance	Wet lap ^(a)	Wet lap ^(a)	Wet lap ^(a)
Polymer	Polyethylene	Polyethylene	Polyethylene
Specific gravity	.96	.96	.90
Melting point, °C	132	132	165
Fiber length, mm			
Average	0.6-1.2	0.6-1.2	0.8-1.5
Maximum	2.0	2.5	2.5
Fiber diameter, μ	10-20	30-40	24-40
Surface area (BET, N ₂), m ² /g	6-20	10-15	5-10
Surface	Hydrophilic ^(f)	Hydrophilic ^(f)	Hydrophilic ^(f)
Total solids of wet lap, %	50	50	50

^(a) Packaged 2,000 wet lbs in a pallet (1,000 lbs dry).

^(f) Fiber surface-treated with polyvinyl alcohol for water dispersibility.

NOTE: For specific information on the above grades, request an Application Data sheet.

Product Safety

Material Safety Data Sheets should be obtained prior to use of these products.

A HERCULES/SOLVAY COMPANY • WILMINGTON, DELAWARE 19899

We cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used. We accept no responsibility for results obtained by the application of this information or the safety and suitability of our products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product or product combination for their own purposes. Unless otherwise agreed in writing, we sell the products without warranty, and buyers and users assume all responsibility and liability for loss or damage arising from the handling and use of our products, whether used alone or in combination with other products.

16. Documents from
Other Companies

Volume I